GUIDE TO HEALTH CARE CAREERS

A resource for students, teachers, counselors, librarians and parents focusing on the wide variety of health care careers.

Produced by Cascades East Area Health Education Center.

Online version is available at www.cascadeseast.org
ABOUT THIS GUIDE

Thank you for taking the time to read the *Guide to Health Care Careers* brought to you by Cascades East Area Health Education Center (CEAHEC). The health care workforce has been shrinking in many rural communities. Thus, it is important that a pipeline of students in these areas is cultivated to meet future demands. This Guide is on way CEAHEC can help students, guidance counselors, teachers, and parents navigate sometimes confusing and overwhelming areas.

This easy-to-follow guide is broken down into several major categories: Planning Your Career in Health Care Services, Transfer and Transfer Degree Options, Oregon Statewide Scholarship Opportunities, Location of Oregon Universities, Colleges, and Training Centers, School Profiles, and Health Career Occupations.

The School Profiles section provides information on each school’s general profile as well as the health care career-related programs it provides. Under each program, you’ll see the type of certificate/degree offered.

The Health Career Occupations section covers health care-related occupations. Each occupation is grouped into related health care areas. Each occupation lists a general salary average, years of education needed, job prospect outlook, a general description of the career, academic training needed, other related fields, schools listed that offer the program as well of the type of degree offered, and other related resources.

It is our desire at CEAHEC that you benefit from this resource, so please use it as one of your tools in designing your unique health career path. It will be updated as needed.

This Guide is available online on our website, www.cascadeseast.org. Hard copies in 3-ring binders are also available. Please contact the CEAHEC office at 541-706-2617 to request a guide.

Debbie Cole
Center Director
Cascades East AHEC
April 2019
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Planning Your Career in Health Care Services

Your career path is determined by your unique set of dreams, goals, and accomplishments. Your goals will change over time as you achieve them or as you open doors to new options...

Because you have picked up this Guide, you probably have some interest in health care services as a career. The opportunities are vast, the types of jobs are varied, and the outlook for employment is generally excellent. Unlike many careers, health care careers allow a person greater choice in geographic location. Your chance of living in a place you like and having a career you like are elevated. You may be interested in the field because of a desire to help people, to work with sophisticated equipment and technologies, or to manage information in a complex work environment. You may want to be employed in a field that delivers vital services to individuals and communities. As you explore career possibilities in health care services, keep in mind some general considerations.

Employment
Most health care personnel work in the health services industry. In Oregon, there are over 157,000 wage and salaried workers (as opposed to self-employed people) in the health services industry. This means that about nine out of every 100 employed people in the state work in this industry.

Many health services professionals are employed outside the health services industry. The government hires health workers in public health, mental health, social services, and corrections programs. Educational institutions — our schools and colleges — employ nurses, doctors, social workers, and counselors. Even businesses have health services workers on their payrolls.

Within the health services industry, most workers fall into one of the health occupational groups described in this booklet. However, there are also many support staff in the industry, from facilities maintenance to food services, which provide essential functions. As you think
about what attracts you to health services, it is important to recognize that you can be part of this growing, dynamic industry even if you choose an occupation that is not specifically health-related.

**Growth & Change**
Over the next six years, employment in Oregon’s health services industry is expected to grow by roughly 23 percent. At the same time, employment overall in the state is projected to grow only nine percent. Employment of dental assistants, medical assistants, and nursing assistants and aides is estimated to grow about 25 percent, adding over 9,000 new jobs in the next six years. Other health occupations projected to grow at least twice as fast as the average include chiropractors, dental hygienists, health information specialists, medical assistants, occupational therapists, opticians, optometrists, and physician assistants.

The health services industry of the 21st century will be different from the health services industry we know today, and people who work in it will need to be willing and able to change with it. It will serve a more diverse and aging population with different expectations for care. It will use new technologies that will develop at an ever increasing pace. It will become increas- ingly complex and diverse. Large group practices, health maintenance organizations (HMOs), birthing centers, and surgery centers are some of the innovations we have already seen. Pressures to shift care from hospitals and nursing homes to outpatient care and away from specialists to primary care providers will greatly impact the job market of the future.

**Self-Employment**
A significant number of health services professionals in Oregon are self-employed (data collected from U.S. Census Bureau 2006-2010).

- 26.5 percent of physicians
- 65.4 percent of dentist
- 42.5 percent of veterinarians
- 43.1 percent of optometrists
- 66.7 percent of chiropractors

Other occupations with significant self-employment rates include dental laboratory technicians (11.4 percent), physical therapists (11.7 percent), speech pathologists (8.0 percent), and pharmacists (4.8 percent). Although some of the industry trends will reduce the proportion of self-employed professionals, if you are interested in one of these occupations, you may want to develop small business skills as part of your educational plan.

**Career Paths**
To understand a career path, it is important to understand the word “career.” Sometimes people think that “job” and “career” mean the same thing. A job is a unique work situation or position, paid or unpaid. A job can be cleaning your room, babysitting, delivering newspapers, or volunteering at your local hospital. A career is different. It is the combination of learning and work that you pursue over your lifetime. You have already begun your career.

Your career path is determined by your unique set of dreams, goals, and accomplishments. If you are managing your career path through thoughtful planning, your goals will emerge from your dreams and will be based upon the decisions you make. Your goals will change over time as you achieve them or as you open doors to new options that more closely meet your needs. To make good career decisions, you must know and understand the opportunities for work and education.
Career Information
This Guide is designed to help you learn about the world of work and education in health services. The information you will find here is organized around the primary health services occupations in Oregon. You may be interested in a specialty that is not discussed. In that case, you will still want to learn about the primary occupation because that is the path you will need to follow before you specialize.

As you try to determine if you would be suited for an occupation, you will need to look carefully at who you are, your interests, skills, personality, aptitudes, and values -- and compare these to the occupation’s requirements. You may need to learn more about the occupation. You can do this by: finding someone in the field to interview; or developing a volunteer, mentorship, or work experience placement.

Preparation
You can make the most of your school years by choosing courses and outside activities that fit your career path. The health services industry needs people who are committed, flexible, motivated, and caring. It also needs workers that can demonstrate a wide range of specific skills and knowledge. Oregon post-secondary schools offer many options for developing the needed skills and knowledge.

Specific information about these schools is provided in this booklet.

Many of Oregon’s high schools are changing the way they organize coursework and requirements.

If your high school offers any specific health career classes, introductory or advanced, take them to build your resume, knowledge and skills.

A strong high school foundation in mathematics, sciences, social studies and language arts is important for success in most health services occupations.

College admissions are now based largely on GPA and SAT type scores. Some schools have special admissions policies if you are a minority or have another unique situation. Please see your school counselor for assistance if you are concerned about what you need to do for admission to a college. Explain you are also interested in a health career and they may be able to guide you to some of the better school choices for your interest.

Concerns about financing your education after high school should not deter your dreams. Patience, careful planning, and motivation to reach your goals can create opportunities for you. You can begin learning about the financial aid by scanning the last section in this booklet on loans, grants, and scholarships available specifically for the health fields.
Transfer and Transfer Degree Options

Associate of Arts Oregon Transfer Degree (AAOT)

The Associate of Arts Oregon Transfer degree is an opportunity for students to complete lower division degree requirements at an Oregon Community College. Any student having the Associate of Arts Oregon Transfer (AAOT) degree recognized on an official college transcript will have met the lower division general education requirements of baccalaureate degree programs of any institution in the Oregon University System.

Students transferring under this agreement will have junior status for registration purposes. Course, class standing or GPA, and requirements for specific majors, departments, or schools are not necessarily satisfied by an AAOT degree. All courses should be aligned with the student’s intended program of study and degree requirements of the baccalaureate institution to which the student plans to transfer.

Some community colleges provide specific focus areas within a degree (biology, chemistry, etc) that can assist students with selecting courses that align with the student’s intended program of study and the degree requirements of the baccalaureate institute to which the student plans to transfer.

Colleges which accept the AAOT in addition to Oregon’s public universities include: Concordia College (OR), George Fox College (OR), Linfield College (OR), Pacific University (OR), University of Portland (OR), Warner Pacific College (OR), and Willamette University (OR), Evergreen State College (WA), Pacific Lutheran University (WA), and Washington State University (WA).

Oregon Transfer Module (OTM)

The Oregon Transfer Module is designed for students who plan to transfer to an Oregon community college or public university. Composed of 45 credits in writing, math, speech, social sciences, sciences, arts and letters, and electives, it is similar to many institution’s general education requirements and depending on courses chosen, may meet some lower-division major requirements. It guarantees that another Oregon community college or public university will accept all credits toward the institution’s general education requirements and, depending on courses chosen, may meet some lower-division major requirements. The OTM provides students with documentation of completion of a standard set of commonly accepted courses.

Associate of Applied Science Degree (AAS)

The Associate of Applied Science degree trains students in specific technical areas to prepare for immediate employment upon graduation. The AAS degree provides students with the hands-on technical skills needed for employment or certification/licensure in a variety of career areas. This degree is generally a two-year degree option for full-time students. Community colleges generally provide certificates of completion in many other Career and Technical Education (CTE) areas which require one to six terms to complete (on a quarter system). The AAS degree is not intended to transfer, though most general education and some CTE courses are eligible for transfer.
Oregon Statewide Scholarship Opportunities

Oregon Promise

Oregon Promise is a state grant that helps to cover most tuition costs at any Oregon community college for recent high school graduates and GED recipients. Students can receive Oregon Promise until you have attempted a total of 90 college credits. There is no limit to the number of years or terms you can receive the grant; it is based on the 90 credit limit. As of 2017-18, awards for full-time students range from $1,000 to $3,540 per year, minus a $50 co-pay per term.

Oregon Opportunity Grant

Oregon Opportunity Grant (OOG) is Oregon's largest state-funded, need-based grant program for college students. Approximately 40,000 students receive Opportunity Grants each year. The grant is available to Oregon residents attending one of more than 40 institutions of higher learning throughout the state. Grants are awarded first to students with the greatest financial need, based on their Expected Family Contribution. For 2018-19, the maximum award amount is $2,600 at an Oregon community college and $3,200 at an Oregon public university or an Oregon-based private nonprofit 4-year college or university. Students must be enrolled full-time, full-year (12 credits or more per term) to receive a maximum award.

Oregon Student Child Care Grant

The Oregon Student Child Care Grant Program was established to assist parents enrolled in postsecondary education obtain safe, dependable care that supports their children's development while allowing completion of the parent's academic programs. This program is available to Oregon residents enrolled as an undergraduate at an Oregon community college, public university, or private college/university, with a child or legal dependent age 12 or under in need of child care. Awards are based on financial need as well as number of credit hours enrolled.

Oregon Office of Student Access & Compliance (OSAC)

The Office of Student Access and Completion (OSAC) administers a variety of state, federal, and privately funded student financial aid programs for the benefit of Oregonians attending institutions of postsecondary education.

OSAC is responsible for the administration of state financial aid and access programs, including budget recommendations, fiscal management, policy, and awarding of financial aid to Oregon students at public institutions statewide.
OSAC helps Oregon students pursue their college and career goals. Though this office students can find information on Access Grants, including Oregon Opportunity Grants and Oregon Promise Grants, in addition to OSAC Scholarships.

For more information
www.oregonstudentaid.gov
Oregon Universities, Colleges, and Training Center Locations by County/City

**Baker County**
Baker City
*Blue Mountain Community College*

**Benton County**
Corvallis
*Linn-Benton Community College*
*Oregon Health Science University - College of Pharmacy*
*Oregon State University*

**Clackamas County**
Lake Oswego
*Portland School of Radiography*
Milwaukee
*Clackamas Community College*
Oregon City
*Clackamas Community College*
Wilsonville
*Clackamas Community College*

**Clatsop County**
Astoria
*Clatsop Community College*
*Tongue Point Job Corps Center*

**Columbia County**
*No current Community College or University campus - classes for Portland Community College are taught at St. Helen’s High School and PCC is the process of developing a training center in Scapoose.*

**Coos County**
Coos Bay
*Southwestern Oregon Community College*

**Crook County**
Prineville
*Central Oregon Community College*

**Curry County**
Brookings
*Southwestern Oregon Community College*
Deschutes County
Bend
Central Oregon Community College
Oregon State University-Cascades
Redmond
Central Oregon Community College
George Fox University

Douglas County
Roseburg
Umpqua Community College

Gilliam County
Currently no Community College or University in Gilliam County. Nearest options for county residents are Blue Mountain Community College programs in Boardman and Columbia Gorge Community College options in The Dalles.

Grant County
John Day
Blue Mountain Community College

Harney County
Burns
Treasure Valley Community College

Hood River county
Hood River
Columbia Gorge Community College

Jackson County
Ashland
Ashland Institute of Massage
Oregon Health Science University - School of Nursing
Southern Oregon University
Medford
Rogue Community College
White City
Rogue Community College

Jefferson County
Madras
Central Oregon Community College

Josephine County
Grants Pass
Rogue Community College
Klamath County
Klamath Falls
Klamath Community College
Oregon Health Science University - School of Nursing
Oregon Institute of Technology (Oregon Tech)

Lake County
Lakeview
Klamath Community College

Lane County
Eugene
Lane Community College
Northwest Christian University
Pacific University
University of Oregon

Lincoln County
Lincoln City
Oregon Coast Community College
Newport
Oregon Coast Community College
Waldport
Oregon Coast Community College

Linn County
Albany
Linn-Benton Community College
Lebanon
College of Osteopathic Medicine of the Pacific (COMP-Northwest)
Linn-Benton Community College
Sweet Home
Linn-Benton Community College

Malheur County
Ontario
Treasure Valley Community College

Marion County
Brooks
Chemeketa Community College
George Fox University
Salem
Chemeketa Community College
Corban University
Oregon Institute of Technology (Oregon Tech)
Oregon School of Massage Therapy
Willamette University
Woodburn
Chemeketa Community College
Pacific University
Morrow County
Boardman
Blue Mountain Community College

Multnomah County
Gresham
Mount Hood Community College
Portland
Caregiver Training Institute, LLC
Concordia University
George Fox University
Lewis & Clark College
Mount Hood Community College
Multnomah University
National University of Natural Medicine
Oregon College of Oriental Medicine
Oregon Health Science University
Oregon Institute of Technology (Oregon Tech)
Oregon School of Massage Therapy
Oregon State University
Portland Community College
Portland School of Radiography
Portland State University
Reed College
University of Portland
University of Western States
Warner Pacific University
Troutdale
Springdale Job Corps Center

Polk County
Dallas
Chemeketa Community College
Monmouth
Oregon Health Science University - School of Nursing
Western Oregon University

Sherman County
Currently no Community College or University options in Sherman County. Nearest option for county residents is Columbia Gorge Community College in The Dalles.

Tillamook County
Tillamook
Tillamook Bay Community College
Umatilla County
Hermiston
Blue Mountain Community College
Milton-Freewater
Blue Mountain Community College
Pendleton
Blue Mountain Community College

Union County
La Grande
Blue Mountain Community College
Eastern Oregon University
Oregon Health Science University - School of Nursing

Wallowa County
Currently no Community College or University options available in Wallowa County. Nearest options for county residents are Blue Mountain Community College in Pendleton or Eastern Oregon University in LaGrande.

Wasco County
The Dalles
Columbia Gorge Community College

Washington County
Beaverton
Portland Community College
Forest Grove
Pacific University
Hillsboro
Pacific University
Portland Community College

Wheeler County
Currently no Community College or University options available in Wheeler County. Nearest options for county residents are Blue Mountain Community College in John Day or Central Oregon Community College in Prineville.

Yamhill County
McMinnville
Chemeketa Community College
Linfield College
Newberg
George Fox University
Portland Community College
Oregon Universities, Colleges, and Training Centers

Ashland Institute of Massage
Ashland Institute of Massage
280 East Hersey Street A-8
Ashland, OR. 97520
541-482-5134

Blue Mountain Community College
Blue Mountain Community College Main Campus
P.O. Box 100/2411 N.W. Carden Avenue
Pendleton, OR 97801
541-276-1260
getinfo@bluecc.edu
www.bluecc.edu
BMCC Baker County
3275 Baker Street
Baker City, OR 97814
541-523-9127
bmccbaker@bluecc.edu
BMCC Hermiston
975 S.E. Columbia Drive
Hermiston, OR 97838
541-567-1800
bmcchermiston@bluecc.edu
BMCC Milton-Freewater
311 N. Columbia
Milton-Freewater, OR 97862
541-938-7176
bmccmiltonfreewater@bluecc.edu
BMCC Workforce Training Center (Morrow County)
P.O. Box 939/251 Olson Rd.
Boardman, OR 97818
541-481-2099
bmccmorrowcounty@bluecc.edu
BMCC Grant County
835-B S. Canyon Blvd.
John Day, OR 97845
541-575-1550
getinfo@bluecc.edu
BMCC Union County
798 K. Ave, #49
La Grande, OR 97850
541-663-3319
getinfo@bluecc.edu
Caregiver Training Institute, LLC  
Caregiver Training Institute, LLC  
12790 SE Stark Street, Suite 100  
Portland, OR 97233  
503-257-0117

Central Oregon Community College  
Central Oregon Community College Main Campus  
2600 NW College Way  
Bend, OR 97703  
541-383-7700  
www.cocc.edu  
COCO Redmond Campus  
2030 SE College Loop  
Redmond, OR. 97756  
541-504-2900  
Madras Education Center  
1170 E Ashwood Road  
Madras, OR. 97741  
541-550-4100  
COCO Crook County Open Campus  
510 SE Lynn Blvd.  
Prineville, OR. 97754  
541-447-9233

Chemeketa Community College  
Chemeketa Community College Main Campus  
4000 Lancaster Drive NE  
Salem, OR. 97305-1453  
503-399-5000  
Chemeketa CC - Polk Campus  
1340 SE Holman Ave.  
Dallas, OR. 97338  
503-623-5567  
Chemeketa CC - Yamhill Valley Campus  
288 NE Norton Lane  
McMinnville, OR. 97128-9508  
503-472-9482  
Chemeketa CC - Woodburn Campus  
120 E. Lincoln St.  
Woodburn, OR. 97071-5024  
503-981-8820  
Chemeketa CC - Brooks Campus  
4910 Brooklake Rd. NE  
Brooks, OR. 97305  
503-399-5163  
Chemeketa CC - Eola Campus  
215 Doaks Ferry Rd. NW  
Salem, OR. 97304-4138  
503-584-7272
Chemeketa CC - Center for Business & Industry
626 High Street NE
Salem, OR 97301
503-399-5181

Clackamas Community College
Clackamas Community College Oregon City Campus
19600 Molalla Avenue
Oregon City, OR 97045
503-594-6000

Clackamas Community College
Clackamas CC - Harmony Campus
7738 SE Harmony Road
Milwaukee, OR 97222
503-594-0620

Clackamas Community College
Clackamas CC - Wilsonville Campus
29353 SW Town Center Loop East
Wilsonville, OR 97070
503-594-0940

Clatsop Community College
Clatsop Community College
1651 Lexington Ave.
Astoria, OR. 97103
503-325-0910

College of Osteopathic Medicine of the Pacific (COMP-Northwest)
College of Osteopathic Medicine of the Pacific - Northwest (COMP-Northwest)
200 Mullins Drive
Lebanon, OR 97355
541-259-0200

Columbia Gorge Community College
Columbia Gorge CC - The Dalles Campus
400 East Scenic Drive
The Dalles, OR. 97058-3434
541-506-6000

Columbia Gorge CC - Hood River-Indian Creek Campus
1730 College Way
Hood River, OR. 97031-7502
541-308-8202

Concordia University
Concordia University
2811 NE Holman Street
Portland, OR. 97211
503-288-9371
admission@cu-portland.edu
Corban University
Corban University
5000 Deer Park Dr. SE
Salem, OR 97317
503-581-8600

Eastern Oregon University
Eastern Oregon University
One University Blvd.
La Grande, OR 97850-2807
541-962-3672

George Fox University
George Fox University - Main Campus
414 N. Meridian St.
Newberg, OR 97132
503-538-8383
Portland Center
12753 SW 68th Avenue, suite 185
Portland, OR 97223
503-554-6100
Salem Site
4910 Brooklake Road NE
Brooks, OR 97305
971-239-4930
Redmond Site
4555 Elkhorn Ave.
Redmond, OR 97756
541-504-3617

Klamath Community College
Klamath Community College Main Campus
7390 South 6th Street
Klamath Falls, OR 97603
541-882-3521
www.klamathcc.edu
KCC-Lake County
541-407-1757
KCC-Lake county@klamathcc.edu

Lane Community College
Lane Community College
Enrollment Services
Building 1
Lane Community College
4000 East 30th Avenue
Eugene, OR 97405
541-463-3100
www.lanec.edu
Lewis & Clark College
Lewis & Clark College
0615 SW Palatine Hill Road
Portland, OR 97219
503-768-7000

Linfield College
Linfield College
900 SE Baker Street
McMinnville, OR 97128-6894
503-883-2200

Linn-Benton Community College
LBCC - Albany Campus
6500 Pacific Blvd. SW
Albany, OR
541-917-4999
albany@linnbenton.edu
LBCC - Benton Center
757 NW Polk Ave.
Corvallis, OR
541-757-8944
LBCC - Lebanon Center
44 Industrial Way
Lebanon, OR
541-259-5801
LBCC - Advanced Transportation Technology Center
2000 Oak Street
Lebanon, OR
541-917-4597
LBCC - Healthcare Occupations Center
300 Mullins Drive
Lebanon, OR 97355
541-917-4923
LBCC - Sweet Home Center
1661 Long Street
Sweet Home, OR 97386
541-367-6901

Mount Hood Community College
MHCC - Gresham Campus
26000 SE Stark Street
Gresham, OR 97030
503-491-6422
www.mhcc.edu
MHCC - Maywood Park Campus
10100 NE Prescott
Portland, OR 97220
503-491-6100
MHCC - The Bruning Center for Health Professions
1484 NW Civic Drive
Gresham, OR 97030
503-491-6700

Multnomah University
Multnomah University
8435 NE Glisan Street
Portland, OR 97220
503-255-0332

National University of Natural Medicine
National University of Natural Medicine
049 SW Porter Street
Portland, OR 97201
www.nunm.edu

Northwest Christian University
Northwest Christian University
828 E. 11th Avenue
Eugene, OR, 97401
877-463-6622

Oregon Coast Community College
OCCC - Central County Campus
400 SE College Way
Newport, OR 97366
541-867-8501
www.oregoncoastcc.org
OCCC - North County Center
3788 SE High School Drive
Lincoln City, OR 97367
OCCC - South County Center
3120 Crestline Drive
Waldport, OR 97394

Oregon College of Oriental Medicine
Oregon College of Oriental Medicine
75 NW Couch Street
Portland, OR 97209
503-253-3443

Oregon Health Science University
OHSU School of Medicine
503-494-8220
OHSU School of Nursing (SoN)
3455 SW US Veterans Hospital Rd, SN-ADM
Portland, OR 97239-2941
OHSU SoN - Ashland
1250 Siskiyou Blvd.
Ashland, OR 97520
541-552-6256
OHSU SoN - Klamath Falls
3201 Campus Drive
Third floor - Dow II
Klamath Falls, OR 97601
541-885-1665

OHSU SoN - La Grande
One University Blvd
La Grande, OR 97850
541-962-3803

OHSU SoN - Monmouth
345 N. Monmouth Ave.
Monmouth, OR 97361
503-838-8179

OHSU School of Dentistry
2730 SW Moody Ave
Portland, OR 97201
503-494-5274

OHSU School of Public Health
MC: GH230
3181 SW Sam Jackson Park Road
Portland, OR 97239
503-494-1158

College of Pharmacy
Oregon State University
Corvallis, OR 97331
541-737-3424

Oregon Institute of Technology (Oregon Tech)
Oregon Institute of Technology
3201 Campus Drive
Klamath Falls, OR 97601
541-885-1024
www.oit.edu/admissions

Portland-Metro Campus
www.oit.edu/portland-metro
503-821-1250

Salem Center
503-584-7102

Oregon School of Massage Therapy
Portland Campus
9500 SW Barbur Blvd. Suite 100
Portland, OR 97219
503-244-3420

Salem Campus
2111 Front St NE - Building 3
Salem, OR 97301
503-585-8912
Oregon State University
Oregon State University
1500 SW Jefferson Street
Corvallis, OR 97331-2155
541-737-1000
OSU PDX Center
555 SW Morrison Street
Portland, OR. 97204

Oregon State University-Cascades
OSU-Cascades
1500 SW Chandler Ave.
Bend, OR 97702
541-322-3100

Pacific University
Pacific University - Main Campus
2043 College Way
Forest Grove, OR 97116
503-352-6151
Hillsboro Campus
222 SE 8th Avenue
Hillsboro, OR 97123
Eugene Campus
40 East Broadway, suite 250
Eugene, OR 97401
541-485-6812
Woodburn Campus
124 W. Lincoln Street
Woodburn, OR 97701
503-352-1443

Portland Community College
PCC - Sylvania Campus
12000 SW 49th Avenue
Portland, OR 97219
971-722-6111
www.pcc.edu
PCC - Cascade Campus
705 N. Killingsworth St.
Portland, OR 97217
971-722-6111
PCC - Rock Creek Campus
17705 NW Springville Rd.
Portland, OR 97229
971-722-6111
PCC - Southeast Campus
2305 SE 82nd and Division
Portland, OR 97216
971-722-6111
PCC - CLIMB Center for Advancement
1626 SE Water Avenue
Portland, OR 97214
971-722-2798

PCC - Newberg Center
135 Worth Blvd.
Newberg, OR 97132
971-722-8602

PCC - Downtown Center
722 SW 2nd Ave.
Portland, OR 97204
971-722-6642

PCC - Hillsboro Center
775 SE Baseline St.
Hillsboro, OR 97123
971-722-6800

PCC - Portland Metropolitan Workforce Training Center
5600 NE 42nd
Portland, OR 97218
971-722-2000

PCC - Willow Creek Center
241 SW Edgeway Drive
Beaverton, OR 97006

PCC - Swan Island Trades Center
6400 N Cutter Circle
Portland, OR 97217
971-722-5650

Portland School of Radiography
Portland School of Radiography
539 10th Street
Lake Oswego, OR 97034
503-635-0105

Classroom Address:
Olympic Mills Commerce Building
107 SE Washington St. Suite 158
Portland, OR 97214

Portland State University
Portland State University
PO Box 751
Portland, OR 97207
503-725-3000

Reed College
Reed College
3203 Southeast Woodstock Blvd.
Portland, OR 97202-8199
503-771-1112

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Rogue Community College
RCC Redwood Campus
3345 Redwood Highway
Grants Pass, OR 97527-9291
541-956-7500
www.roguecc.edu
RCC Riverside Campus
117 S. Central Avenue
Medford, OR 97501-7221
541-245-7500
RCC/SOU Higher Education Center
101 S. Bartlett
Medford, OR 97501
541-552-8100
RCC Table Rock Campus
7800 Pacific Avenue
White City, OR 97503-1060
541-245-7500

Southern Oregon University
Southern Oregon University
1250 Siskiyou Blvd.
Ashland, OR 97520
541-552-7672

Southwestern Oregon Community College
SWOCC - Coos Campus
Southwestern Community College
1988 Newmark Avenue
Coos Bay, OR 97420
541-888-2525
www.socc.edu
SWOCC - Curry Campus
Curry Campus-Brookings
96082 Lone Ranch Parkway
Brookings, OR 97415
541-813-16687

Springdale Job Corps Center
Springdale Job Corps Center
31224 Historic Columbia River Highway
Troutdale, OR 97060-9340
800-733-5627

Tillamook Bay Community College
Tillamook Bay Community College
4301 Third Street
Tillamook, OR 97141
www.tillamookbaycc.edu
503-842-8222
Tongue Point Job Corps Center
Tongue Point Job Corps Center
37573 Old Highway 30
Astoria, OR 97103-7200
800-733-5627

Treasure Valley Community College
TVCC Main Campus
650 College Blvd.
Ontario, OR 97914
541-881-5811
TVCC-Caldwell Center
205 S. 6th Avenue
Caldwell, ID 83605
208-455-6820
TVCC - Harney County Outreach Center
P.O. Box 756
1100 Oregon Avenue
Burns, OR 97720
541-573-1576

Umpqua Community College
Umpqua Community College
1140 Umpqua College Road
Roseburg, OR 97470
541-440-4600

University of Oregon
University of Oregon
1585 E 13th Ave.
Eugene, OR 97403
541-346-1000

University of Portland
University of Portland
5000 N. Willamette Blvd.
Portland, OR 97203-5798
503-943-8000

University of Western States
University of Western States
2900 NE 132nd Avenue
Portland, OR 97230
503-206-3206
Warner Pacific University
Warner Pacific University
2219 SE 68th Avenue
Portland, OR 97215
503-517-1020

Western Oregon University
Western Oregon University
345 Monmouth Ave. North
Monmouth, OR 97361
503-838-8000

Willamette University
Willamette University
900 State Street
Salem, OR 97301
503-370-6300
School Profiles of Oregon Universities, Colleges, and Training Centers
The Ashland Institute of Massage (AIM) is a small school with a big vision. It offers a holistic approach to the education of body, mind, and heart. AIM is located in Ashland, Oregon, a picturesque town of 20,000 nestled in the southern Rogue River Valley at the confluence of the Klamath, Siskiyou, and Cascade mountain ranges. AIM’s facility includes a large classroom space as well as the Chrysalis Massage Clinic that is utilized for the Student Clinic Experience.

**Academics**
AIM provides a solid foundation in therapeutic and relaxation massage techniques, valuable clinical assessment and treatment skills, business fundamentals, and a greatly enhanced understanding of self and community. Building on a foundation of traditional Swedish massage, our program deepens into myofascial release, neuromuscular therapy, and advanced therapeutic assessment and treatment techniques.

**Program Options**
AIM offers both full-time and part-time massage training programs. The 725-hour Professional Massage Program is designed to develop massage practitioners. The curriculum includes a Human Science and Massage component, combining classroom and hands-on learning for a comprehensive education of mind, body, and heart. AIM offers an eight-month full-time Intensive Day Program and a ten-month Evening/Friday Program. Students who enroll in either program are expected to complete the program with their class cohort in the given time.

**Financial Aid**
No federal financial aid loans are available. Past students have been successful in procuring partial or full assistance through community scholarships, WorkSource Oregon, and Vocational Rehabilitation. Students have frequently accessed the majority of their tuition through Dream Savers, an educational saving program backed by the federal government. The AIM program is also approved for Veterans Education (GI Bill) funding.

**Degree Options**
AIM offers a 725-hour Professional Massage Program that is approved for pre-licensing massage education in the states of Oregon, Washington, California, and Arizona. Additionally, AIM offers continuing education through an evolving variety of high-quality continuing education classes and workshops for licensed massage therapists, and other health care workers.

**Health Career Programs**
Licensed Massage Therapist - CC
For More Information
Ashland Institute of Massage
280 East Hersey Street A-8
Ashland, OR. 97520
541-482-5134
Blue Mountain Community College (BMCC) was established in 1962 to meet the needs of lifelong learners in northeastern Oregon. BMCC serves three counties in this area - Baker, Morrow, and Umatilla - through its locations in Pendleton, Hermiston, Baker City, Milton-Freewater, and Boardman. BMCC also serves Union County through a Center Out of District (COD) in La Grande, and Grant County through a COD in John Day. In addition, BMCC provides selected on-site services to the Confederated Tribes of the Umatilla Indian Reservation. BMCC uses distance education learning modalities to serve residents of the region as well as a small number of students from around the world.

Academics
BMCC provides high quality programs for college preparation, college transfer, professional/technical, workforce development, and self-improvement to strengthen the economy and provide opportunities for personal and professional growth. BMCC is dedicated to enhancing partnerships with other institutions of higher education. One important way of this is by forming articulation agreements. This is designed to help students make a seamless transition when transferring. BMCC currently has articulation agreements in health care fields with: Wenatchee Valley College and the Oregon Consortium for Nursing Education. Additionally, BMCC has degree partnership programs in health care fields with Central Oregon Community College, Linn-Benton Community College, and Oregon State University.

Programs
Associate degrees in the health care fields can be obtained in the specialty areas of Nursing. Additionally, BMCC offers several certificates in health care fields including Dental Assisting, Emergency Medical Technician, Medical Laboratory Technician, Pharmacy Technician, Diagnostic Imaging, and Occupational Therapy Assistant. An Associate of Arts - Oregon Transfer (AAOT) is also available.

Degree Partnership Program (DPP) - the DPP allows undergraduate students to be jointly admitted and enrolled at Oregon State University. DPP is open to all undergraduate students pursing their Bachelor’s Degree.

Early College Credit (ECC) offers academic enrichment opportunities for qualified high school students. ECC gives these students the chance to earn college credit, along with high school credit while continuing their high school courses and activities. Students can earn college credit while still in high school through Dual Credit and Expanded Options. With Dual Credit students earn both high school and college credits while attending their high school course. The high school course provides the same content and outcomes as the BMCC college course. High school courses that meet these requirements are considered ‘articulated’ with a BMCC course allowing the student an opportunity to earn college credit. Expanded Options courses are college courses taken directly from college faculty and paid for by the high school. These
courses cannot be equivalent to coursework offered at the high school but can be used to meet the student’s high school diploma and college degree requirements. Interested students should check with their high school counselor to see which course opportunities area available at their high school.

Student Support Services
BMCC offers a variety of preparatory and supportive services. Preparatory programs include Adult Basic Education (ABE), General Education Development (GED), English as a Second Language (ESL). Academic support includes advising, student success coaches, faculty advisors, career information, Veterans and Service Members services, LGBTQ resources, resume writing, WorkSource Oregon, orientation, tutoring, TRIO, placement and industry testing, tutoring, services for students with disabilities, and learning diagnostics. Partnerships exist with various businesses, area high schools, and other colleges.

Interstate Passport Network - The Interstate Passport is a free program offered by BMCC to make transfer to another participating school in the network smooth and seamless. With the Passport program, it’s possible to graduate without repeating general education courses because you transfer your general education credits as a whole instead of credit by credit. The Passport program makes it easier to transfer because you bring your lower-division, general education credits with you as a block. Western Oregon University and many out-of-state schools participate in this program including Northern Idaho College, University of Utah, Utah State University, Weber State College, Utah Valley University.

Eastern Oregon Collaborative Colleges Council (EOCCC) - BMCC, Treasure Valley Community College (TVCC), and Eastern Oregon University (EOU) have worked together in several academic disciplines to improve articulation opportunities for students, allowing them to share lower division course work among BMCC, TVCC, and EOU.

Articulated Degree Programs - BMCC enjoys articulation agreements with a variety of institutions. These agreements allow you to attain your degree while staying in your area.

Counselor Resources
For more information on Counselor Resources contact the Admissions office at admissions@bluecc.edu or 541-278-5758.

Financial Aid
Approximately 88% of degree-seeking students receive financial assistance ranging from federal and state grants, to scholarships and loans.

Degree Options
BMCC offers Associate of Applied Science (AAS) and Certificate of Completion (CC) in a number of Health Career fields.

Health Careers
Business Administration
Administrative Office Professional: Medical Option -AAS
Administrative Office Professional: Medical Option: Office Receptionist - CC
Administrative Office Professional: Medical Option: Office Support Specialist - CC
Administrative Office Professional: Medical Office Assistant Certificate of Completion - CC
Dental Assisting Technician - CC
Diagnostic Imaging (Radiologic Technology) -
Diagnostic Imaging - AAS
Radiologic Technology - AAS (via distance education through Linn-Benton Community Center)
Emergency Medical Technician - CC, AAS
Fire Science Technology - AAS
Medical Laboratory Technician (MLT) Program - AAS (in partnership with Wenatchee Valley College, and Interpath Laboratory)
Nursing - AAS, BSN (in partnership with Oregon Health & Science University)
Occupational Therapy Assistant Program - AAS (via distance education with Linn-Benton Community College)
Pharmacy Technician Program - CC (via distance education with Central Oregon Community College)
Pre-Veterinary Technician - CC (via distance education with Colby Community College)
Veterinary Assistant - CC

For More Information
Main Campus
P.O. Box 100/2411 N.W. Carden Avenue
Pendleton, OR 97801
541-276-1260
getinfo@bluecc.edu
www.bluecc.edu

BMCC Baker County
3275 Baker Street
Baker City, OR 97814
541-523-9127
bmccbaker@bluecc.edu

BMCC Hermiston
975 S.E. Columbia Drive
Hermiston, OR 97838
541-567-1800
bmcchermiston@bluecc.edu

BMCC Milton-Freewater
311 N. Columbia
Milton-Freewater, OR 97862
541-938-7176
bmccmiltonfreewater@bluecc.edu

BMCC Workforce Training Center (Morrow County)
P.O. Box 939/251 Olson Rd.
Boardman, OR 97818
541-481-2099
bmccmorrowcounty@bluecc.edu

BMCC Grant County
835-B S. Canyon Blvd.
John Day, OR 97845
541-575-1550
getinfo@bluecc.edu
The Caregiver Training Institute (CTI) is a vocational training school offering entry level training school offering entry level training for the medical field in the nursing assistant level and Med Aide programs. The program operates at a facility on SE Stark Street in Portland.

Program Options
There is a Nurse Assistant I (NA-1) is designed so that online students complete the class portion online and do the labs and clinical portions on site. CTI offers day, evening, weekend, and online classes that start weekly, bi-weekly, or monthly. The program is overseen by the Oregon State Board of Nursing (OSBN). Program options include Medication Aide, and Level 1 & 2 certification programs for Nursing Assistant.

Financial Aid
CTI offers a tuition payment plan for the convenience of students. Federal aid is not available however students have found sources of funding through Worksource, Portland SE Works, Human Solutions, and Immigrant & Refugee Community Organization.

Degree Options
CTI offers an Online NA-1 program in addition to the classroom modules for MA, NA-1, and NA-2.

Health Career Programs
Medication Aide - CC
Nursing Assistant Level 1 - CC
Nursing Assistant Level 2 - CC

For More Information
Caregiver Training Institute, LLC
12790 SE Stark Street, Suite 100
Portland, OR 97233
503-257-0117
Central Oregon Community College (COCC) provides comprehensive college services to the residents of its 10,000 square mile district and is the oldest two-year college in Oregon. This district encompasses all of Crook, Deschutes and Jefferson Counties as well as the southern portion of Wasco County and the northern portions of Klamath and Lake Counties.

The main 200-acre main campus is located on the western edge of Bend and has residential facilities. The 25-acre Redmond campus is located near Roberts Field (the primary airport for Central Oregon) and includes the Redmond College Center; the Redmond Workforce Connection and the Manufacturing and Applied Technology Center (MATC). Additionally COCC has campuses in both Madras and Prineville, providing classes and services to the residents of Jefferson and Crook Counties respectively.

All campuses offer credit and non-credit courses and the necessary student services to help assure student success. A branch of Oregon State University is also located in Bend providing students with an opportunity to begin studies at Central Oregon Community College and continue upper division coursework and degree completion at OSU-Cascades.

Academics
COCC offers two-year associate degrees, transfer/lower division programs, career and technical education degrees and certificates, developmental courses, continuing education and community learning classes, industry-specific training programs, and business management assistance. There are over 80 Career and Technical Education (CTE) and Transfer Preparation programs to choose from at COCC.

Programs
Graduates of COCC’s Allied Health programs work as dental assistants, dietary managers, massage therapists, medical assistants and more. Associate degrees can be obtained in specialty areas of apprenticeships, addiction studies, business administration, computers, criminal justice, EMT services, fire sciences, and office administration to name a few. An Associate of Arts Oregon Transfer (AAOT), an Associate of Science (AS), and an Associate of Applied Science (AAS) are also available.

College Now is a program that offers high school students the opportunity to earn college credit while still attending high school. The classes are taught at the high school, during the school day, by COCC approved high school teachers. There are two different types of courses offered through this program. College Now/CTE courses are selected career technical courses which will move students along a Career Pathway, in a Program of Study, leading to a certificate or
Associate of Applied Science degree. Options include courses in allied health, biology, emergency medical technician, and nursing. College Now/Transfer courses can be used to meet COCC certificate or degree requirements or may be transferred to many other community colleges and universities across Oregon and U.S. COCC is currently articulating the following health related courses: math, science, and health & human performance. Contact your high school counselor for offerings in your area.

*Concurrent Enrollment* allows students to take college classes at COCC while enrolled in high school. Students are responsible for all tuition, fees & books.

*Expanded Options* is available to some Central Oregon high school students. The high school pays for associated tuition, fees and books. Contact your high school counselor to determine if you are eligible for this program.

*GED Preparation* includes courses offered by COCC to help students prepare for the GED certification. This certificate indicates you have abilities and competencies similar to high school graduates and is accepted by colleges, training schools, and most employers.

*Post Graduate Scholar Program (formerly Advanced Diploma)* is available at some Central Oregon high schools. The high school pays for associated tuition, fees and books. Contact your high school counselor to determine if you are eligible for this program.

**Counselor Information and Resources**
The COCC Counselor Information & Resources webpage is meant to serve as a guide for high school counselors as they prepare students for transition to college. Links on the webpage provide access to information and resources.

Do your students need to take the placement test? Students can take the test if/when offered at their high school. Sign up should be done through the high school counselor. Oregon students admitted to COCC can make a reservation online. If there are questions contact Enrollment Services at 541-383-7500.

**Student Support Services**
COCC offers a variety of preparatory and supportive services. Preparatory programs include Adult Basic and Secondary Education (ABSE), English Language Learning (ELL). Academic support includes advising, orientation, placement and industry testing, tutoring, personal counseling, services for students with disabilities, learning diagnostics, and career services. Partnerships exist with various businesses, area high schools, and other colleges.

**Financial Aid**
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits and loans. Approximately 52% of certificate/degree seeking students were awarded financial aid (scholarships, grants, or loans).

**Health Career Programs**
- **Addiction Studies** - AAS
- **Biological Sciences** - AAS
- **Chemistry** - AAS
- **Dental Assisting** - CC
- **Emergency Medical Services**
  - **Paramedicine** - AAS
  - **Emergency Medical Technician** - CC
Exercise Science/Kinesiology
Exercise Science/Kinesiology - AAS, AS
Fire Service Administration - AS
General Science - AAS
Health Information Technology - AAS
Coding Competency - CC
Insurance Specialist - CC
Medical Office Specialist - CC
Medical Billing Specialist - CC
Health/Wellness Coaching - AAS
Human Services - AAS
Massage Therapy - CC, AAS
Medical Assistant - CC
Medical Imaging - CC, AS
Nursing
   Nursing Assistant - CC
   Registered Nurse - CC, AAS, BS (in cooperation with Linfield College)
Pharmacy Technician - CC
Pre-Dental Hygiene - CC
Pre-Dentistry - AAS
Pre-Medicine - AAS
Pre-Physical Therapy - AAS
Pre-Physician Assistant - AAS
Pre-Veterinary - AAS
Public Health - AAS
Structural Fire Science - AAS
Veterinary Technician - AAS
Wildland Fire Science - AAS
Wildland Fire Science/Firefighter Type II Certificate - CC

For More Information
COC Main Campus
2600 NW College Way
Bend, OR 97703
541-383-7700
www.cocc.edu

COC Redmond Campus
2030 SE College Loop
Redmond, OR 97756
541-504-2900

Madras Education Center
1170 E Ashwood Road
Madras, OR 97741
541-550-4100

COC Crook County Open Campus
510 SE Lynn Blvd.
Prineville, OR 97754
541-447-9233
Columbia Gorge Community College (CGCC) was established in 1977, and originally offered credit and community education courses through Portland Community College. Over its 40-year history, the college has expanded to serve both Hood River and Wasco counties as its official district, as well as offering educational resources to students from the entire Mid-Columbia region. CGCC has two campuses, the original 62 acre main campus in The Dalles and the 13.5 acre Indian Creek campus in Hood River.

Academics
CGCC offers six Associate degrees, seven Associate of Applied Science degrees, and 14 certificates. The college is the only institution of higher education in the region, offering a gateway to four-year degrees through partner universities across Oregon.

Program Options
Degree Partnership Program (DPP) - the DPP allows undergraduate students to be jointly admitted and enrolled at Oregon State University or Linfield College. DPP is open to all undergraduate students pursuing their Bachelor’s Degree.

College Now (Dual Credit) - College Now allows high school students to earn “dual credits” for college and high school while taking approved college credit courses at their high school. College Now courses are taught by qualified high school instructors during regular school hours at a student's high school and have the same content and outcomes as the course at CGCC.

Early College Program (EC) - The EC program provides students in participating high schools the opportunity to take college courses as part of their high school education. Students can take college courses earning credits towards and Associate of Arts Oregon Transfer (AAOT) degree. Participating institutions include Arlington, Condon, Sherman, and Spray high schools.

Expanded Options (EO) - The EO program allows eligible juniors and seniors in Oregon high schools to take college credit classes at CGCC or online. Contact your high for the EO program eligibility requirements.

Running Start (RS) - The RS program provides academically motivated students in Washington high schools an opportunity to take college courses as part of their high school education. Both high school and college credits can be earned for the complete courses. Contact your high school for the RS program eligibility requirements.

Online Options - CGCC offers both online, hybrid, and web component options. The online option is 100% internet based. The hybrid model is online with some on campus classroom
sessions, face-to-face time is reduced. The web component model is a class with some resources in Moodle with no reduction in classroom time.

**Counselor Resources**
For more information on Counselor Resources at CGCC contact Student Services for The Dalles campus at 541-506-6011 or the Hood River campus at 541-308-8211.

**Student Support Services**
The Advisement Center is available to assist students with course planning, program and career research, and transfer opportunities to other colleges, universities, and training programs. Additionally CGCC provides student support for disability resources, community resources, veterans, placement assessment, student success, and tutoring.

*Pathfinder Career and Transfer Center* - This center offers personalized, one-on-one career counseling and college transfer planning. This includes planning sessions that outline the necessary steps and requirements to transfer to another college or university.

*The Pre-College and College Guidance Department* - This department provides services in a wide range of areas for a variety of students. These include College Guidance, Pre-College Program, General Education Development, Reading, the CGCC Youth Success Program, and Adult and Dislocated Program.

**Financial Aid**
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits, work study, and loans. Approximately 17% of students receive federal loans. CGCC is pleased to offer students the opportunity to apply for and receive full-year and partial-year scholarships through the CGCC Foundation. Additionally there are regional scholarships available through foundations in both the The Dalles and Hood River.

**Degree Options**
The Associate of Applied Science (AAS) and Associate of Science (AS) degrees are intended to prepare you for direct entry into the workforce. The AAS degree may also help you prepare for career advancement, occupational licenses, our study at the baccalaureate level. The Associate of General Studies (AGS) degree is a two-year program designed to provide students the opportunity to acquire a broad education rather than pursuing a specific college major or program. The Associate of Arts Oregon Transfer (AAOT) degree is designed for students planning to transfer into a baccalaureate degree program in the Oregon University System enabling a student to enter as a junior. Certificate of completion (CC) are awarded for occupational content only.

**Health Career Programs**
**Emergency Medical Technician**
- EMT Part I & II - CC
- EMT Intermediate - CC
- Advanced EMT - CC
**Medical Assistant** - CC
**Medical Office Professional** - CC
**Nursing** - AAS, BSN (in cooperation with either Linfield College or Oregon Health Sciences University)
- Nursing Assistant I - CC
**Phlebotomy** - CC
For More Information
The Dalles Campus
400 East Scenic Drive
The Dalles, OR. 97058-3434
541-506-6000

Hood River-Indian Creek Campus
1730 College Way
Hood River, OR. 97031-7502
541-308-8202
Concordia University

Concordia University is a private, Christian, liberal arts university located on 24 acres in a residential neighborhood of Portland. The university opened in 1905 and is affiliated with the Lutheran Church-Missouri Synod and the Concordia University System.

Academics
Concordia provides more than 60 programs of study through five schools and colleges. Additionally, Concordia offers several fully online degree programs including licensure and certificates as well as several MA degrees and one PhD program online.

Program Options
Honors Program - Concordia offers an honors program for incoming freshman that features small, discussion-based classes creating a learning environment where one-on-one relationships with professors and students are valued. Freshmen admitted to the honors program receive an academic scholarship that covers approximately half their tuition cost each year.

Online Programs - Concordia offers a number of programs online that are specifically designed for working professionals. The classroom works around your schedule. These programs are built around instructor-to-student and student-to-student interaction.

Study Abroad - Concordia offers opportunities to explore through study abroad and field study programs. These include two week faculty-led programs as well as field study programs in a variety of locations in conjunction with Concordia's sister college in Austin, Texas. Students also have the opportunity to study abroad for a semester or a year through the Department of International Studies and study abroad organizations as well as a spring semester abroad with the seven national Concordia campuses offered periodically based on student interest.

Counselor Resources
Concordia provides an admission counselor that can serve as an advocate and a resource. For more information on Counselor Resources contact the Admissions office at 503-493-6588 or admissions@cu-portland.edu

Student Support Services
As Freshman all students participate in a Freshman Commitment Class which is designed to help students successfully transition to college, and combines mentorship opportunities, academic training, and professional development. The Wellness Center at Concordia provides counseling services and health services for students. The office of Career Services provides career planning, resume review, interview preparation, as well as job and internship search services. Concordia also provides services through Information and Technology Services, the
Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vig
ten benefits, work study, and loans. 97% of the student population receive financial assistance.
Academic scholarships are awarded to eligible first-year BA or BSN students in the form of merit
scholarships. Additional scholarships are available through university grants, athletic
scholarships, talent awards, and church awards.

Degree Options
As a university Concordia grants Bachelor of Arts (BA) and Bachelor of Science (BS)
degrees in over 20 academic programs. Concordia grants graduate degrees as well as
graduate certificates (MS, PhD) in over seven areas. Additionally, Concordia grants
Adult Degree Completion in five areas.

Health Career Programs
Biology - BA, BS
  Molecular Biology
  Pre-Medical Studies
  Pre-Occupational Therapy
  Pre-Physical Therapy
  Pre-Physician’s Assistant
Chemistry - BA, BS
Computer Information Systems - Minor
Exercise & Sports Science - BA, BS
  Pre-Athletic Training
  Pre-Physical Therapy
Health Care Administration - BS, Online
Homeland Security and Emergency Management - Minor, BS, Online
Long Term Care Administration - BA, BS
Nursing - BSN, Accelerated BSN,
Psychology - BA, BS
  Community Psychology - MA
Social Work - BA

For More Information
Concordia University
2811 NE Holman Street
Portland, OR. 97211
503-288-9371
admission@cu-portland.edu
Chemeketa Community College (CCC) is located in a residential part of Salem. CCC serves nearly 30,000 students each year in a district that covers 2,600 square miles in Marion, Polk, most of Yamhill, and part of Linn counties. CCC began when the Salem School District started the Salem Technical-Vocational School in 1952 with programs in Nursing and Electronics. The college district was formed in 1969. CCC has locations throughout the Mid-Willamette Valley. They include the main campus in Salem, the Yamhill Valley campus in McMinnville, the Brooks-Regional Training Center in Brooks, the Polk County campus in Dallas, the Northwest Wine Studies Center/Eola campus in West Salem, the Woodburn campus in Woodburn, and the Center for Business & Industry in Salem.

**Academics**
CCC offers the first two years of a bachelor’s degree as well as several professional degrees. These include the Associate of Arts Oregon Transfer Degree (AAOT), Associate of Applied Science (AAS), Associate of Science, Associate of General Science, Oregon Transfer Module, Dual Enrollment, as well as Training and Certificate programs. CCC also has an online option that hosts nearly 1200 online courses a year, including 10 degrees, 19 certificates, and short term training needs.

**Program Options**
- **Degree Partnership Program (DPP)** - the DPP allows undergraduate students to be jointly admitted and enrolled at Oregon State University. DPP is open to all undergraduate students pursuing their Bachelor’s Degree.

- **Dual Enrollment** - Dual enrollment and co-admission programs offer the opportunity to achieve educational goals through four Oregon universities; Oregon Tech (OIT), Oregon State University, Portland State University, and Western Oregon University. This includes one application process for both CCC and the university, coordinated financial aid between the schools, advising at either campus, increased flexibility in scheduling and access, and an easier transition from community college to university.

- **General Educational Development (GED) Preparation** - This program provides preparation for a high school equivalency certificate in English or Spanish. These include the four tests covering language arts (writing and reading), social studies, science, and mathematics.

- **High School Equivalency Program (HEP)** - This program provides seasonal workers and their children with a program to earn a GED.
Basic Skills Development (BSD) - This program provides non-credit classes to those college students who would like to improve college placement scores. These include classes offered in the GED program.

English for Speakers of Other Languages (ESOL) - This program offers day and evening classes to improve your ability to understand, speak, read, or write in English. Additionally, students have access to workshops, advising, and language and computer labs.

College Credit Now (CCN) - This program provides high school students with an opportunity to earn CCC credits while still in high school. Courses are taught at the high school by qualified instructors. Participating high schools include Amity, Blanchet, Cascade, Central, Churchill, Colton, Cottage Grove, Dallas, Dayton, Gervais, Jefferson, John F. Kennedy, McKay, McMinnville, McNary, Mountain View, Newport, North Marion, North Salem, Regis, Santiam, Sheridan, Silverton, South Eugene, South Salem, Sprague, St. Paul, Stayton, Woodburn, West Albany, West Salem, Willamina, and Yamhill-Carlton high schools, and Oregon Connections Academy, and Willamette Valley Christian Academy. For more information about the courses available through each high school contact your high school counselor.

Transition to Early College (TEC) - The TEC program is an opportunity for students from Woodburn Success Alternative High School that have completed the majority of their high school credits prior to the end of the school year. This program is designed to support a seamless transition from high school to college level programs.

Plaza Program - This program at the Woodburn campus allows students between 16 and 20 years the opportunity to take Spanish GED and ESOL classes.

Early College - CCC’s high school partnerships in Woodburn provides students with an opportunity to take college courses and earn both college and high school credit at the same time. This unique high school completion program is available at both our Salem and Woodburn locations. CCC also offers a similar program with the Salem/Keizer school district.

High School Completion Program/Winema - The Winema program runs on an accelerated schedule. Day and afternoon classes are offered to allow high school coursework to complete on a college campus. This allows students a fresh start socially and academically in order to obtain a high school diploma.

Early College/Dual Credit - This program through CCC allows a student to earn high school and college credit simultaneously. This provides the unique opportunity to work toward a high school diploma and a college certificate or degree simultaneously.

Mid-Willamette Education Consortium (MWEC) - This regional partnership was formed to promote career technical education and extended learning opportunities in the region. The MWEC is comprised of 23 high school districts, two community colleges (Chemeketa and Oregon Coast), the Willamette Education Service District, and a variety of business and industry partners in the region. This consortium serves the region by leading the Perkins Consortium for Career and Technical Education, facilitate training, and provide Professional Learning Communities.

Study Abroad - CCC offers service learning abroad programs to Nicaragua and Mexico and one study abroad program to Japan. The Director of International Programs can also assist students who would like to pursue a different study program abroad.
Counselor Resources
CCC provides CCN advisors to help high school counselors provide students with an awareness of the implications of that program in order to make an informed decision. CCN advisors are available at 503-584-7349. CCC can provide high school counselors with information on which classes are available at specific high schools and how these courses can count toward a specific career pathway.

Student Support Services
CCC’s Advising Services provides academic advising for both new and continuing students as well as assisting with academic, career, and life transitions. CCC’s Counseling Services assists students through their academic, career, and life transitions, as well as to empower individuals through knowledge and career preparation, and personal effectiveness. Career Services supports Chemeketa students and alumni through all stages of their career development.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, work study, and vet benefits and loans. Approximately 41% of students receive federal loans. CCC participates in the Oregon Promise program which covers most tuition at any Oregon community college for recent high graduates and GED recipients. The Chemeketa Scholars program provides qualifying students with two years of tuition in any field of study, including career technical programs. Additionally, the Chemeketa Foundation has over 100 different scholarships available in which a student can apply for consideration.

Degree Options
The Associate of Applied Science (AAS) and Associate of Science (AS) degrees are intended to prepare you for direct entry into the workforce. The AAS degree may also help you prepare for career advancement, occupational licenses, our study at the baccalaureate level. The Associate of Arts Oregon Transfer (AAOT) degree is designed for students planning to transfer into a baccalaureate degree program in the Oregon University System enabling a student to enter as a junior. Certificate of completion (CC) are awarded for occupational content only.

Health Career Programs
Addiction Studies - AAS
Anesthesia Technology Program - AAS, AAOT
Biology - AAOT
Business Technology
   Medical Administrative Assistant - AAS
Chemistry - AAOT
Computer Systems and Information Technology - AAS
Dental Assisting Program - CC
Dental Hygiene Program - AAOT
Emergency Medical Technology - AAS
   Paramedic Program - AAS
   Paramedicine Program - AAS
Fire Prevention Technology
   Fire Service Supervision and Management - CC
General Science - AAOT
Health/Health Ed - AAOT
Health Information Management
   Basic Health Care - CC
   Health Information Management - AAS
Human Services
Addiction Counselor Certification Preparation - CC
Addiction Studies - AAS
Social Services - AAS
Medical Administrative Assistant - AAS
Medical Assisting Program - CC
Nursing
Practical Nursing - CC
Nursing - AAS, AAOT
Nutrition and Food Management - AAOT
Paramedicine - AAS
Pharmacy Programs
Pharmacy Technician - CC
Pharmacy Management - AAS
Physical Education and Human Performance - AAOT
Psychology - AAOT
Social Service - AAS
Speech Language Pathology Assistant - AAS

For More Information
Main Campus
4000 Lancaster Drive NE
Salem, OR. 97305-1453
503-399-5000

Polk Campus
1340 SE Holman Ave.
Dallas, OR. 97338
503-623-5567

Yamhill Valley Campus
288 NE Norton Lane
McMinnville, OR. 97128-9508
503-472-9482

Woodburn Campus
120 E. Lincoln St.
Woodburn, OR. 97071-5024
503-981-8820

Brooks Campus
4910 Brooklake Rd. NE
Brooks, OR. 97305
503-399-5163

Eola Campus
215 Doaks Ferry Rd. NW
Salem, OR. 97304-4138
503-584-7272
Clackamas Community College

Clackamas Community College (CCC) serves Clackamas County, a part of the Portland Metropolitan area. The community college district was founded in 1966 and moved to a permanent site in 1969. The main campus consists of 165 acres and is located in Oregon City. Additional campuses are located in Wilsonville and Milwaukee. The Wilsonville campus offers a variety of apprenticeship, technical training and general education courses tailored toward an Associates of Arts Oregon Transfer Degree (AAOT). The Harmony campus in Milwaukee is home to health education programs as well as courses towards an Oregon transfer degree. The Harmony campus is located close to Clackamas Town Center and the Green Line light rail. A free shuttle connects the Harmony and Oregon City campus during school hours.

Academics
CCC provides many academic options. These include options to earn a one-year certificate or two-year technical degree. Students can also begin working on a bachelor’s degree before transferring to a university. Additionally, CCC also offers basic education, GED prep, and college credit for high school students.

Program Options
Degree Partnership Program (DPP) - the DPP allows undergraduate students to be jointly admitted and enrolled at Oregon State University. DPP is open to all undergraduate students pursing their Bachelor’s Degree.

GED & Adult Programs - CCC offers you several ways to complete your GED or high school diploma and build skills in reading and math to help students meet their work, education and personal goals. Program locations include the Oregon City Campus Smart Learning Lab and the Harmony Campus ESL & GED Services Office. CCC offers day and evening GED classes at both of these campuses. The CCC Adult High School Diploma (AHSD) provides a pathway to complete high school if a student has earned at least 14 high school credits. Additionally, CCC offers Adult Basic Education (ABE) classes with a focus on basic skills education in reading and math.

Advanced College Credit (ACC) - ACC provides eligible high school students the opportunity to experience more challenging coursework and begin earning college credit while still enrolled in high school. Credits students earn through the ACC program can apply directly to certificates and degrees at CCC, or may be transferable directly to other colleges and universities. The dual credit program at CCC allows student to earn both high school and college credit for some of their high school courses that have been reviewed and approved by CCC. For more
information contact High School Connections at 503-594-3161, hsconnections@clackamas.edu, or ACC at 503-594-3499, accinfo@clackamas.edu.

**Expanded Options (EO)** - The EO program allows individual students to take classes at the college or online paid for by their school district while they are still in high school. Schools participating in EO include: Alliance Charter Academy, Baker Early College, Clackamas Academy of Industrial Sciences, Clackamas Web Academy, Metro East Web Academy, Oregon City Service Learning Academy, Oregon Virtual Academy, Renaissance Public Academy, Sheridan All Prep Academy, Summit Learning Charter, and Canby, Estacada, Milwaukie, Molalla, New Urban, Rex Putnum, West Linn, and Wilsonville Art & Technology high schools. Students wishing to participate in this program should talk to their high school counselor.

**High School Career Technical Education (CTE)** - High School CTE courses are classes held on the CCC campus and taught by CCC faculty. Students participate in manufacturing, engineering, automotive, and welding with other high school students. Classes are paid for by the high school. Participating high schools include; Clackamas Academy of Industrial Sciences, Clackamas Middle College, Oregon City Service Learning Academy, and Canby, Gladstone, Molalla, and Oregon City High Schools.

**CTE Summer Camps** - Clackamas County students entering 9th-12th grade can earn college credits in one of four hands-on summer camps. The camps include the areas of Health Sciences, Horticulture, Industrial Technology, Invention.

**High School Plus** - High School Plus classes are college courses taught by CCC instructors at partner high schools and designated locations during the regular school day. High schools participating in High School Plus include; Clackamas Academic of the Industrial Sciences, Clackamas Middle College, and Canby, Gladstone, Lake Ridge, Lake Oswego, North Marion, Sherwood, Tualatin, West Linn, Wilsonville Arts and Technology, and Wilsonville high schools.

**Clackamas Promise** - The Clackamas Promise is a grant-funded, regional partnerships that gives high school students access to accelerated college credit courses in science, technology, engineering, math, as well as CTE classes. The grant includes a partnership with CCC, Oregon Institute of Technology, Clackamas Education Service District and the following school districts; North Clackamas, West Linn-Wilsonville, Canby, Molalla River, Gladstone, Oregon City, Estacada, and Colton school districts.

**Smart Internship Program** - This provides opportunities for students to participate in internships at training sites and earn college credit. This involves a partnership between CCC, a high school/agency, the student, and an employer (training site). Students can learn more about this program through the SI program at 503-594-3161 or hsconnections@clackamas.edu.

**Counselor Resources**
For more information on Counselor Resources contact the Admissions Welcome Center at 503-594-3284 or welcome@clackamas.edu or the High School Connections program at 503-594-3161, hsconnections@clackamas.edu.

**Student Support Services**
CCC provides a wide variety of student support services. The Learning Center provides opportunities for tutoring and academic support as well as access to a variety of computer labs. Additionally the Learning Center provides Math labs, the Writing Center, Technology tutoring, as well as Smarthinking/Online tutoring. The Advising center provides new students, students transferring to CCC, and returning students with ongoing academic advising.
Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits, work study, and loans. Approximately 41% of students receive federal loans. CCC awards more than $500,000 annually in scholarships, which includes the ability to apply for over 225 scholarships with one application. Additionally, CCC’s student government offers a variety of small grants to help students meet their goals and graduate.

Degree Options
The Associate of Applied Science (AAS) and Associate of Science (AS) degrees are intended to prepare you for direct entry into the workforce. The AAS degree may also help you prepare for career advancement, occupational licenses, our study at the baccalaureate level. The Associate of General Studies (AGS) degree is a two-year program designed to provide students the opportunity to acquire a broad education rather than pursuing a specific college major or program. The Associate of Arts Oregon Transfer (AAOT) degree is designed for students planning to transfer into a baccalaureate degree program in the Oregon University System enabling a student to enter as a junior. Certificate of completion (CC) are awarded for occupational content only.

Health Career Programs
Alcohol and Drug Counselor - CC
Basic Health Sciences - CC
Biology - AS
Clinical Laboratory Assistant - CC
Computer and Network Administration - CC
Dental Assistant - CC
Emergency Medical Technology - CC
Fitness Technology - CC
Gerontology - CC
Gerontology for Health Care Professionals - CC
Medical Assistant - CC
Nursing - AAS
  Nursing Assistant - CC
  Nursing Assistant Gerontology Specialist - CC
Wildland Fire Management - AAS
Wildland Firefighter - CC

For More Information
Clackamas Community College
Oregon City Campus
19600 Molalla Avenue
Oregon City, OR 97045
503-594-6000

Harmony Campus
7738 SE Harmony Road
Milwaukee, OR 97222
503-594-0620

Wilsonville Campus
29353 SW Town Center Loop East
Wilsonville, OR 97070
503-594-0940
Clatsop Community College

Clatsop Community College (CCC) is a comprehensive two-year community college with a service that includes Clatsop county, and portions of Columbia and Tillamook counties in Oregon, and Pacific and Wahkiakum counties in Washington state. Campuses include the Lexington campus and Performing Arts Center in Astoria, the Marine and Environmental Research and Training Station located south of Astoria, and the South County Campus in Seaside. Other communities which CCC serves include Warrenton, Knappa, Clatskanie, Rainier, and Westport in Oregon, as well as Long Beach, Ilwaco, Seaview, and Naselle in Washington state.

Academics
The academic division of CCC provides learning opportunities to a wide variety of academic options. These include provides lower division transfer credit, a variety of courses and programs to prepare for employment, basic skills courses and programs as well as life-long learning opportunities.

Program Options
Degree Partnership Program (DPP) - the DPP allows undergraduate students to be jointly admitted and enrolled at Oregon State University. DPP is open to all undergraduate students pursuing their Bachelor’s Degree.

Credit for Other Learning - At Clatsop, students can earn credit for other learning experiences through cooperative work experience, credit by examination, and credit for prior learning. Additionally, the college works in conjunction with various professional associations and employers to offer continuing education units (CEU’s) as a form of certification for the successful completion of specified occupational instruction.

Simultaneous Enrollment - This program is a great opportunity for high school students to attend CCC. Students simultaneously earn credit toward high school graduation requirements and college credits from a regionally accredited community college. Students usually take one or two classes at Clatsop and continue attending high school for their other classes.

College Bridge Program - The purpose of this program is to motivate participants to consider attending college. CCC works closely with the local high schools in Clatsop county to provide information that supports and reinforces college planning efforts. College Bridge Programs are tailored to the individual needs of each school.

College Now - This program allows students to earn CCC credits for completing competencies mastered in certain selected local high school courses, Tongue Point Job Corps Center programs, or US Coast Guard training programs. Through an agreement between CCC and regional schools and training facilities, students can earn both secondary school or training
credits, as well as college credits upon satisfactorily completing identified competencies mastered in their classes or training.

**Dual Credit and Coastal Commitment Programs** - These programs allow students to take college level academic coursework while enrolled in high school with instruction taking place in high school. Students interested in this program should contact their high school counselor.

**MERTS High School Program** - CCC, and Astoria, Jewell, Knappa, Seaside, and Warrenton-Hammond school districts seek to provide leadership in the development of professional technical programs for Clatsop County. In doing so, CCC and the school districts provide introductory and intermediate classes to high school students at CCC’s Marine and Environmental Research and Training Station (MERTS) and Integrated Manufacturing Technology Center (IMTC) campus. Classes in this program are taught by faculty provided by the college and who meet minimum College qualifications. Students should contact their high school counselor to see if their high school participates in this program.

**Perkins CTE** - The Perkins CTE program at Clatskanie High School provides program roadmaps and identifies high school and college classes the provide educational opportunities for career and college readiness in Nursing.

**Running Start** - Running Start allows eligible Washington high school juniors and seniors to attend college part-time or full-time and receive both high school and college credit. Washington high school students are eligible to attend CCC as Running Start students.

**Simultaneous Enrollment (SE)** - SE allows high school students to attend classes at CCC. Students simultaneously earn credit toward high school graduation requirements and college credits from a regionally accredited community college.

**TRiO Pre-College** - TRiO is a nationwide series of educational opportunity programs designed to help low income, first generation, and/or disabled Americans enter and graduate from college. TRiO Pre-College programs at CCC include Talent Search and Upward Bound. Talent Search provides information, advising, tutoring, college visits, and application to 6th-12th grade students in the Astoria, Warrenton, Seaside, and Knappa school districts. Upward Bound provides intense advising, academic support, and a six-week summer enrichment program for a select group of students from the Astoria, Warrenton, and Seaside school districts.

**Workforce Alliance** - This community partnership developed to assist with skill enhancements of the emerging workforce. Local high schools, the Northwest Regional ESD and CCC have partnered to improve the connections between Oregon schools, alternative schools, community colleges, and regional employers. Through this partnership high school youth will attend high school classes, workforce readiness classes and then move into high demand, high growth real world internship opportunities. Students have the opportunity to earn high school as well as community college credit. Students should contact their high school counselor for more information on this program.

**Lives in Transition (LIT)** - LIT is designed to support adult learners complete or continue their education. The LIT program is able to encourage students to develop greater self-awareness about their educational goals, enhance self-esteem, overcome personal barriers, and establish clear career directions. The LIT program is comprised of two, free college classes, taught over one or two terms.
Counselor Resources
CCC is in the process of constructing a high school counselor resource page with information for degree and certificate students. There is information currently on dual enrollment opportunities, simultaneous enrollment information, running start information, and CCC scholarships & deadlines through the high school counselors tab. Additional information can be found by contacting the office of Admissions for assistance at 503-338-2417 or admissions@clatsopcc.edu.

Student Support Services
CCC offers a number of support services to students while they are taking classes. These services include the following: academic advising, career services, counseling services, disability services, math assistance center, tutoring, veterans benefits, and the writing center.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits, work study, and loans. Approximately 14% of students receive federal loans.

Degree Options
The Associate of Applied Science (AAS) and Associate of Science (AS) degrees are intended to prepare you for direct entry into the workforce. The AAS degree may also help you prepare for career advancement, occupational licenses, our study at the baccalaureate level. The Associate of General Studies (AGS) degree is a two-year program designed to provide students the opportunity to acquire a broad education rather than pursuing a specific college major or program. The Associate of Arts Oregon Transfer (AAOT) degree is designed for students planning to transfer into a baccalaureate degree program in the Oregon University System enabling a student to enter as a junior. Certificate of completion (CC) are awarded for occupational content only.

Health Career Programs
Biology - AAOT
Chemistry - AAOT
Diagnostic Imaging - AAOT
Emergency Medical Technician - CC
Fire Science - AAS
Medical Assistant - CC
Medical/Pharmacy (Pre-Professional) - AAOT
Nursing - AAS
Nursing Assistant - CC
Psychology - AAOT
Veterinary Medicine (Pre-Professional) - AAOT

For More Information
Clatsop Community College
1651 Lexington Ave.
Astoria, OR. 97103
503-325-0910
The College of Osteopathic Medicine of the Pacific - Northwest, Western University of Health Sciences (COMP-NW) supports Western University of Health Science in its mission to increase the availability of Physicians to serve the needs of the people living in the western region of the University States. COMP-NW is a non-profit, private, medical school for osteopathic medicine and is operated in partnership with Samaritan Health Services. The campus is part of the 50-acre Samaritan Campus Center adjacent to Lebanon Community Hospital. When the college opened in 1977, it was the only osteopathic medical school west of the Rocky Mountains. The main campus is located in Pomona, CA, and features 8 colleges in addition to COMP, each offering professional degrees in various fields of healthcare. In 2011, COMP opened a branch campus in Lebanon, Oregon called COMP-NW. Currently, only the medical program is offered at the Lebanon campus.

Academics
COMP's curriculum consists of four years of full-time academic and clinical programs. Two years of preclinical studies on campus integrating case based learning and two years of clinical education. COMP-NW shares lectures streamed from both the Lebanon and Pomona campuses.

Program Options
As of 2015 COMP-NW requires confirmation of a baccalaureate degree as a requirement of matriculation. This includes completion of the majority of prerequisite courses listed on the college admission's website (prospective.westernu.edu), completion of a minimum of 90 semester units from a regionally accredited U.S. institution or its equivalent abroad at time of applications, submitted MCAT scores, and two letters of recommendations. See the school website for more specific information.

Counselor Resources
For more information on Counselor Resources contact COMP-NW at 541-259-0200.

Student Support Services
The Office of Student Affairs is an advocate for collective and individual student needs. The office connects students to resources based on their individual needs. This includes a wide variety of areas from student performance committee preparation, advising, career.
development, and a clinical rotations office. Learning Enhancement & Academic Development (LEAD) specializes in six main topics that support students through their academic journey. The main areas include: one-on-one academic counseling, tutoring, the annual Summer Preparedness and Readiness Course, the Wellbeing Initiative, Mindfulness Meditation Training & Practice, and various workshops relevant to student life.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, veteran benefits, work study, and loans. COMP-NW offers several search engines, both affiliated with WUHS and other medical-related scholarship services. Students who are committed to serving in a service organization (armed forces, underserved populations) upon graduation may be eligible to apply for scholarship or loan repayment opportunities with that organization. Additionally, if a student resides in one of 10 western states (Alaska, Arizona, Commonwealth of the Northern Mariana Islands, Colorado, Hawai’i, Montana, Nevada, New Mexico, North Dakota, Utah, Wyoming) enables students to enroll in selected out-of-state professional programs usually because those fields of study are not available at public institutions in their home states. For more information contact the Financial Aid Office at 541-259-0200.

Degree Options
COMP-NW offers a Doctor of Osteopathic Medicine (DO) degree. Beyond their basic and medical training Osteopathic physicians in the program receive training in Osteopathic Manipulative Medicine (OMM). OMM enables physicians to treat their patients with the appropriate combination of medical procedures, medication, and body manipulation.

Health Career Programs
Osteopathic Medicine - DO

For More Information
College of Osteopathic Medicine of the Pacific - Northwest (COMP-Northwest)
200 Mullins Drive
Lebanon, OR 97355
541-259-0200
Corban University originally began as the Phoenix Bible Institute in 1935. After moving the campus to Oakland, CA and later to El Cerrito, CA, the campus moved to a new 100-acre campus in Salem. In 2005, the school's name was changed to Corban College in 2005. The term Corban references the ancient Hebrew expression of ‘a gift dedicated to God’. University was added to the title in 2010. The campus has grown to 222 acres in the southeastern part of Salem, part of which was Oregon Institute for the Deaf and the Oregon State Tuberculosis Hospital. The school also operates the Corban School of Ministry in Tacoma, Washington.

Academics
Corban offers undergraduate and graduate studies in four schools, an online program, a Bible college, and graduate school. Students are required regardless of major to complete a minimum of 18 semester units of Bible classes and 50 hours of community outreach. Every program combines academic excellence with Christian principles and purpose, integrating a biblical worldview in every class.

Program Options
Honors Program - The Corban Honors Program provides highly-motivated students in any major with academic enrichment above and beyond the regular undergraduate curriculum. Honors students interact with distinguished scholars at special events and take at least three honors-level courses.

Pre-College - Corban’s pre-college program lets high school seniors in the local Salem area attend classes at Corban’s campus and learn directly from faculty.

Dual Credit - With dual credit high school seniors can take approved courses at their high school, taught by teachers, and receive both high school and college credit. Students at select schools may also take online courses through Corban for dual credit.

Study Abroad - Corban offers more than a dozen study abroad programs that will enhance the college experience. Corban students can also participate in any BestSemester program offered by the Council for Christian Colleges & Universities. Additional opportunities exist through the GO ED programs, Corban’s Center for Global Engagement, and the university’s study tours program.

Corban Debate - Corban Debate is open to any Corban student (no experience necessary) interested in gaining skills in creativity, logic, critical thinking, mutual respect, research, leadership, public speaking, team-building, oral delivery techniques, constructive criticism, and confidence building. The British Parliamentary teams compete against teams from around the Pacific Northwest and the rest of the country.
Reach - The Reach program allows students to put their faith to work in community service projects focusing on hunger and housing, education and literacy, justice and dignity, or creation care. This is part of Corban’s service requirement for all traditional undergraduates.

Counselor Resources
Corban’s Admissions Office has counselors specifically assigned to all parts of Oregon, the Pacific Northwest, and the rest of the country. For further information on Counselor Resources or to contact the counselor for your area, contact the Admissions Office at 503-581-8600 or admissions@corban.edu.

Student Support Services
The Office of Student Life seeks to foster student learning that results in meaningful growth. Services provided include counseling services, health resources, and The Barn (design lab, gallery, milkshead/symposiums, woodshop). For more information on student support services contact the Office of Student Life at studentlife@corban.edu.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits and loans. Approximately 81% of certificate/degree seeking students were awarded financial aid (scholarships, grants, or loans). Academic scholarships are automatically awarded to incoming freshmen who meet certain academic criteria. The university also offers grants and talent scholarships on the basis of merit. Corban is the first college in Oregon to participate in the SAGE Scholars Tuition Rewards, a free college savings program.

Degree Options
Corban offers a wide variety of undergraduate, graduate, and doctoral programs, both on campus and online.

Health Career Programs
Biomedical Sciences - BS
Counseling - MA
Exercise Science - BS
Forensic Psychology - BS
Health Science (Pre-Med) - BS
Pre-Counseling/Clinical Psychology - BS, BS (Online)
Pre-Physical Therapy - BS
Psychology - BS

For More Information
Corban University
5000 Deer Park Dr. SE
Salem, OR. 97317
503-581-8600
Eastern Oregon University

Eastern Oregon University is located in La Grande, Oregon and serves as a regional center for education, culture, and scholarship. EOU plays a vital role providing greater access to higher education in rural areas of the state. The small size of the campus and supportive learning community enhances the quality instruction and personal attention students receive. A broad choice of liberal arts, sciences, and professional programs are available.

Regional centers and off-site programs extend exceptional learning opportunities to students from nearly every part of the globe through the university’s nationally recognized distance education program. Unique among most public colleges and universities in the U.S., all undergraduate students pay the same in-state tuition.

Academics
EOU has high quality academic programs, a faculty committed to excellence, and small classes where emphasis is on the students. Academic programs as EOU are offered through the College of Arts, Humanities, and Social Sciences, the College of STM & Health Sciences, and the Colleges of Business and Education. In addition, the baccalaureate degree in Nursing through the Oregon Health Sciences University are offered on this campus. Students have access to mainframe and personal computers, and a library with national on-line computerized search capabilities.

Programs
Students may choose from the school's 30 bachelor degree programs with a cooperative program in nursing (Oregon Health Sciences University).

Student Support Services
EOU offers peer tutoring, personal counseling, career advice, internship opportunities, and job placement services which include resume writing and interviewing skills. Students enrolled for a minimum of eight credit hours can receive general medical care from Student Health Services.

EOU Online Center
The EOU Online option allows students to access education wherever they call home. Regionally accredited and flexible programs help a student earn a degree with ease. Online bachelor degree options in the health care careers include Emergency Medical Services Administration, Fire Services Administration (FSA), Physical Activity and Health (Exercise Science, Community Health), and Emergency Medical Services Administration.

EOU offers courses in three delivery modes - on campus, online, and onsite. For online courses, students are required to have access to an Internet-connected computer and a web browser, such as Internet Explorer, Netscape, or Mozilla. EOU online and onsite courses rely
heavily upon the use of email for communication with your instructors. This requires the use of an EOU email account.

Additionally EOU offers center locations to bring high quality programs to students outside the EOU main campus in La Grande. Each center provides online advisors to support adult students. Advisors are a personal coach that works alongside the student from admissions to graduation. EOU operates Online Centers in the following communities; Bend (Deschutes, Crook, and Jefferson Counties), Burns (Klamath, Lake, and Harney Counties), Enterprise (Wallowa and Union Counties), Gresham, Hermiston (Hermiston and Columbia Gorge Region), John Day (Grant County), Ontario (Ontario, Nampa, Caldwell, and surrounding area), Pendleton (Pendleton and Southeast Washington), Portland, Roseburg (Roseburg and Coos Bay areas), and Salem (Salem, Astoria, and Western Oregon).

Fast Track Transfer Pathway
EOU strives to provide a seamless transition from our community college partners. Community Colleges that have partnered with EOU include; Blue Mountain, Central Oregon, Chemeketa, Clackamas, Clatsop, Columbia Gorge, Klamath, Lane, Linn-Benton, Mount Hood, Portland, Rogue, Southwestern, Treasure Valley, and Umpqua Community Colleges.

Accelerated Credit Options
EOU recognizes that people pursuing distance education degrees often have extensive learning from prior jobs, educational programs, travel, and other life experiences. EOU provides multiple educational options in which this learning can be documented for academic credit, enabling students to apply their prior learning directly to their degree. These options include transfer credit, assessment of prior experiential learning, and agency sponsored learning.

Health Careers
EOU provides several opportunities to earn bachelor degrees and certifications in the area of health care.

Animal Science - Minor (in partnership with Oregon State University)
Biology - Minor, BA, BS
Molecular Biology
Chemistry-Biochemistry - Minor, BA, BS
Emergency Medical Service Administration - Minor (Online)
Fire Services Administration - BA (Online)
Health Studies - Minor, Online
Nursing - BSN (in partnership with Oregon Health & Sciences University)

Physical Activity & Health
Exercise Science - BA, BS,
Community Health - BA, BS

Pre-Professional Programs
Pre-Dental Hygiene
Pre-Dentistry
Pre-Medicine
Pre-Nursing
Pre-Optometry
Pre-Pharmacy
Pre-Physical Therapy
Pre-Physicians Assistant
Pre-Veterinary Medicine
Psychology - Minor, BA, BS, Online
George Fox University

George Fox University (GFU) is a Christian university of liberal arts and sciences and professional studies. The school was founded as a school for Quakers in 1885 as Friends Pacific Academy. The Academy became a four-year school in 1925. The school’s name changed to George Fox College in 1949 to honor George Fox, the founder of the Quaker movement. In 1996, the college merged with Western Evangelical Seminary to form George Fox University. The residential campus of 108 acres is located in Newberg, located southwest of Portland. Classes are also taught in Portland, Salem, and Redmond, Oregon.

Academics
George Fox grants bachelor’s, master’s, and doctoral degrees. The university is a participant in the Richter Scholars program, which sponsors 15-25 students per year to perform original research. The university offers more than 40 majors, adult degree programs, six seminary degrees, and 12 master’s and doctoral degrees.

Program Options
*William Penn Honors Program (WPHP)* - The WPHP, an alternative general education track at GFU, offers an intensive journey through nearly 140 of the greatest works in history. It is designed to further enrich your major field of study and distinguish you as a person of faith with uncommon understanding.

*Study Abroad* - GFU offers a number of opportunities to study abroad. The Juniors Abroad program are three-week trips with airfare and program costs funded by the university under the guidance of faculty mentors. The National Semester Program offers students to study in the American Studies Program, Contemporary Music Center, LA Film Studies Center, a Mission Year, or the National Theater Institute, in different parts of the United States. The Study Abroad program offers the opportunity to study overseas in over 25 countries. The Summer Serve program allows students the opportunity to serve on short-term mission trips in one of 10 countries. More than 50% of GFU undergraduate students travel overseas during their undergraduate studies.

Counselor Resources
For more information on Counselor Resources contact the Office of Undergraduate Admissions at 503-554-2240 or admissions@georgefox.edu.

Student Support Services
GFU provides a wide variety of student support services. These include the Academic Resource Center, Health & Counseling Services, the IDEA Center (Career Services), Institutional Technology, and Student Life.
Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits and loans. Approximately 74% of certificate/degree seeking students were awarded financial aid (scholarships, grants, or loans).

Degree Options
To complete an undergraduate academic program at GFU, a student must select a major to pursue one of two general degrees (the Bachelor of Arts (BA) or the Bachelor of Science BS) or the professional degrees (the Bachelor of Science in Athletic Training or the Bachelor of Social Work). A course of study includes three basic components: general education, the major field, and supporting and/or elective courses. Minor fields are optional and are composed of elective courses that have been packaged for identification on a vocational purpose or an interest. The Adult Degree programs are accelerated bachelor’s degrees that enable working adults returning to college to finish their degree in as few as 16 months. Additionally GFU offers several graduate programs in the field of Health Care.

Health Career Programs
Biochemistry - BS
Biology - Minor, BS
Biomedical Engineering - Concentration
Cell & Molecular Biology - Concentration
Chemistry - Minor, BS
Clinical Mental Health Counseling - MA (Salem)
Cognitive Science - BS
Cyber Security - Concentration
Exercise Science - BS
Fitness Management - Concentration
Health - Minor
Health Teaching - Minor
Health Administration - BA (Portland)
Health & Human Performance - BS
Information Systems - Minor, BS
Kinesiology
Exercise Science - BS
Health & Human Performance - BS
Nursing - RN to BSN (Salem)
Physical Therapy - DPT
Biomedical Engineering - BS
Exercise Science - BS
Pre-Professional
Pre-Dental
Pre-Medicine
Pre-Pharmacy
Pre-Veterinary
Psychology - Minor, BS, PsyD
Social & Behavioral Studies - BA (Portland)
Social Welfare - Minor
Social Work - BS, MSW (Portland)
For More Information
George Fox University
414 N. Meridian St.
Newborn, OR 97132
503-538-8383

Portland Center
12753 SW 68th Avenue, suite 185
Portland, OR 97223
503-554-6100

Salem Site
4910 Brooklake Road NE
Brooks, OR 97305
971-239-4930

Redmond Site
4555 Elkhorn Ave.
Redmond, OR 97756
541-504-3617
Klamath Community College (KCC) is a two-year college located in Klamath Falls, Oregon. KCC's primary service area is Klamath County and Lake County in South Central Oregon.

**Academics**
KCC is a small community college offering career, technical, and online degrees. Additionally, KCC offers distance education through online classes.

**Program Options**

*Career Pathways* - KCC can ease the transition from high school to community college, from pre-college courses to credit postsecondary programs; and from community college to university or employment. KCC offers a variety of programs to prepare students for a range of career fields including Associate of Applied Science (AAS) degrees, One-Year Certificates of Completion (CC) and Career Pathways Certificates.

*Distance Education* - KCC offers online (distance education) courses, degrees, and certificates through distance education. Included in the degree offerings is the Associate of Arts Oregon Transfer (AAOT), that allows for transfer to all public and some private colleges and universities in Oregon.

*Degree Partnership Program (DPP)* - the DPP allows undergraduate students to be jointly admitted and enrolled at Oregon State University. DPP is open to all undergraduate students pursuing their Bachelor's Degree.

*College Now* - KCC partners with several area high school to offer “College Now” to their students. This program assists in the planning and coordinating of bringing high school students onto the KCC campus to take courses and have an actual on-campus experience. This program is supported and paid for by the districts. Please see your high school counselor for details and requirements.

*College Online* - Through several local high schools, KCC offers high school students distance education courses, often referred to as online courses, at no cost to the student. This program is supported and paid for by the districts. Please see your high school counselor for details and requirements.

*Dual Credit* - KCC partners with high schools across Oregon, and recently California, to provide dual credit course options to their students. Students receive college credit while taking required courses necessary for high school graduation. Dual credit is free to in-state students and at a much discounted rate for out-of-state students. Ask your high school counselor what courses are available at your high school and for instruction on how to register.

*Synchronous* - KCC partners with several high schools in Klamath County (through the Learning Resource Center) and Lake County (through the Innovation and Learning Center) to bring
synchronized course options to these high schools. Courses This program is supported and paid for by the districts. Please see your high school counselor for details and requirements.

Oregon Transfer Module (OTM) - The OTM is an approved 45-unit subset of general education courses (foundational skills and introduction-to-discipline course) that are common among colleges and universities in the Oregon University System (OUS). Any student holding an OTM will have met the requirements for the transfer module at any institution in the OUS.

Counselor Resources
Instructional videos as well as information on admission information, Learning Resource Center overview and articulation/transfer agreements are available at https://www.klamathcc.edu/Admissions/High-School-Connections/Counselor-Resources.

Student Support Services
The KCC Learning Resource Center (LRC) houses the library, the Tutoring Center, and the Testing Center. The LRC is also available to distance education and synchronous students. The Office of Student Life promotes the development and success of KCC students by providing opportunities for meaningful, diverse connections; personal and professional leadership and growth; and community engagement and services. TRiO provides additional services for first-generation college students, low-income students, and students with documented disabilities.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits and loans. Approximately 82% of certificate/degree seeking students were awarded financial aid (scholarships, grants, or loans).

Degree Options
KCC offers several degree options. The Associate of Applied Science (AAS) is intended for students who want to earn a college degree and gain technical skills in a specific area and get a job after graduation. Certificates of Completion (CC) are similar to the AAS but smaller in scale and provide hands on training for employment. Associate of Arts, Oregon Transfer (AAOT) is intended for students who will earn a bachelor’s degree but have not yet identified their final university, or are undeclared in their educational goal. Associate of Science (AS) is intended for students interested in pursuing a bachelor’s degree at a specific institution, or in a specific major.

Health Career Programs
Emergency Response and Operations - AAS  
Emergency Medical Technician - CC  
Structural Fire Science - CC  
Wildland Fire Science - CC  
Nursing - AAS  
Certified Nursing Assistant - CC  
Science - AAS
For More Information
Klamath Community College - Main Campus
7390 South 6th Street
Klamath Falls, OR 97603
541-882-3521
www.klamathcc.edu

KCC-Lake County
541-407-1757
KCC-Lake county@klamathcc.edu
Lane Community College

Lane Community College (LCC) is a two-year college located on a 314 acre campus in southeast Eugene. Additional centers are located in downtown Eugene, Cottage Grove, and Florence. LCC serves a 4,600 square mile area from the Cascade Mountains to the Pacific Ocean, an area larger than Delaware and Rhode Island combined. The college is a member of the League for Innovation in the Community College and has been selected as one of 12 Vanguard Learning Colleges in North America for its outstanding record of achievement and innovation in the area of improving learning.

Academics
LCC is a comprehensive community college offering career and technical and lower division college classes. In addition to weekday classes, LCC offers some online, evening, and Saturday classes. Evening classes for credit are offered on the main campus and at off-campus centers. Students can earn college transfer credit or work toward a certificate or degree in one of LCC’s career and technical programs. LCC also offers a variety of different ways students can learn ranging from traditional lectures or lecture/lab classes to open-entry/open-exit classes that permit students to begin and end the class when they wish.

Program Options
Associate degrees can be obtained in a number of specialty areas. An Associate of Arts Oregon Transfer (AAOT) is also available.

Career Pathways - LCC can ease the transition from high school to community college, from pre-college courses to credit postsecondary programs; and from community college to university or employment. LCC offers a variety of programs to prepare students for a range of career fields including Associate of Applied Science (AAS) degrees, One-Year Certificates of Completion (CC) and Career Pathways Certificates.

Career Pathway Certificates (CPC) - Career Pathway Certificates of Completion are between 12-44 credits and are fully embedded in an Associate of Applied Science (AAS) or One Year Certificate. At LCC the certificates are divided into two categories; Model A: Beginning and Model B: Advanced. Model A are front end certificates ideal for students transitioning from Adult Basic Skills. These certificates may be taken independently and require minimal academic prerequisites or professional preparations. Model B are advanced certificates ideal for professional development of those currently employed, or those seeking to enhance their current or previous educational path.

Degree Partnership Program (DPP) - the DPP allows undergraduate students to be jointly admitted and enrolled at Oregon State University. DPP is open to all undergraduate students pursuing their Bachelor’s Degree.
PASS Lane - Pathways, Academic Skills, and Services targets students in Adult Basic Secondary Education (ABSE), English as a Second Language (ESL), General Educational Development (GED), or other students interested in transitioning to credit classes while working on reading, writing, and math skills. Students admitted to PASS Lane options are given the opportunity to take specific credit level Career Technical classes and integrated non-credit ABSE or ESL classes simultaneously, regardless of whether or not they have passed the college placement test. At LCC currently the programs in Certified Nursing Assistant and Bridge to health Professions are recruiting students.

College Now Credits with a Purpose - Most courses listed for LCC certificates can be articulated through the High School Connections Office as College Now classes. This is dependent on what the high school offers and teacher qualifications. For more information about these certificates in your school contact your high school counselor.

Regional Technical and Early College (RTEC) - These expanded options offerings are career/technical and academic transfer courses not available at area high schools and can give students a jump start to a college program. Contact either the High School Connections office or the RTEC Advisor for more information.

Counselor Resources
Information on academic and admission resources are available to high school counselors are available through LCC’s High School Connections office. Additional information is available through the Counseling & Career Center.

Student Support Services
LCC offers a variety of preparatory and supportive services. These include Adult Basic and Secondary Education (ABSE), General Education Development (GED), English as a Second Language (ESL), and Lane Job Connection. Academic support includes advising, orientation, placement and industrial testing, tutoring, services for students with disabilities, and learning diagnostics. Partnerships also exist with various businesses, high schools, and other colleges.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits and loans. Approximately 63% of certificate/degree seeking students were awarded financial aid (scholarships, grants, or loans).

Degree Options
LCC may confer a number degrees and certificates upon satisfactory completion of prescribed credit programs. These include the following; Associate of Arts Oregon Transfer (AAOT), Associate of General Studies (AGS), Associate of Science (AS), Associate of Science: Oregon State University, Associate of Science: University of Oregon, Associate of Applied Science (AAS), and Certificate of Completion (CC). The Certificate of Completion includes One-Year, Two-Year, and Career Pathway Certificates of Completion.

Health Career Programs
Allied Health - AAOT
Community Health Care Worker - CC
Dental Assisting - CC
Dental Hygiene - AAS
Emergency Medical Technician - CC
Fitness and Lifestyle Specialist - CC
Health Information Management - AAS, CC
Human Services - AAS
Massage Therapy - CC
Medical Assistant - CC
Nursing
   LPN Practical Nursing - CC
   RN Nursing - AAS
   Nursing Assistant - CC
Science - AAOT
Paramedicine - AAS
Pharmacy Technician - CC
Physical Therapist Assistant - AAS
Phlebotomy - CC

For More Information
Enrollment Services
Building 1
Lane Community College
4000 East 30th Avenue
Eugene, OR 97405
541-463-3100
www.lanec.edu
Lewis & Clark College

Lewis & Clark College is a private liberal arts institution. The college began 1867 as Albany Collegiate Institute and later Albany College. In 1934 Albany College opened a lower division extension in Portland. In 1938 all operations for the college were moved to Portland. In 1942 the school acquired a tract of 63 acres in Portland’s southwest hills. This was known as Fir Acres, a grand estate developed in the 1920’s. To mark the acquisition, the school became known as Lewis & Clark College. The original 63 acres has since become 137 acres.

Academics
Lewis & Clark consists of three colleges including the College of Arts & Sciences, the Law School, and the Graduate School of Education and Counseling. Lewis & Clark is part of the Annapolis Group, an American organization of independent liberal arts colleges.

Program Options
Interdisciplinary Programs - Lewis & Clark offers a number of interdisciplinary majors and minors. These programs combine courses and faculty from many traditional academic subjects. Currently there are four majors and eight minors offered as part of this option.

Engineering 3/2 - Lewis & Clark participates in a 3-2 program which enables a student to complete three years of study at Lewis & Clark, followed by two years at the engineering school. This allows students to earn a degree from each school. Lewis & Clark cooperates in this program with three institutions: Columbia University, Washington University, and the University of Southern California.

John S. Rogers Science Program - This program prepares outstanding students for careers in the sciences by supporting collaborative scientific research between students and faculty. The program aims to attract and retain outstanding student and faculty in the mathematical and natural science fields of study. Rogers fellows are trained as scientists, but as scientists who have a responsibility to communicate the purpose and results of their work to a general audience.

Lewis & Clark Collaborative Research Program - There are two components to this program, one that targets increased opportunities for faculty and students in the classroom, and another that enhances student-faculty collaborative research in the summers. This program is in the developmental and implementation stages and serves to enhance student-faculty collaborative interdisciplinary research in the arts, humanities, and humanistic sciences.

Overseas & Off-Campus programs - This program forms an integral part of the total educational experience at Lewis & Clark. It supports and enhances on-campus curricula and provides a unique academic and experiential opportunity. Programs range from a semester to a full-year and can be major or language focused as well as simply general education. The program includes opportunities in 23 countries.
Counselor Resources
For more information on Counselor Resources, attending information sessions, learn about the Compass Scholars Fly-In program, or scheduling a visit, contact the Admissions Office at 503-768-7040 or admissions@clark.edu.

Student Support Services
Lewis & Clark is committed to the academic success of every student. Many resources are provided to support students inside and outside the classroom. These include services in research and writing, advising and accommodations, the Career Center, tutoring, the Office of Student Support Services. The Office of Student Life provides services to meet the school’s main areas of concentration - health and wellness, civic leadership and development, diversity, and experimental. Services include psychological counseling, teaching cognitive skills, providing health care, coordinating meaningful programs for diversity and inclusion, community service, recreation and physical education, and career development.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits and loans. Approximately 57% of certificate/degree seeking students were awarded financial aid (scholarships, grants, or loans). Lewis & Clark offers grants based on financial need, merit-based scholarships based on achievement, and endowed scholarships.

Degree Options
Lewis & Clark offers undergraduate degrees 29 majors and 27 minors, as well as ideal preparation for careers in engineering, law, medicine, business, entrepreneurship, and teaching. Additionally Lewis & Clark offers graduate degrees, professional endorsements, and certificates through the Law School and Graduate School.

Health Career Programs
Biochemistry and Molecular Biology - BS
Biology - BS
Chemistry - Minor, BS
Counseling - MA
Eating Disorders - Graduate Certificate
Mental Health Counseling - MA, MS
  Specialization in Addictions - MA, MS
Neuroscience - Minor
Psychology - BS

For More Information
Lewis & Clark College
0615 SW Palatine Hill Road
Portland, OR 97219
503-768-7000
Linfield College

Linfield College (LC) is a private institution of higher learning. Linfield traces its history back to 1849 when the Oregon Baptist Educational Society was created in Oregon City. The Baptist College at McMinnville was chartered in 1858 by the territorial legislature and became Linfield College in 1922. The main campus is located on 189 park-like acres in McMinnville. This residential campus features traditional liberal arts curriculum, including pre-professional programs. The Portland campus is home to the Linfield-Good Samaritan School of Nursing through a partnership with Good Samaritan Hospital. The transfer-only campus is located in Northwest Portland and offers a bachelor’s degree in nursing.

Academics
LC offers 49 majors through three programs.

Program Options
Online and Continuing Education (OCE) - OCE allows students to earn a degree online. Online bachelor’s degrees are offered in nine majors areas of study, five minors, 18 certification programs, and one professional advancement program.

Credit for Prior Learning - LC believes that adults should be able to receive college credit for life experience acquired outside of the traditional college setting. This can be done via three methods; Portfolio Development, American Council on Education, and Credit by Exam.

Community College Co-Admission Partnerships for RN to BSN Students - This Co-Admission Agreement between LC and Community College partners facilitates student progression from the Associate of Applied Science degree program to the Bachelor of Science degree program (RN to BSN) through consistent program communication, curricular coordination, and focused academic advising. LC has co-admission agreements with the following institutions; Central Oregon, Chemeketa, Clackamas, Clatsop, Columbia Gorge, Klamath, Lane, Linn-Benton, Mt. Hood, Oregon Coast, Portland, and Southwestern Oregon Community Colleges.

Professional Advancement Programs (PAP) - LC’s PAP offers Linfield’s learning to everyone. This includes Society for Human Resource Management Certified and Senior Certified Program, Spanish Healthcare Interpreter Training, and Spanish for Healthcare Workers.

Linfield Curriculum - The Linfield Curriculum is the core to Linfield students’ liberal arts education. Its four components: the Inquiry Seminar, Diversity Studies, a Writing-Intensive requirement, and six Modes of Inquiry, teach critical thinking skills and provide a rich, broad experience.

January Term - LC offers a four-week term between fall and spring semesters in which there are immersive in-class experiences and study abroad opportunities. January Term is required for all first-year students.
**International Programs** - LC demonstrates its strong commitment to international study through its semester or academic year abroad programs. Jan Term study abroad courses, and English Language and Culture Program for international students. Each LC student's first trip abroad airfare is paid for by the College.

**Coursework for High School Students** - High school juniors and seniors may enroll in only one class and up to 5 credits per semester with the approval of the high school principal, the Linfield faculty member teaching the course, and the Linfield Directory of Admissions.

**Counselor Resources**
Admission requirements for each program at Linfield are unique to that program and the type of students who pursue the variety of academic offerings. Student interested in the McMinnville campus will use a different application than those applying to enter the pre-licensure nursing program in Portland, and the online programs request a different type of application. For more information on Counselor Resources, the application checklist, and the admissions procedure for first-year students contact the admissions office at 503-883-2213 or admission@linfield.edu

**Student Support Services**
On the Portland campus, the Student Life Office provides career service, multicultural programs, and student resources including health services and student counseling. The Student Affairs Division on the McMinnville campus connects experiential learning life, leadership, and community outside students’ classroom environment. This division provides assistance in the areas of career development, college activities, community engagement & service, multicultural programs & services, learning support, sustainability, and student health/wellness & counseling.

**Financial Aid**
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits and loans. Approximately 96% of certificate/degree seeking students were awarded some type of financial aid (scholarships, grants, or loans). Linfield offers a number of renewable scholarships based on academic achievement. Additional options for qualified prospective freshman include the Linfield Scholarship and Visit Weekend. There are also a limited number of talent scholarships available.

**Degree Options**
The Portland campus offers a bachelor’s degree in nursing. Linfield’s Online and Continuing Education program has made bachelor’s degrees accessible to working adults through online courses. Advisors serve students around the state, country, and world. Linfield offers 49 majors through these three programs.

**Health Career Programs**
- **Athletic Training** - BA, BS
- **Biochemistry & Molecular Biology** - BA, BS
- **Biology** - Minor, BA, BS
- **Chemistry** - Minor, BA, BS
- **Computer Information Systems** - BS (Online)
- **Cyber Security & Digital Forensics** - Certificate (Online)
- **Health Administration** - BS (Online), Certificate (Online)
- **Human Performance**
  - **Exercise Science** - BA, BS
  - **Physical Activity & Fitness Studies** - BA, BS
- **Nursing** - RN to BSN (Online), BSN
- **Psychology** - Minor, BA, BS
Linn-Benton Community College

Linn-Benton Community College (LBCC) was established in 1966 as a two-year public college to serve the educational needs of residents in Linn and Benton counties. Approximately 7,000 attend LBCC full-time and more than 22,000 students take at least one class at LBCC each year. Class size averages 22:1 student to instructor ratio with a focus on personal attention. LBCC’s main and largest campus is located in Albany. Additional campus sites are located in Corvallis, Lebanon, and Sweet Home. The Benton Center in Corvallis is located one mile from the Oregon State University and offers a variety of credit and non-credit classes. The Lebanon Center in Lebanon offers a variety of credit and non-credit classes, and professional development. The Advanced Transportation Technology Center in Lebanon provides students with facilities, equipment and instruction necessary to develop professional level skills in auto mechanical work. The Healthcare Occupations Center in Lebanon brings all LBCC healthcare programs into one learning space, providing greater opportunity for collaboration between programs and sharing of resources. The Sweet Home Center in Sweet Home offers a variety of credit and non-credit classes, transfer credits, and professional development.

Academics
LBCC has over 60 transfer and career & technical programs which to choose from. LBCC offers degrees and certificates in a wide variety of fields. Students also have the option of choosing a specific program of study when they enroll or if they are not sure of what program they’d like to pursue, they may choose a broader Meta Major as their starting point. Meta Majors are collections of academic majors that have related courses and fit within a career area. They are grouped according to similar interests, knowledge, skills, and abilities.

Program Options
*Degree Partnership Program (DPP)* - the DPP allows undergraduate students to be jointly admitted and enrolled at Oregon State University. DPP is open to all undergraduate students pursing their Bachelor’s Degree.

*Oregon Transfer Module (OTM)* - the OTM allows a student to transfer 45 credits of general education requirements to any Oregon community college, Oregon university system institution, or participating Oregon independent college or university. It is not a degree or certificate.

*Adult High School Diploma (AHSD)* - This competency-based adult high school diploma is for adults age 16 or older who meet high school graduation requirements established by the college.

*General Education Development (GED)* - LBCC offers GED preparatory classes for adults who want to improve their general knowledge and skills in writing, math, science, or social studies.
Pipeline Program - The Pipeline Program is an initiative developed by the Albany Chamber of Commerce that works with area partners to provide a skilled and trained workforce that meets the needs of local businesses and industries. In the medical field Pipeline Programs include Coding and Reimbursement Specialist, Diagnostic Imaging, Occupational Therapy Assistant, Pharmacy Technician, Phlebotomy, and Polysomnographic Technology.

Dual Enrollment with Oregon Tech (OIT) - LBCC has a Dual Enrollment option with OIT which allows students access services at both colleges, the ability to complete one application for enrollment at both schools, and degree programs that can maximize a student’s ability to transfer credit.

Counselor Resources
For more information on Counselor Resources contact the Admissions Office at admissions@linnbenton.edu or 541-917-4999.

Student Support Services
At LBCC the Advising Center assists students with academic advising, well-being, and career services. The Learning Center offers academic support as well as comfortable place to study. Additionally LBCC has the Center for Accessibility Resources, as well as support services and information for veterans, as well as career coaching, tutoring, computer labs, a writing center, and child care.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits, work study, and loans. Approximately 30% receive federal student loans.

Degree Options
The Associate of Applied Science (AAS) and Associate of Science (AS) degrees are intended to prepare you for direct entry into the workforce. The AAS degree may also help you prepare for career advancement, occupational licenses, our study at the baccalaureate level. The Associate of General Studies (AGS) degree is a two-year program designed to provide students the opportunity to acquire a broad education rather than pursuing a specific college major or program. The Associate of Arts Oregon Transfer (AAOT) degree is designed for students planning to transfer into a baccalaureate degree program in the Oregon University System enabling a student to enter as a junior. Certificate of completion (CC) are awarded for occupational content only.

Health Career Programs
Biological Sciences - AS
Chemistry - AS
Coding and Reimbursement Specialist - CC
Computed Tomography - CC
Computer Network & Systems Administration - AAS
Dental Assistant - CC
Diagnostic Imaging - AAS
Exercise & Sports Science - AS, AAOT
General Science - AS
Health Management & Policy - AS
Health Promotion & Behavior - AS
Human Services - AS
Human Development & Family Science - AS
Medical Assistant - AAS
Nursing - AAS  
Nutrition and Food Services Systems - AS  
Occupational Therapy Assistant - AAS  
Pharmacy Technician - CC  
Phlebotomy Technician - CC  
Polysomnographic Technology - CC  
Psychology - AS  
Surgical Technician - CC  
Veterinary Assistant - CC  

For More Information  
Albany Campus  
6500 Pacific Blvd. SW  
Albany, OR  
541-917-4999  
albany@linnbenton.edu  

Benton Center  
757 NW Polk Ave.  
Corvallis, OR  
541-757-8944  

Lebanon Center  
44 Industrial Way  
Lebanon, OR  
541-259-5801  

Advanced Transportation Technology Center  
2000 Oak Street  
Lebanon, OR  
541-917-4597  

Healthcare Occupations Center  
300 Mullins Drive  
Lebanon, OR 97355  
541-917-4923  

Sweet Home Center  
1661 Long Street  
Sweet Home, OR 97386  
541-367-6901
Mt. Hood Community College (MHCC) serves an area of about 950 square miles with a population of more than 300,000. Within the area are included the high school districts of Corbett, David Douglas, Gresham-Barlow, Parkrose, Port of Cascade Locks, Reynolds, Centennial, and the Oregon Trail District. MHCC opened in 1966 and now enrolls over 33,000 students each year. Classes are offered at the Gresham Campus, the Maywood Park Campus, the Bruning Center for Allied Health Education, and public schools within the district.

Academics
MHCC offers over 120 professional and technical programs, as well as a variety of university transfer possibilities. Students may complete a 2-year degree at MHCC and earn transfer credits to apply to a four-year degree at a university or be prepared to enter the workforce.

Program Options
Degree Partnership Program (DPP) - the DPP allows undergraduate students to be jointly admitted and enrolled at Oregon State University. DPP is open to all undergraduate students pursuing their Bachelor’s Degree.

Adult High School Diploma (AHSD) - this program is designed for students aged 16 years or older, who would like to earn or complete their high school diploma while taking high school and/or college courses at MHCC. This is an opportunity for anyone who has the goal of completing their high school education.

ABE GED - this program offers classes in both Spanish and English designed to develop the skills needed in reading, math, science, social studies, and writing in preparation for the GED test, skill advancement.

College Now - the College Now Dual Credit Program at MHCC provides high school students the opportunity to get a head start on their college experience. Students take college level coursework from MHCC approved high school instructors. All College Now students receive credit from both MHCC and their high school at no cost to the student.

Credit Recovery - the High School Credit Recovery and Acceleration Program at MHCC is a service provided to currently enrolled high school students grades 9-12 in the Portland-Metropolitan area. Students looking to recover credits from classes taken at their home high school can retake those courses through our summer program. High school level classes are offered in all core subject areas required for the completion of the Oregon Diploma and local high school graduation requirements.
**Expanded Options** - this program was developed by the Oregon Department of Education so high schools could provide funding for selected students to take college courses for dual credit. Students should contact their high school counselor to discuss if this program is offered and is a viable option.

**Middle College** - the Middle College program at MHCC is an early college opportunity for qualifying high school juniors and seniors enrolled in participating high schools. Students take a part- or full-time college course load during the fall, winter, and spring terms. Schools currently with Middle College partnerships include, Centennial, Corbett, David Douglas, Parkrose, Reynolds, Sandy, and Springwater Trail High Schools, and Reynolds Learning Academy, Rey Academy, Sandy Blended Learning Center.

**Mt. Hood Regional Career and Technical Education (CTE) Consortium** - the CTE is an educational program for high school and community college students based on industry needs. CTE includes coursework in high-demand industry areas such as business, health care, information technology, and manufacturing. High School District partners include the Centennial, David Douglas, Gresham-Barlow, Parkrose, and Reynolds School Districts and Sam Barlow High School.

**TRIO College First** - this program is dedicated to making college a reality. MHCC mentors middle and high school students in seven MHCC district schools. Students are the first in their families to attend college. MHCC hosts two TRIO programs: College First (a Talent Search program) and Student Support Services. College First serves young people in grades six through twelve. Participants receive information about college admissions requirements, scholarships, and financial aid. Student Support Services helps eligible students stay in college until their earn their bachelor degree. Participants, who may be first generational college, low-income, or have a documented disability, receive academic and personal counseling, tutoring, and transfer assistance.

**Underage Student Enrollment** - this program is for students aged 14 or 15 wishing to take credit courses at MHCC. This requires the presence of a parent or guardian during the Underage Enrollment meeting.

**Counselor Resources**
High school counselors are encouraged to contact PCC’s Academic Advising and Transfer Center at 503-491-7315, advising.questions@mhcc.edu or the Admissions Office at 503-491-7393, ar@mhcc.edu for assistance.

**Student Support Services**
The Learning Success Center and the Advancement Via Individual Determination (AVID) Center provide free tutoring and academic support to every enrolled student at MHCC. AVID is a program dedicated to helping new students get started on the right track. AVID provides academic tutoring, writing center, computer use and support, college resource connections, study space, and group project support. The Career Planning & Counseling Center offers a variety of services for students including career services and job search assistance as well as personal counseling. Additionally their are services specifically for students with documented disabilities or in the need of special accommodations. Veterans services are available for veterans or their dependents, members of the Reserves, National Guard, or Active Duty.
Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits, work-study, and loans. Approximately 24% of students receive federal loans. MHCC awards foundations scholarships every year to students who may not otherwise afford an education.

Degree Options
The Associate of Applied Science (AAS) and Associate of Science (AS) degrees are intended to prepare you for direct entry into the workforce. The AAS degree may also help you prepare for career advancement, occupational licenses, our study at the baccalaureate level. The Associate of General Studies (AGS) degree is a two-year program designed to provide students the opportunity to acquire a broad education rather than pursuing a specific college major or program. The Associate of Arts Oregon Transfer (AAOT) degree is designed for students planning to transfer into a baccalaureate degree program in the Oregon University System enabling a student to enter as a junior. In some cases a Bachelor of Applied Science (BAS) or Bachelor of Science (BS) may be pursued at another university that has an articulated agreement with MHCC. Certificate of completion (CC) are awarded for occupational content only.

Health Career Programs
Basic Health Care - CC
Behavioral Healthcare Specialist - CC
Biology - AAOT
Chemistry-Biochemistry - AAOT
Cybersecurity and Information Assurance - AASBS (in coordination with Western Governor’s University)
Dental Hygiene - AAS, BS (in coordination with Oregon Tech)
Fitness Technology - CC
Exercise and Sports Science - AAOT
Health Care Administration - AAS, BS (in coordination with Concordia University)
Health Studies - BA or BS (in coordination with Portland State University)
Information Technology - BS (in coordination with Western Governor’s University)
Long Term Care - AAS, BS (in coordination with Concordia University)
Medical Assistant - CC
Medical Office Specialist
Accounting - AAS
Administrative Secretary - AAS
Benefits Specialist - CC
Billing and Coding - CC, AAS
Customer Service Representative - CC
Management Curriculum - AAS
Receptionist - CC
Mental Health
Social Service and Addiction Counseling - AAS
Social Service and Addiction Counseling: Youth Worker - AAS
Nursing - CC, AAS, BSN (in coordination with Linfield College), RN-BS (in coordination with Oregon Health & Science University), BSN (in coordination with Western Governor’s University)
Psychology - AAOT
Respiratory Care - AAS
Social Work - AAS, BS (in coordination with Concordia University), BS (in coordination with Warner Pacific University)
Surgical Technology - AAS, BAS (in coordination with Oregon Tech)
For More Information
Mt. Hood Community College
Gresham Campus
26000 SE Stark Street
Gresham, OR 97030
503-491-6422
www.mhcc.edu

Maywood Park Campus
10100 NE Prescott
Portland, OR 97220
503-491-6100

The Bruning Center for Health Professions
1484 NW Civic Drive
Gresham, OR 97030
503-491-6700
Multnomah University

Multnomah University is a non-denominational Christian university founded in 1936. The campus consists of 25 acres and is located on the former campus of the Oregon State School in the Montavilla neighborhood in Portland. A satellite campus is located in Reno, Nevada.

Academics
Multnomah offers over 20 majors as well as pre-professional, graduate, doctorate, and online degree programs.

Program Options
Study Abroad - Multnomah offers short-term as well as longer term semester-long opportunities to study abroad. These include twelve off-campus and study abroad programs around the world through the Council for Christian Colleges & Universities.

LINK - The LINK Service Learning Program is to link students to potential vocations so that they can begin discovering which might be right for them.

Counselor Resources
For more information on Counselor Resources contact the Admissions Office at 503-251-6485 or admissions@multnomah.edu

Student Support Services
Student Resources & Support at Multnomah includes Counseling services, Career services, Academic Advising, Disability services, and Student Health services. The Student Success Center can assist students with scheduling a tutor, coordinate accommodations and assist with academic planning and time management techniques.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits, work study, and loans. Approximately 85% of undergrad students receive Multnomah institutional aid. These include academic scholarships, grants and awards, and athletic scholarships.

Degree Options
Degree options at Multnomah consist of a college, graduate school, seminary and Degree Completion Program, which allows the university to offer bachelor’s master’s and doctorate degrees in a wide range of fields.

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Health Career Programs
Applied Psychology - BA, BS (Online)
Biology - BA, BS
Chiropractic - PhD (in cooperation with University of Western States)
Counseling - MA
Exercise Science - BA, BS
Healthcare Management - BA, BS (Online)
Information Technology - BA, BS (Online)

Pre-Professional
Pre-Chiropractic (Accelerated DC with University of Western States)
Pre-Dental
Pre-Med
Pre-Pharmacy
Pre-Physical Therapy
Pre-Veterinary

Psychology - BA, BS

For More Information
Multnomah University
8435 NE Glisan Street
Portland, OR 97220
503-255-0332
The National University of Natural Medicine (NUNM) is a school of naturopathic medicine and Classical Chinese medicine. Founded in 1956, it is the oldest naturopathic program in North America that is accredited by the Council on Naturopathic Medical Education. NUNM is located in a converted historic elementary school building in downtown Portland. Additionally, the university also has several community clinics, which offer low-cost naturopathic care and acupuncture in the Portland Metropolitan area.

**Program Options**
NUNM has four colleges/schools: College of Naturopathic Medicine, College of Classical Chinese Medicine, School of Graduate Studies, and School of Undergraduate and Part-Time Studies. It offers eight professional graduate degree programs which include preparation and clinical practice in Holism.

**Financial Aid**
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits and loans. The aid package awarded may consist of a loan, grant, scholarship, part-time job or a combination of all of these programs. Additionally, NUNM participates in the Federal Supplemental Educational Opportunity Grant as well as the Oregon Opportunity Grant.

**Degree Options**
NUNM offers undergraduate (Bachelor of Science), Master’s and Doctoral programs. These diverse degree programs offer a range of options for postgraduates who seek careers in the field of natural health. Additionally, there are a variety of certificates in several naturopathic and classical Chinese medicine modalities. The undergraduate programs are for third-year students seeking to develop an in-depth understanding of integrative health sciences and allow students to complete the final two years of a degree.

**Health Career Programs**

- **Ayurveda** - MS
- **Global Health** - MS
- **Homeopathic Medicine** - Certificate
- **Integrative Health Science** - BS
- **Integrative Mental Health** - MS
- **Integrative Medicine Research** - MS
- **Integrative Therapeutics/Massage Therapy** - BS
- **Naturopathic Medicine** - ND
- **Naturopathic Obstetric/Midwifery** - Certificate
- **Nutrition** - BS, MS
- **Oriental Medicine** - MS, DSOM
For More Information
National University of Natural Medicine
049 SW Porter Street
Portland, OR  97201
www.nunm.edu
Northwest Christian University (NCU) is a private, Christian liberal arts college. The school was founded in 1895 as Eugene Divinity School. In 1934 it merged with Spokane University to become Northwest Christian College and became a full-fledged university in 2008. The campus is located adjacent to the University of Oregon campus in Eugene in the city’s University District.

Academics
NCU is organized into two schools: Liberal Arts & Bible, and Professional Studies. The School of Liberal Arts & Bible houses the academic majors of Biology, Communication, English, Exercise Science, History, Interdisciplinary Studies, Mathematics, Psychology, Bible and Theology, Christian Ministry, and Music. The School of Professional Studies includes both undergraduate majors in Accounting, Business Administration, Criminal Justice, and Teacher Education as well as graduate programs in business Administration, Clinical Mental Health Counseling, School Counseling, and Teacher Education.

Program Options
Programs are offered in three different formats: traditional undergraduate daytime, adult degree evening and online, and graduate.

Sophomore Year Experience - This program is designed to inform and engage Sophomores on their college journey. It allows students to determine their career pathway as well as how to navigate the rest of their time at NCU.

Off-Campus Study Programs - Programs include the NCU Faculty Summer program, Dankook Summer, and Study Abroad. Each summer, NCU faculty lead short-term study abroad experiences to various locations for approximately three weeks. The Dankook Summer involves students spending approximately two months on an exchange program with Dankook University in Korea. Students in the study abroad program during the fall or spring semester.

Counselor Resources
For more information on Counselor Resources contact the admissions office at 541-343-1641.

Student Support Services
Academic Services include academic advising, major selection and declaration, career and life planning as well as development, and support for academic success. The Office of Academic Advising provides individualized academic advising for all students at NCU. The Counseling Center offers low-cost, confidential counseling to adults in the community. Additional services include career development, tutoring, veteran benefits, and accessibility services.
Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, veteran benefits and loans. Approximately 90% of certificate/degree seeking students were awarded some form of financial aid (scholarships, grants, or loans). Scholarships range from academic scholarships, to leadership awards, as well as talent, endowed, and athletic scholarships.

Degree Options
Undergraduate degree options include 17 major areas of study in the traditional undergraduate daytime option. The Adult Degree Programs is a unique alternative to the traditional method of pursuing a bachelor’s degree. This degree option includes eight major areas of study. The graduate program of study includes eight areas of study as well as a professional certification.

Health Career Programs
Biology - Minor, BA, BS
Exercise Science - BA, BS
Forensic Psychology - BA, BS
Nursing - RN to BSN, RN to MSN, BSN, MSN
Psychology - Minor, BA, BS

For More Information
Northwest Christian University
828 E. 11th Avenue
Eugene, OR. 97401
877-463-6622
Oregon Coast Community College

Oregon Coast Community College (OCCC) is a community college in Newport, OR serving students in Lincoln County, Oregon. OCCC has three campuses, the main campus in Newport and north and south campus facilities in Lincoln City and Waldport respectively.

Academics
OCCC is a small community college offering career, technical degrees as well as certificates. Additionally OCCC offers distance education through online classes.

Program Options
Degree Partnership Program (DPP) - the DPP allows undergraduate students to be jointly admitted and enrolled at Oregon State University. DPP is open to all undergraduate students pursuing their Bachelor’s Degree.

Early College - OCCC’s Early College program allows high school students to earn high school and college credits concurrently (high school credit is granted at the discretion of the high school you attend). Juniors and Seniors from Lincoln County School District, including home schools and charter schools, who are college-ready are eligible. College-ready is defined as having course placement into 100-level or above classes.

Expanded Options/Dual Credit - This program helps students get a head start on college, at considerable savings, while they are still in high school. Under an agreement between Lincoln County School District (LCSD) and OCCC, eligible and admitted LCSD juniors and seniors may take OCCC college courses at OCCC or online and receive simultaneous college and high school credit. Interested students should contact their high school counselor at Taft, Newport, Toledo, or Waldport High School.

Distance Education - This program allows students to take classes at their convenience from home or work. OCCC students also have the option to take online classes at Portland Community College. Students interested in this option should coordinate with an academic advisor who will facilitate registration with PCC. It should be noted that Oregon Coast Scholar scholarships can not be used to cover tuition and fees for PCC Distance Education classes. Tuition waivers will also not pay for PCC classes.

Counselor Resources
OCCC provides academic advisors by appointment in Newport and Lincoln City. OCCC’s Career and Transfer Readiness Center at the Newport campus is open to the public and staffed daily with college representatives that can help students explore career opportunities, training programs, academic paths, and transfer opportunities.
**Student Support Services**
OCCC provides a variety of support services including placement tests, the tutoring center, disability services, and distance education.

**Financial Aid**
Financial aid assistance is available and ranges from federal and state grants, scholarships, work study, vet benefits, and loans. Approximately 31% of students receive federal loans. OCCC students have opportunities to apply for a number of different local, regional, and national scholarships. Additionally the OCCC Foundation Scholarships, the Serve/Earn/Learn (SEAL) Scholarship Program, and Oregon Coast Scholars provide opportunities to defray the cost of attending OCCC.

**Degree Options**
The Associate of Applied Science (AAS) and Associate of Science (AS) degrees are intended to prepare you for direct entry into the workforce. The AAS degree may also help you prepare for career advancement, occupational licenses, our study at the baccalaureate level. The Associate of General Studies (AGS) degree is a two-year program designed to provide students the opportunity to acquire a broad education rather than pursuing a specific college major or program. The Associate of Arts Oregon Transfer (AAOT) degree is designed for students planning to transfer into a baccalaureate degree program in the Oregon University System enabling a student to enter as a junior. Certificate of completion (CC) are awarded for occupational content only.

**Health Career Programs**
**Emergency Medical Services**
- Emergency Medical Technician - CC
- Advanced Emergency Medical Services - CC
- Paramedic EMT - AAS

**Medical Assistant - CC**

**Nursing - AAS, BSN (in coordination with Linfield College)**
- Nursing Assistant I - CC
- Nursing Assistant 2 - CC
- Licensed Practical Nurse - CC
- Registered Nurse - AAS

**For More Information**
Central County Campus
400 SE College Way
Newport, OR 97366
541-867-8501
www.oregoncoastcc.org

North County Center
3788 SE High School Drive
Lincoln City, OR 97367

South County Center
3120 Crestline Drive
Waldport, OR 97394
The Oregon College of Oriental Medicine (OCOM), is located in Portland and offers master's and postgraduate doctoral degrees in acupuncture and Oriental medicine. OCOM was founded in 1983 and is one of the oldest Chinese medicine colleges in the United States. OCOM became the first college to graduate cohort of Doctors of Acupuncture and Oriental Medicine. OCOM operates two Portland clinics and herbal medicinary.

Academics
Students study the basic theories underlying Chinese medicine. Concepts of energetic physiology, notions of health and the origins of illness, and the location of acupuncture points and channels/meridians are presented. Students begin the study of classical internal arts (Qigong/Taiji Quan) and the basics of Chinese medicine terminology. They develop awareness of personal and professional boundaries and non-needling techniques such as cupping and moxibustion. The study of traditional Chinese herbal medicine is studied. Students train in the essential techniques and clinical skills of the acupuncturist and explore issues surrounding physiological and clinical research in acupuncture and Oriental medicine.

Program Options
The Master of Acupuncture and Oriental Medicine (MAcOM) provides comprehensive practitioner training providing a theoretical and practical foundation for ongoing study and development in the field. The Doctor of Acupuncture and Oriental Medicine (DAOM) is a clinically focused program leading to a clinical doctorate degree. Graduates are naturally positioned as leaders in the Acupuncture and Oriental Medicine field.

Student Support Services
Student Services guides and supports all students through their transformational journey in achieving their educational and professional goals. A continuum of services is offered for prospective students, current, and OCOM graduates including academic advising, academic coaching, tutoring, general support/lifestyle counseling, referrals for professional counseling, disability services, and mentoring.

Financial Aid
OCOM’s Office of Financial Aid is committed to assisting you with financing your education. Several types of financial aid are available at OCOM, including loans, work-study and scholarships. For students not receiving financial aid, a monthly payment option may be available.
**Degree Options**
OCOM is a single-purpose professional graduate school offering two specialized degree programs in Acupuncture and Oriental Medicine. This includes a Master and Doctor degree program.

**Health Career Programs**
Acupuncture and Oriental Medicine - MAcOM, DAOM

**For More Information**
Oregon College of Oriental Medicine
75 NW Couch Street
Portland, OR 97209
503-253-3443
The Oregon Health & Sciences University (OHSU) is a public comprehensive health sciences university. The institution was founded in 1887 as the University of Oregon Medical Department and later became the University of Oregon Medical School when the University of Oregon and Willamette School's of Medicine merged. In 1974, the campus became an independent self-governing institution, and took its current name in 2001 when it merged with the Oregon Graduate Institute in Hillsboro. The main campus is located on Marquam Hill in the southwest Portland neighborhood of Homestead. This campus is home to the university's medical school as well as two associated hospitals. The Portland Veterans Affairs Medical Center and the Portland Shriners Hospital for Children are located adjacent to the OHSU campus on Marquam Hill. In 2003, the campus expanded to include the South Waterfront District campus. The south waterfront campus includes the Center for Health & Healing as well as the Knight Cancer Research Building. The Portland Aerial Tram links the two campuses.

Academics
OHSU is Oregon’s only academic health center and is nationally distinguished as a research university dedicated solely to advancing health sciences. OHSU has joint programs with Portland State University, Oregon State University, and Oregon Institute of Technology. The university includes Schools of Medicine, Nursing, Dentistry, and Public Health, as well as a College of Pharmacy. OHSU has 58 degree programs, associates through PhD, and 16 certificate programs.

Program Options
School of Medicine - OHSU’s School of Medicine includes an MD program, a Physician Assistant program, Graduate Medical Education, and Graduate Studies in biomedical sciences, informatics, and physician assistant studies.

School of Nursing - OHSU provides an undergraduate program including a Bachelor of Science, accelerated Bachelor of Science and Registered Nurse to Bachelor of Science. Dual admission options let students look beyond the Bachelor’s level to further a student’s career at a faster pace. The School of Nursing offers several Master’s degree programs and two state-of-the-art doctoral programs. The School of Nursing has five regional campuses and community partnerships. These programs/partnerships are located in Portland, Monmouth, La Grande, Ashland, and Klamath Falls.
School of Dentistry - OHSU provides a General Practice Residency, as well as departments in Pathology & Radiology, Pediatric Dentistry, and Periodontics.

School of Public Health - OHSU has a cooperative agreement with Portland State University which allows the School of Public Health’s multidisciplinary program to offer two undergraduate degrees, four concentration areas, a certificate, and two undergraduate minors. Additionally the school offers two graduate certificate programs, four dual Master's Degree programs, a Master’s Degree, and six Master of Public Health programs.

College of Pharmacy - OHSU provides PharmD program in cooperation with Oregon State University.

Counselor Resources
For more information on Counselor Resources please refer to the OHSU website (ohsu.edu) and go to the specific school or college of interest.

Student Support Services
OHSU’s Central Services includes departments that provide critical services to students. This includes such services as the Center for Diversity & Inclusion, Library Services, March Wellness, and EdCOMM Classroom Operations & Multimedia Services. The Academic and Student Affairs Offices includes the Center for Diversity & Inclusion, Student Health Services, Student Access, and the Teaching & Learning Center. Additionally, each school and college at OHSU provides student services specifically focused for that student group. For specific student services for each school please refer to the OHSU website under the specific school or college. For more information contact the Office of Academic and Student Affairs at 503-494-7878.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, veteran benefits and loans. Approximately 83% of certificate/degree seeking students were awarded financial aid (scholarships, grants, or loans). Each school and college provides additional scholarship and grant opportunities. Please refer to the OHSU website under the specific school or college for more information.

Degree Options
OHSU provides degree opportunities spanning from associate and certificate programs to undergraduate, master’s, and doctoral degrees.

Health Career Programs
Dentistry
Dental Medicine - DMD
Endodontics: Advanced Specialty - Certificate
Oral and Maxillofacial Surgery: Advanced Specialty - Certificate
Orthodontics: Advanced Specialty - MS
Pediatric Dentistry: Advanced Specialty - Certificate
Periodontology: Advanced Specialty - Certificate

Medicine
Doctor of Medicine - MD
Clinical Laboratory Science - BS (in conjunction with Oregon Tech)
Combined Doctor of Medicine, Doctor of Philosophy - MD/PhD
Combined Doctor of Medicine, Master of Public Health - MD/MPH
Behavioral Neuroscience - PhD
Biochemistry & Molecular Biology - PhD
Biochemistry & Molecular Biology - MS, PhD (through Division of Environmental & Biomolecular Systems)
Biomedical Engineering - MS, PhD
Biomedical Informatics - (Certificate, MBI, MS, PhD)
Biostatistics - MS, MBST, Certificate
Cancer Biology - PhD
Cell & Developmental Biology - PhD
Clinical Research - MCR, Certificate (through Human Investigations Program)
Computer Science & Engineering - MS, PhD
Health Care Management - Certificate, MS, MBA
Human Nutrition - Certificate, MS
Medical Physics - MS, MMP, PhD
Molecular & Cellular Biosciences - PhD
Molecular & Medical Genetics - PhD
Molecular Microbiology & Immunology - PhD
Neuroscience - PhD
Oregon Medical Physics Program - PhD
Paramedic Educational Program - AAS, BS (in conjunction with Oregon Tech)
Physiology & Pharmacology - PhD
Physician Assistant - MPAS
Public Health - MD/MPH
Radiation Therapy - BS
Nursing - OCNE, BS, Accelerated BS, RN to BS, MS, MN, MPH, PMCO, PMCONE, DNP, PhD
  Gerontology - Specialty
  Education - Specialty
  Midwifery - Specialty
  Anesthesia - Specialty
  Psychiatric Mental Health Nurse Practitioner - Specialty
  Family Nurse Practitioner - Specialty
  Public Health - Specialty
Public Health
Biostatistics - MPH, MS, Certificate
Community Health - PhD
Environmental Systems and Human Health - MPH
Epidemiology - MPH, PhD
Epidemiology & Medicine - MD/MPH
Health Management and Policy - MPH
Health Management & Policy/Social Work - MPH/MSW
Health Promotion - MPH
Health Promotion & Urban Planning - MPH/MURP
Health Promotion & Social Work - MHP/MSW
Health Studies - MS
Health Systems & Policy - PhD
Primary Health Care & Health Disparities - MPH
Preventive Medicine - Residency
Public Health - Certificates

Pharmacy - PharmD (joint program with Oregon State University)
For More Information
OHSU School of Medicine
503-494-8220

OHSU School of Nursing
3455 SW US Veterans Hospital Rd, SN-ADM
Portland, OR 97239-2941

OHSU SoN - Ashland
1250 Siskiyou Blvd.
Ashland, OR 97520
541-552-6256

OHSU SoN - Klamath Falls
3201 Campus Drive
Third floor - Dow II
Klamath Falls, OR 97601
541-885-1665

OHSU SoN - La Grande
One University Blvd
La Grande, OR 97850
541-962-3803

OHSU SoN - Monmouth
345 N. Monmouth Ave.
Monmouth, OR 97361
503-838-8179

OHSU School of Dentistry
2730 SW Moody Ave
Portland, OR 97201
503-494-5274

OHSU School of Public Health
MC: GH230
3181 SW Sam Jackson Park Road
Portland, OR 97239
503-494-1158

College of Pharmacy
Oregon State University
Corvallis, OR 97331
541-737-3424
The Oregon Institute of Technology (OIT) or Oregon Tech is the only public polytechnic university established in the Northwestern United States. OIT's main campus is located in Klamath Falls. In addition to the traditional, residential campus in Klamath Falls, OIT as an urban campus in metropolitan Portland (Wilsonville), as well as a site in Salem. Oregon Tech Online delivers variety of programs with convenience and flexibility.

Academics
OIT is a comprehensive college offering career and technical courses. It is the Pacific Northwest’s premier public and affordable polytechnic university. OIT offers bachelor and masters degree programs focused on applied technologies, engineering, health professions, applied sciences, communication, and business.

Program Options
OIT is a member of the Oregon University System and offers innovative and rigorous applied degree programs in engineering technologies and health technologies. OIT is one of the few colleges in the country offering web-based Bachelor of Science degree completion programs in the high-demand health technologies. These online degree completion programs enable registered professionals to earn a Bachelor’s degree in their current field.

Dual Enrollment Options - Through OIT’s dual enrollment program, students can take classes at any of six public community colleges while they earn their degree from Oregon Tech. They included Chemeketa, Clackamas, Klamath, Linn-Benton, Mount Hood, or Portland Community College.

Oregon Tech Online - This program allows students to earn certificate, bachelor, or master’s degree without leaving their home or office. Courses are taught through the Internet, allowing you to receive and submit assignments and interact with instructors and classmates through personal computer.

High School Transition (HST) - The HST at Oregon Tech gives qualified high school students the opportunity to take college courses at the Klamath Falls or Portland-metro campus. Students can take as many as eight credits per term at a reduced tuition rate of $25 per credit. Students are still responsible for the cost of books, lab fees, or equipment fees associated with the course.

Advance Credit Program (ACP) - The ACP is a partnership between Oregon Tech and a participating high school. Enrolling in an ACP course is enrolling as a part-time Oregon Tech student. Contact your school counselor to determine if you are eligible for this program.
**TRIO Student Support Services** - provides one on one tutoring, academic/career planning, and peer mentoring for first generation, low-income students, and students with disabilities.

**Counselor Resources**
OIT provides a web based resource page specifically devoted to high school counselors. On this page counselors can learn about OIT and partnerships with OIT, as well as admissions information, and scheduling campus visits. For further information contact OIT Admissions at 800-422-2017 or oit@oit.edu.

**Student Support Services**
To provide the best service possible to students, employers, faculty, and alumni, Career Services coordinates programming related to student employment and graduate success. This includes federal work-study, on campus, part time, internship, and career opportunities, as well as individual career advising and assessment. Students who have chosen a major field are assigned faculty advisors from the student's major department. The Student Success Center at OIT provides testing services, disabilities services, the Tech Opportunities Program, and Peer Consulting to help guarantee student success.

**Financial Aid**
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits and loans. Approximately 66% of certificate/degree seeking students were awarded financial aid (scholarships, grants, or loans).

**Degree Options**
Oregon Tech’s degree programs are focused on applied technologies, engineering, health professions, applied sciences, communication and business. While Oregon Tech is best known for its traditional engineering and technological core, new degree options (and surprising twists on old ones) are remarkably multi-dimensional. As a comprehensive master’s degree granting polytechnic university OIT offers certificates, associate degrees, bachelor degrees, and master’s degrees in a wide variety of health-related fields.

**Health Career Programs**
- **Allied Health** - MS (Online)
- **Applied Behavior Analysis** - CC, MS (Klamath Falls, Portland-metro)
- **Biology-Health Sciences** - BS (Klamath Falls)
  - Pre-Dentistry
  - Pre-Medical
  - Pre-Osteopathic Medicine
  - Pre-Pharmacy
  - Pre-Physical Therapy
  - Pre-Veterinary Medicine
- **Clinical Sleep Health** - CC, AAS (Online)
- **Dental Hygiene** - BS (Klamath Falls, Online, Salem)
- **Diagnostic Medical Sonography** - BS (Klamath Falls, Online)
- **Echocardiography** - BS (Klamath Falls, Online)
- **Emergency Medical Services Management** - BS (Portland-metro)
- **Health Care Management** - BS (Klamath Falls, Online)
- **Health Informatics** - BS (Klamath Falls, Portland-metro, Online)
- **Information Technology** - BS (Klamath Falls, Portland-metro, Online)
- **Medical Imaging Technology** - BS (Klamath Falls)
- **Medical Laboratory Science** - BS (Portland-metro)
- **Nuclear Medicine Technology** - BS (Klamath Falls)
Nursing - BS (Klamath Falls)
Paramedic Program - AAS (Portland-metro)
Polysomnographic Technology - CC, AAS (Online)
Population Health Management - BS (Klamath Falls)
Psychology, Applied - BS (Klamath Falls, Portland-metro, Online)
Radiologic Science - BS (Klamath Falls, Online)
Respiratory Care -BS (Klamath Falls, Online)
Vascular Technology - BS (Klamath Falls, Online)

For More Information
Oregon Institute of Technology
3201 Campus Drive
Klamath Falls, OR 97601
541-885-1024
www.oit.edu/admissions

Portland-Metro Campus
www.oit.edu/portland-metro
503-821-1250

Salem Center
503-584-7102
Oregon School of Massage

Oregon School of Massage (OSM) is committed to holistic education and training designed to integrate body, mind, heart, and spirit. Central to the philosophy of the school is the idea that touch is a powerful form of communication, carrying complex messages for both giver and receiver. The OSM, founded in 1984 and licensed by the Oregon Department of Education, is a private professional school devoted to massage and related health education. OSM has two campuses, one in Portland, and one in Salem.

Academics
OSM provides a rigorous study of anatomy, physiology, kinesiology, pathology, hydrotherapy, and massage is augmented by time for students to share their experiences both as givers and receivers of touch. Everyone carries conscious and unconscious beliefs about touch based on socialization, parenting, and past experiences. Having a dialog helps students to clarify their own beliefs and needs around touching. It also encourages development of the “inner healer”. Our staff supports these beliefs by honoring each student wherever they are in their development and nurturing change as it occurs. Key to our educational process is asking students to view their experiences as personal growth as well as training.

Program Options
OSM offers two programs which meet the requirements for Oregon Licensing, Washington Licensing, and National Certification. Additionally, OSM offers further specialized certification, Continuing Education options, and organized Massage events. OSM is unique in that you can fit classes in and around your life; work, personal pursuits, children, and more. With flexibility in your schedule and a full-time commitment, a student can complete the program in as little as 15 months, however most students complete the program in 2 years by taking 1 or 2 classes per quarter.

Student Support Services
OSM supports graduates through weekly job opportunity emails, free Massage Connections and LMT Gathering educational events, and provides referrals to graduates when members of the public call to inquire about massage specialties. Student Service Coordinators provide schedule planning assistance, student coaching sessions, licensing exam application assistance, general career guidance, and student grievance support/facilitation.

Financial Aid
OSM currently does not process FAFSA applications for Federal Financial Aid, Grants, or scholarships. The U.S. Department of Veterans Affairs has approved the Oregon School of Massage 640-Hour certificate program to accept qualifying veterans and/or dependents for educational benefits. OSM does offer low interest loans as well as monthly payment plans.
Degree Options
OSM provides a 640-Hour Massage Certificate program and a similar program for Healthcare Professionals. Additionally the school provides advanced massage certificates, a Shiatsu certificate, as well as a Mother Touch Advanced Maternity certification.

Health Career Programs
Licensed Massage Therapist - CC
Licensed Massage Therapist for Healthcare Professionals - CC

For More Information
Portland Campus
9500 SW Barbur Blvd. Suite 100
Portland, OR 97219
503-244-3420

Salem Campus
2111 Front St NE - Building 3
Salem, OR 97301
503-585-8912
Oregon State University (OSU) is an international, public research university, located in Corvallis, Oregon. The university offers more than 200 undergraduate degree programs along with a variety of graduate and doctoral programs. It is the largest university in Oregon and is designated by the Carnegie Foundation as a “Community Engagement” university and classifies it as a doctoral university with a status of “Highest research activity”. OSU is one of 73 land grant universities and is one of three U.S. institutions to be designated a sea-grant, space-grant, and sun-grant institution.

**Academics**
OSU’s outstanding faculty and academic programs consistently attract more high achieving Oregon students than any other school in Oregon. OSU is an international public research university that draws people from all 50 states and more than 100 countries. OSU offers more than 200 undergraduate and 100 graduate degree programs through its 11 colleges, the graduate school, and the Honors College - one of only a handful of degree-granting honors programs in the U.S.

**Program Options**
Academic options that are health-related focused come from the Academic Colleges of Pharmacy, Public Health and Human Sciences, Science, and Veterinary Medicine. OSU offers programs that include majors, minors, certificates, professional programs, and online degrees.

*The Honors College (HC)* - The HC is a small degree-granting college at OSU. Students are all working toward an Honors Baccalaureate degree in their academic major.

*The Graduate School* - OSU offers more than 80 graduate programs in fields including life sciences, health and human sciences, and environmental sciences. OSU offers world-class laboratories and other research facilities.

*OSU Ecampus* - OSU offers over 50 programs online that include undergraduate degree and graduate program offerings. OSU’s Ecampus has been consistently ranked as a top 10 online program for Bachelor degrees.

*University Scholars Program (USP)* - USP provides leadership and service opportunities to enhance students’ campus experiences through networking. As part of the USP, scholars are provided direction to be competitive for elite scholarship programs such as the Fulbright, Marshall, and Truman Scholarships upon graduation from OSU.
Office of Global Opportunities (OSU GO) - OSU GO provides study abroad programs for nearly 200 programs in more than 70 countries. This includes Study Abroad, Faculty Led Program Offerings, Intern Abroad, and Research Abroad.

Counselor Resources
OSU’s Office of Admissions provides information for high school counselors on the online application process at OSU. Along with admissions it also allows students to check their application status. This also includes information on admissions requirements as well as information on applying as a non-degree student and re-applying (for previous OSU students) as well as scholarships available for students. The OSU Office of Admissions has a team dedicated to personalize each student’s experience in the admissions process. Each Oregon county has an assigned advisor and they can help answer admissions-related questions, when they will be visiting your area, and how to schedule your personalized visit to campus.

Student Support Services
The Academic Success Center (ASC) is charged with providing academic support services for all students at OSU. The ASC office in Waldo Hall serves as a centralized location for information and referral for students, staff, and faculty. The ASC strives to provide academic success services to current OSU students at all levels of their education. These include such programs as the Academic Coaching Program, Supplemental Instruction, Tutoring, the Learning Corner, New Student Programs & Family Outreach, Math Placement, Campus Housing, and Welcome Week. New student programs provide new students and their families with informative and engaging orientation and transition programs. There are also programs to support transition services for unique student populations (e.g. Veterans, international students, Degree Partnership Program students, transfer students, multicultural student, non-traditional students, first-generation students).

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, veteran benefits and loans. Approximately 52% of certificate/degree seeking students were awarded financial aid (scholarships, grants, or loans). OSU awards more than $20 million in merit based aid annually to undergraduate resident and non-resident students.

Degree Options
Oregon State University’s outstanding faculty and academic programs consistently attract more high achieving students than any other school in Oregon. Oregon State offers more than 200 undergraduate and 100 graduate degree programs through its 11 colleges, the graduate school and the Honors College, one of only a handful of degree-granting honors programs in the U.S.

Health Career Programs
Aging Sciences - Minor
Athletic Training - MAIS, MATRN
Biochemistry and Biophysics - Minor, BS, MAIS, MS, MA, PhD
Bioengineering - BS
BioHealth Sciences - BS
Biological and Ecological Engineering - Minor, MS, MEng, Phd
Biology - Online-Minor, BS
Bioresource Research - BS
Chemistry - Minor, Online-Minor & Course Sequences, BS, MS, MA, PhD
Comparative Health Sciences - Minor, MS, PhD
Counseling - Online-MCoun Clinical Mental Health
Exercise Physiology - Minor
Gerontology - CC
Health Management & Policy - Online-Minor
Health Promotion and Health Behavior - Minor
Human Development and Family Studies - Minor, BS, BS-Online, BS - Portland Center, MS, PhD
Integrative Biology - Minor, MS, PhD
Kinesiology - Minor, BS, MAIS, MS, PhD
Medical Humanities - Certificate (Portland Center)
Medical Technology - BS
Microbiology - Minor, BS, MS, MA, PhD
Molecular and Cellular Biology - Minor, MS, PhD
Nutrition - Minor, BS, MS, PhD
Pharmaceutical Sciences - Minor, MS, PharmD, PhD
Pre-Pharmacy - BS
Psychology - Minor, Online-Minor, BS, BS/BA - Portland Center, MAIS, MS, PhD
Public Health - CC, Minor, Online-Minor, BS, MPH, Online-MPH Public Health Practice, PhD
Radiation Health Physics - Minor, BS, MS, MHP, Online-MHP, PhD
Sports Injury Care - Minor
Toxicology - Minor
Veterinary Medicine - Online-Course Sequences

For More Information
Oregon State University
1500 SW Jefferson Street
Corvallis, OR 97331-2155
541-737-1000

OSU PDX Center
555 SW Morrison Street
Portland, OR. 97204
503-273-4301
Oregon State University - Cascades

Oregon State University - Cascades (OSU-C) is OSU’s branch campus in Bend and is the first and only branch campus in Oregon. OSU-Cascades is also the only baccalaureate and graduate degree granting institution based in Central Oregon. The campus is located in a new and developing campus on Bend’s west side.

Academics
Degree Partnership Program (DPP) - the DPP allows undergraduate students to be jointly admitted and enrolled at the Oregon State University main campus in Corvallis. DPP is open to all undergraduate students pursing their Bachelor’s Degree.

Honors College - The OSU Honors College welcomed its first cohort of honors students at OSU-C in the fall of 2017. The Honors College in partnership with OSU-C provides students with the opportunity to be part of the Honors College experience. Students can earn Oregon State’s most prestigious undergraduate degree and engage in unique research opportunities and interdisciplinary studies, just like top undergraduates at OSU’s main campus in Corvallis.

COCC/OSU-C Transfer Option - OSU-C and COCC have maintained strong connections since the founding of OSU-C in Bend. COCC has a direct and specific guide on course transfer requirements that are aligned with courses at OSU-C.

Program Options
Students have the ability to earn an Oregon State University degree in a small college setting. Students can choose from 16 undergraduate majors and 30 minors.

Study Abroad - Students at OSU-C have the same opportunities to study abroad as students at the Corvallis campus. OSU-C has an on-site study abroad advisor to assist students interested in research or study abroad.

Counselor Resources
OSU-C has created a section specifically for high school counselors on the OSU-C website. This section provide information and answer many important questions about your students’ interest in OSU-C. For more information on Counselor Resources contact the Office of Admissions at bendbeavs@osucascades.edu or 541-322-3142.

Student Support Services
Academic advisors assist you in long- and short-term academic and career planning. They provide information on curricula, educational and experiential options within your college and the university, schedule planning, and help interpret university and departmental requirements. Many student friendly services are offered to support academic success as well as personal well being. These include such free services as the Computer Lab, Personal Counseling Services,
Services for Students with Disabilities, Tutoring Services, Test Proctoring Services, and the Student Success Center.

_Cascades START_ - This is an opportunity for new students to meet with an academic advisor and register for courses.

**Financial Aid**
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits, work study and loans.

**Degree Options**
As a major research university OSU-C grants Bachelor of Arts (BA) and Bachelor of Science (BS) degrees in 16 academic programs. OSU-C grants graduate degrees in 3 areas.

**Health Career Programs**
- **Biology** - Minor, BS
- **Counseling** - MCOUN
- **Human Development & Family Sciences**
  - General Human Development - BS
  - Human Services - BS
- **Kinesiology** - BS
- **Pre-Health** - Biology & Kinesiology
  - Physical Therapy
  - Pre-Dental
  - Pre-Medical
  - Pre-Pharmacy
  - Pre-Veterinary

**For More Information**
OSU-Cascades
1500 SW Chandler Ave.
Bend, OR 97702
541-322-3100
Pacific University

Pacific University is a private, coeducational university. Founded and chartered by the territorial legislature, in 1849 as the Tualatin Academy, it is the oldest chartered university in Oregon. In 1854, the Academy became Tualatin Academy and Pacific University and became the first school in the region to award a baccalaureate degree. The original main campus is located in Forest Grove and features College Hall, the oldest academic building still in use west of the Mississippi. A graduate and professional programs campus is located in the heart of Hillboro’s Health and Education District. The Eugene campus offers undergraduate and graduate programs in the College of Education and a Masters of Social Work. The Woodburn campus offers professional pathways in education with a focus on STEM subjects and teaching diverse students.

Academics
Pacific is home to the colleges of Arts & Sciences, Education, Optometry, Health Professions, and Business. Approximately half of all students are undergraduates, while the other half are graduate and professional students. Over 65 undergraduate areas of study are offered. The College of Optometry is one of 21 schools in the US and Canada offering a doctorate in optometry. The College of Health Professions offers Graduate and Professional Programs in a wide range of health fields.

Program Options
Undergraduate Core - As its name suggests, the Core is at the center of a student’s liberal arts experience at Pacific. The Core supplies about 37% of the credits required for graduation. Within the Core are the study areas of Foundations, Exploration, and Applications. The core is designed to give a student a broad set of knowledge and skills that are considered to be the cornerstone of a successful and meaningful life.

Voyages - Voyages are pre-orientation outdoor adventures for first year Pacific students be they incoming freshmen or transfer students. These voyages are led by current Pacific students and a faculty member. Trips vary and include wilderness, outdoor, and front country voyages.

First Year Seminar (FYS) - FYS introduces incoming students to college academic life and the skills needed for success in that life. FYS classes are capped at 20, which allows FYS faculty to design a unique experience with new students in mind. The courses are topically diverse and far ranging, but all work to develop a foundation of learning that will prepare you for your four years at Pacific.

First Year, First Served Programming - this program is designed with first-year student needs in mind, offering programming and events relevant to the first year in college.
Study Abroad - Study Abroad is an opportunity to earn Pacific academic credit for courses taken at a foreign university or taught by a faculty member from Pacific in another country. Study Abroad Program locations are in 13 countries at 28 universities. Students can also participate in short term study abroad programs as well as summer study abroad programs.

Counselor Resources
Pacific provides opportunities for students to visit and learn more about Pacific. These include spring preview programs for high school juniors and senior preview scholarship days in the fall. For more information on Counselor Resources, contact the Admissions representative for your high school. For more information contact the Office of Admissions at 1-800-677-6712 or admissions@pacificu.edu.

Student Support Services
The Office of Student Support offers a nurturing environment that is conducive to student success. The office provides assistance, intervention, and referrals in the areas of mental health, physical health, academics, and finances. Additionally, Pacific provides additional services through the Student Health Center, Campus Wellness, the Student Counseling Center, Career Development Center, Advising Center, Center for Learning & Student Success, Transfer Student Services, First-Generation Student Resources, and the Office of Equity, Diversity and Inclusion.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits and loans. Approximately 99% of certificate/degree seeking students were awarded financial aid (scholarships, grants, or loans) of some sort. Each year $40 million in institutional scholarships are awarded to students. Admitted students are automatically considered for renewable merit scholarships. Students have the opportunity to also apply for talent and well as institutional scholarships.

Degree Options
Pacific offers undergraduate degrees (BA, BS, BMT, BSW) in addition to graduate degrees (MA, MS, MEd, MSAT), endorsements/specializations/certificates, graduate certificates, as well as graduate and professional program degrees (PhD, OD PsyD, OTD, PharmD, DPT).

Health Career Programs
Applied Science - BS
Applied Psychological Science - MA, MS
Applied Vision Science - BS
Athletic Training - MSAT
Audiology - AuD
Bioinformatics - BS
Biology - Minor, BS
Chemistry - Minor, BS
Clinical Psychology - PhD, PsyD
Communication Sciences & Disorders - Minor, BS, Post-Bac
Dental Hygiene - BS
Disability Studies - Minor, BS
Environmental Chemistry & Toxicology - BS
Exercise Science - Minor, BS
Gerontology - Graduate Certificate
Health Education & Leadership - PhD
Health Science - BHS
Healthcare Administration - MHA
Occupational Therapy - OTD
Optometry - OD
Pharmacy - PharmD
Physical Therapy - DPT
Physician Assistant Studies - MS
Pre-Professional Tracks
  Athletic Training 3:2 Pathway - BS/MS
  Pharmacy 3:3 Pathway - BS/PharmD
  Pre-Audiology
  Pre-Dental
  Pre-Dental Hygiene
  Pre-Graduate Psychology
  Pre-Med
  Pre-Occupational Therapy
  Pre-Optometry & Vision Science
  Pre-Pharmacy
  Pre-Physical Therapy
  Pre-Physician Assistant Studies
Psychology - Minor, BS
Public Health - Minor, BS
Social Work - BSW, MSW
Speech-Language Pathology - MS
Vision Science - BS, MS, PhD

For More Information
Pacific University
2043 College Way
Forest Grove, OR 97116
503-352-6151

Hillsboro Campus
222 SE 8th Avenue
Hillboro, OR 97123

Eugene Campus
40 East Broadway, suite 250
Eugene, OR 97401
541-485-6812

Woodburn Campus
124 W. Lincoln Street
Woodburn, OR 97701
503-352-1443
Portland Community College

Portland Community College (PCC) is the largest post-secondary institution in Oregon. PCC fills a unique role, one that offers high quality education and opportunities for students, which in turn contributes to the vibrancy of Portland’s economic community. PCC includes four comprehensive campuses, eight centers, and dozens of independent locations throughout the community that offer courses and provide student services. Campuses include the following; Cascade in a diverse urban neighborhood in the heart of Portland, Rock Creek in Hillsboro, Sylvania which is PCC’s largest campus between Tigard and Lake Oswego, and Southeast which is PCC’s newest campus in central Eastside Portland. From training our community’s workforce to preparing students for four-year schools to lending the way in educational success and completion, PCC is at the heart of the region’s success tomorrow.

Academics
One of the top 20 community colleges in the country, PCC is unmatched in its breadth of opportunities. Students can earn a two-year degree, then transfer to a four-year school as a junior. Each year, 5000 students transfer PCC to four-year colleges. Many of PCC’s Career/Technical programs offer students the opportunity to earn short-term certificates, ranging in length from one term to one year. These include Career Pathways Certificates and One-year Certificates.

Program Options
Degree Partnership Program (DPP) - the DPP allows undergraduate students to be jointly admitted and enrolled at Oregon State University. DPP is open to all undergraduate students pursuing their Bachelor’s Degree.

Adult Basic Education (ABE): GED - This program develops reading, writing, and math skills to prepare a student to pass the Oregon GED State Exam, enter college, or training programs. The program offers classes in English at four main college campuses, two workforce training centers, online, and has family literacy programs in some public schools.

Developmental Education - This program prepares for PCC’s college credit programs, and for a student’s chosen career. Many students already enrolled in credit courses take developmental classes as needed to meet the requirements of their degree program.

Dual Enrollment Programs - PCC has dual enrollment agreements (also known as co-admission agreements) with the above four-year schools. Dual enrollment agreements allow you to take classes at both schools, greatly expanding your resources and options. PCC enrollment can be combined with Portland State University, Oregon State University, Oregon Institute of Technology, Linfield College, and Concordia University.

Study Abroad - Study abroad options at PCC include faculty-led programs, options via Portland State University, and International Coop or Internship.
Community-Based Learning - the program is an academic program that provides support across all disciplines through assistance with community-based learning course implementation, professional development, and resources.

Continuous Learning for Individuals, Management, & Business (CLIMB) - PCC CLIMB Center for Advancement delivers continuous learning opportunities for individuals and customized training for organizations throughout the Portland, Oregon metro region and beyond. Housing programs include the Institute for Health Professionals. CLIMB is a central hub for noncredit courses, workshops, and certifications that help elevate careers and/or personal growth with specialized training from experts in their respective fields.

Online Learning - PCC provides online learning opportunities for take a wide variety of classes. Students receive weekly lessons, complete assignments, and communicate in a virtual classroom setting.

Expanded Options - this program provides junior and senior high school students with additional options to continue or complete their education, and to allow them to earn concurrent high school and college credits. If accepted into the program, the student's sponsoring high school covers the cost of tuition and fees.

Dual Credit - high school juniors and seniors in the Portland area are able to receive college credits for some of their high school courses through an “articulated credit” program at PCC. Students complete courses taught at their high school by qualified instructors. Students can earn PCC credit in lower division collegiate courses and well as courses which lead to an associate degree or certificate in a vocational program.

High School Credit Recovery - this program allows a student to make up missing credits at PCC that can then be applied to a high school diploma, to a PCC degree, or transfer to a university.

Gateway to College - this program helps students who have dropped out of high school or who may not graduate. Through this program a student can obtain a high school diploma and earn college credits at the same time. This program is available to students in the the Portland Public, Hillsboro, Lake Oswego, Sherwood, and Tigard/Tualatin school districts.

YES to College - this program allow students to prepare for the GED, learn about interesting careers, and get the support needed to achieve career goals. This program is available to students in the Portland Public, Hillsboro, Lake Oswego, Sherwood, and Tigard/Tualatin school districts.

Beaverton Early College High School - this program is located at Rock Creek and Sylvania Campuses and offers junior and senior high school students the opportunity to attend PCC as a full-time student, earning a high school diploma, and two years of college course work. Students follow a career pathway that will lead to a certification or associates degree.

Jefferson Middle College Program - this program is a community collaboration between the Portland Public Schools district, PCC, and Self-Enhancement, Inc, a local community-based educational nonprofit. Students at Jefferson High School-Middle College for Advanced Studies ear college credit while they’re still enrolled in high school.

Counselor Resources
For Counselor Resources contact the Admissions Office at www.pcc.edu/enroll/ or 971-722-8888 x2.
Student Support Services
PCC offers a wide variety of student support services. Among specific centers are the Queer Center, Multicultural Center, Veterans Center, and Women’s Center. Additionally PCC is part of the TRIO program which is a federal outreach and student services programs designed to identify and provide services for individuals from disadvantaged backgrounds. PCC also provides safety resources for students from short-term counseling, public safety, as well as safe spaces. PCC’s Student Success Center provides academic support, drop-in tutoring, computer access, as well as disability services and equal access resources for all students.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits, work-study, and loans. Approximately 34% of students receive federal loans. The PCC Foundation awards hundreds of scholarships every year to students who may not otherwise be able to afford an education.

Degree Options
The Associate of Applied Science (AAS) and Associate of Science (AS) degrees are intended to prepare you for direct entry into the workforce. The AAS degree may also help you prepare for career advancement, occupational licenses, our study at the baccalaureate level. The Associate of General Studies (AGS) degree is a two-year program designed to provide students the opportunity to acquire a broad education rather than pursuing a specific college major or program. The Associate of Arts Oregon Transfer (AAOT) degree is designed for students planning to transfer into a baccalaureate degree program in the Oregon University System enabling a student to enter as a junior. Certificate of completion (CC) are awarded for occupational content only.

Health Career Programs
Health Care is an exciting and dynamic field with many career options. Whether you want to work directly with patients, behind the scenes, or somewhere in between.

Addiction Counseling
Addiction Counselor - AAS
Addiction Studies - CC
Alcohol and Drug Counseling (Cascade)
Addiction Studies - AAS (Cascade)
Bioscience
Bioscience Technology - AAS (Rock Creek)
Advanced Bioscience Technology - CC
Bioscience Technician - CC
Computer Information Systems
Computer Information Systems - CC, AAS
Network Administration - AAS
Cybersecurity Fundamentals - CC
Dental Assisting - CC (Sylvania)
Dental Hygiene - AAS (Sylvania)
Dental Laboratory Technology - CC, AAS (Sylvania)
Emergency Medical Services
Emergency Medical Technician (Paramedic) - AAS (Cascade)
Emergency Medical Services - CC
Advanced Emergency Medical Technician - CC
Exercise Science
Fitness Technology - AAS
Group Fitness Leader - CC
Healthy Older Adult Fitness - CC (Sylvania)
Personal Trainer - CC
Fire Protection Technology - CC, AAS
Gerontology
Gerontology - AAS (Sylvania)
Activity Assistant - CC (Sylvania)
Activity Consultant - CC (Sylvania)
Activity Director - CC (Sylvania)
Advanced Behavioral and Cognition Care - CC (Sylvania)
End of Life Care and Support - CC (Sylvania)
Gerontology Advocacy - CC
Therapeutic Horticulture Activity Specialist - CC
Health Information Management - AAS (Cascade)
Medical Assisting - CC (Cascade)
Medical Imaging
Radiography - AAS (Sylvania)
Computed Tomography - CC (Sylvania)
Magnetic Resonance Imaging - CC (Sylvania)
Medical Laboratory - AAS (Cascade)
Medical Professions
Healthcare Careers - CC (Cascade)
Nursing - AAS (Sylvania)
Ophthalmic Medical - AAS (Cascade)
Veterinary Technology - AAS (Rock Creek)

For More Information
Sylvania Campus
12000 SW 49th Avenue
Portland, OR 97219
971-722-6111
www.pcc.edu

Cascade Campus
705 N. Killingsworth St.
Portland, OR 97217
971-722-6111

Rock Creek Campus
17705 NW Springville Rd.
Portland, OR 97229
971-722-6111

Southeast Campus
2305 SE 82nd and Division
Portland, OR 97216
971-722-6111

CLIMB Center for Advancement
1626 SE Water Avenue
Portland, OR 97214
971-722-2798
Newborn Center
135 Worth Blvd.
Newberg, OR 97132
971-722-8602

Downtown Center
722 SW 2nd Ave.
Portland, OR 97204
971-722-6642

Hillsboro Center
775 SE Baseline St.
Hillsboro, OR 97123
971-722-6800

Portland Metropolitan Workforce Training Center
5600 NE 42nd
Portland, OR 97218
971-722-2000

Willow Creek Center
241 SW Edgeway Drive
Beaverton, OR 97006

Swan Island Trades Center
6400 N Cutter Circle
Portland, OR 97217
971-722-5650
Portland School of Radiography

Portland School of Radiography is the longest running program for training limited X-ray machine operators (LXMO) in the state of Oregon. Our instructors have many decades of experience at both the graduate and post graduate levels and have successfully trained more limited permit holders than any other program. Due to our limited class size and skills labs, we are able to maintain an excellent student/teacher ratio, thus maximizing teacher accessibility for our students.

Academics
Our program is designed to train medical, chiropractic, and podiatry assistants in limited permit radiography (LXMO certificate). We offer all of the modules (except bone densitometry) approved by Oregon Board of Medical Imaging (OBMI) for limited permit holders in the state of Oregon. Our program is offered two times per year with classes offered in the Spring, and Fall.

Program Options
This program is for medical assistants, chiropractic assistants, podiatry assistants, or those who are in the medical field looking to get their limited permit. The complete course takes about three and a half months. The program specifically requires that an applicant be employed in a clinic where they will be able to get their practical experience under the supervision of a clinical coordinator. Classes are offered weekends only and are held in the Olympic Mills Commerce Building in East Portland.

Degree Options
Students are required to take Core Module (Radiation Use & Safety, and Patient Care) and at least one positioning module depending on the anatomical category in which they want/need to obtain a limited permit.

Health Career Programs
Radiologic Technologist - CC

For More Information
Portland School of Radiography
539 10th Street
Lake Oswego, OR. 97034
503-635-0105

Classroom Address:
Olympic Mills Commerce Building
107 SE Washington St. Suite 158
Portland, OR. 97214
Portland State University

Portland State University (PSU) is a public research university. PSU was founded in 1946 as a post-secondary educational institution for World War II veterans. It evolved into a four-year college over the following two decades, and was granted university status in 1969. It is the only public urban university in the state of Oregon that is located in a major metropolitan city. The university moved to its present location in 1953. The 50 acre urban campus is located in Portland’s South Blocks area and is part of the downtown urban core.

Academics
PSU comprises seven constituent colleges, offering undergraduate degrees in 123 fields, and postgraduate degrees in 117 fields. Schools at PSU include the Schools of Business, Education, Social Work, the Colleges of Urban and Public Affairs, Arts, Liberal Arts and Sciences, and the Maseeh College of Engineering and Computer Science. The university has increasingly added more doctoral programs as it has grown from its original mission as a liberal arts undergraduate college into a more broad-based research university. Graduate education is now offered in more than 70 Master’s programs, more than 30 graduate certificate programs, and 20 doctoral programs.

Program Options
PSU includes both traditional and online options for obtaining a degree or certificate, both at the undergraduate and graduate level.

Online Education - PSU’s online program has several degree options available. They include nine undergraduate degrees, 14 graduate degrees, and 18 certificates. The online programs support a student's independence while providing the same support or assistance a student would have available to them in a traditional setting. This includes academic advising, technology support, career services, online tutoring, library services, and disability resources.

Honors College - The PSU Honors College is the only urban-focused honors college in the country. It offers a liberal arts education with a focus on the urban environment. Students enjoy a small, dedicated community of highly motivated students and engaged professors. It provides a small, liberal arts college atmosphere within a larger university. Additionally, the Honors College is a close-knit academic community with personalized academic support and dedicated Honors housing.

Co-Admission - Co-Admission, also known as dual enrollment or degree partnership, is a special admissions process that allows students to be formally admitted to both PSU and partner community colleges. Co-Admission partner community colleges include Chemeketa, Clackamas, Clatsop, Oregon Coast (through Portland CC), Mt. Hood, and Portland community colleges, and Clark College.
Advanced Placement (AP), International Baccalaureate (IB), and College Level Exam Program (CLEP) - Students who complete college-level work in high school under the AP or IB program with a qualifying exam score or through a CLEP exam qualified score may be granted credit toward a bachelor’s degree in comparable college courses.

Study Abroad - PSU Education Abroad Office coordinates a variety of study abroad and international internship opportunities in Asia. Many international opportunities are available and PSU works with a variety of program providers to offer opportunities worldwide. All of the programs are approved for PSU credit. In addition to being able to apply PSU financial aid to approved study abroad programs, PSU students are excellent candidates for study abroad related scholarships.

Counselor Resources
PSU Admissions representatives visit high schools, community colleges, and participate in college fairs regionally, nationally, and internationally throughout the year. Each county in Oregon has a specifically assigned admissions counselors. The office provides links for counselor conferences to keep counselors up to date on admissions requirements, scholarship deadlines, and FAFSA information. They also can provide information on application fee deferral, and information on HB 2787 (tuition equity). The staff can arrange to bring students to campus or set up Instant Viking events as an on-site admissions events at specific high schools. For more information contact the admissions office at 503-725-3511 and admissions@pdx.edu.

Student Support Services
PSU provides a wide ranging spectrum of student support services. The traditional services include academic advising, career services, student life, student activities and leadership programs, student health and counseling, and tutoring services. Specific centers exist for the following: Disability Resources Center, Financial Wellness Center, Multicultural Student Center, Native American Student and Community Center, Pacific Islander, Asian, and Asian American Student Center, Queer Resource Center, Student Sustainability Center, The Learning Center, The Writing Center, University Success Center, Veterans Resource Center, and Women's Resource Center. Additionally, resources are provided for the following areas and groups; Committee for Improving Student Food Security, Food Pantry, La Casa Latina Student Center/ Multicultural Retention Services, Pan-African Commons, Services for Students with Children, and Student Legal Services.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits and loans. Approximately 64% of certificate/degree seeking students were awarded financial aid (scholarships, grants, or loans). PSU offers many scholarship opportunities for undergraduate, post baccalaureate and graduate studies.

Degree Options
PSU offers undergraduate degrees, postgraduate degrees, master’s degrees, graduate certificates, and doctoral degrees.

Health Career Programs
Addictions Counseling - Graduate Certificate
Aging Services - Minor, BA, BS
Applied Health & Fitness
  Fitness Exercise Focus - BA, BS
  Fitness Special Populations Focus - BA, BS
  Health Coaching Focus - BA, BS
Biology - Minor, BA, BS, MS, PhD
Biomedical Physics - BA, BS
Chemistry - Minor, BA, BS, MS, PhD
Chemistry/Biochemistry - BA, BS
Community Health - PhD
Community Health Education - Minor, BA, BS
General Science - MS
Gerontology - Graduate Certificate (Online)
Health Management & Policy - MS
Healthcare MBA BBA, MBA (Online) (Jointly with OHSU)
Health Studies - MS
Aging Services - Minor, BA, BS
Community Health Education - Minor, BA, BS
Health Sciences - Minor, BA, BS
Physical Activity/Exercise - BA, BS
School Health - BA, BS
Health Systems & Policy - PhD
Infant/Toddler Mental Health - Certificate (Online)
Physical Activity/Exercise - BA, BS
Psychology - Minor, BA, BS, MS
Applied Psychology - PhD
Public Administration
Health Administration - MS
School Health - BA, BS
Science - BA, BS
Social Work - BA, BS, MSW (Online)
Speech and Hearing Sciences - BA, BS, MS

For More Information
Portland State University
PO Box 751
Portland, OR 97207
503-725-3000
Reed College is an independent liberal arts college in Portland's Eastmoreland neighborhood which includes a forested canyon nature preserve at its center. Reed is known for its academic rigor, mandatory freshman humanities program, senior thesis, and unusually high proportion of graduates who go on to earn doctorates and other postgraduate degrees. Referred to as one of the most intellectual colleges in the country, Reed is known for its high standards of scholarly practice, creative thinking, and engaging citizenship.

Academics
Reed maintains a very low student-to-faculty ratio and its small classes emphasize a “conference” style where the teacher often acts as a mediator for discussion rather than a lecturer. While larger classes do exist, Reed emphasizes its smaller lab and conference sections. Reed categorizes its academic program into five Divisions and the Humanities program. Overall, Reed offers twenty-six department majors, twelve interdisciplinary majors, six dual-degree programs with other colleges and universities, and programs for pre-medical and pre-veterinary students. Reed is part of the Annapolis Group, an American organization of independent liberal arts colleges.

Program Options
Dual Degree - In order to offer students a broad selection of majors, Reed College has affiliated with cooperating institutions where students may undertake a program that allow them to graduate with degrees from both institutions. These programs include Engineering or Computer Science (Caltech, Columbia University, or Rensselaer Polytechnic Institute), Forestry-Environmental Science (Duke University), and Visual Arts (Pacific Northwest College of Art).

Center for Life Beyond Reed - This program supports students from their first semester to their last as they prepare for life after graduation. Programming includes one-on-one counseling, internships/fellowships/awards, job listings, networking opportunities, and hands-on workshops.

Young Scholars - The Young Scholars program, developed in 1980, extends this opportunity to selected high-school students who are ready for part-time, rigorous college study. This high selective scholarship program allows seniors to take one college class a Reed for the full academic year while concurrently enrolled in high school area.

Counselor Resources
Reed welcomes visits from school counselors year round. Reed offers information sessions and tours outside regularly scheduled events on a limited basis and on an availability basis. For more information contact 503-777-7538.
Student Support Services
The Division of Student Services works directly and collaboratively with student to provide guidance and resources designed to optimize the quality of student life and student success beyond the classroom. The fourteen departments that comprise Student Services provide a wide range of programs and services intended to complement and enhance each student’s academic experiences. These departments include such areas as academic support, community wellness, disability support services, health & counseling, office for inclusive community, and student engagement.

Financial Aid
Reed meets 100 percent of the demonstrated need of all admitted students for all four years. Scholarships, grants, employment opportunities, and loans are all part of Reed's financial aid program. 51% of Reed students receive need-based aid.

Degree Options
Reed students pursue the bachelor of arts degrees in 40 majors and programs. Reed also offers a graduate program leading to a master of arts degree in liberal studies.

Health Career Programs
Biology - BLS
Biochemistry & Molecular Biology - Interdisciplinary Study
Chemistry - BLS
Chemistry-Physics - Interdisciplinary Study
Neuroscience - Interdisciplinary Study
Premedical and Preveterinary Preparation - Interdisciplinary Study
Psychology - BLS

For More Information
Reed College
3203 Southeast Woodstock Blvd.
Portland, OR 97202-8199
503-771-1112
Rogue Community College

Rogue Community College (RCC) has been a powerful force for quality of life in the Rogue River region since 1970. Through teaching and service, the college has provided leadership and enriched the community by embracing equality and diversity. RCC has three campuses, in Medford, Grants Pass, and White City. These campuses serve the citizens of Josephine and Jackson County.

The RCC Redwood Campus is a former Job Corps training center and is located five miles west of Grants Pass on 84 wooded acres. The spacious campus has grown to include many academic and classroom facilities as well as modern laboratories.

The RCC Riverside Campus is a multi-building complex located in downtown Medford and is providing a key role in the educational and cultural renaissance occurring in the heart of Medford. The main downtown complex houses classrooms, labs, as well as student and library services. Additionally, there are two additional facilities nearby: The Fir Street Learning Center and the D Building. The new SOU/RCC Higher Education Center is a state-of-the art facility integrates RCC and Southern Oregon University students in one learning environment, making the seamless transition from a two-to four-year degree.

The RCC Table Rock Campus is the newest campus and is located in White City. This campus houses professional and technical programs such as diesel technology, construction, manufacturing, electronics, public safety, and apprenticeships.

RCC also offers classes at the Small Business Development Center in Grants Pass, and the Illinois Valley Learning Center in Kerby.

Academics
RCC is a comprehensive community college offering career and technical and lower division college classes. In addition to weekday classes, RCC offers some online, evening, and Saturday classes. Evening classes for credit are offered on the main campus and at off-campus centers. RCC also offers a variety of different ways students can learn ranging from traditional lectures or lecture/lab classes to open-entry/open-exit classes that permit students to begin and end classes when they wish.

Program Options
Degree Partnership Program (DPP) - the DPP allows undergraduate students to be jointly admitted and enrolled at Oregon State University. DPP is open to all undergraduate students pursing their Bachelor’s Degree.

College Now - RCC’s dual enrollment program allows high school students to earn college credit for free in selected high school classes at the same time they are earning credit toward their high school diploma.
Early College Program - Traditional RCC courses, known as Early College (offered at a discount rate if billed/approved by the high school). Students are encouraged to pair the free College Now course offerings at their high school to complete an RCC certificate or plan of study.

High School Program Options - Three entry points have been identified by RCC as ideal for high school students in the Rogue Valley. They include Basic Healthcare Certificate, Business Assistant: Business and Information Specialist Career Pathway Certificate, and Oregon Transfer Module.

Counselor Resources
In order to ensure that our high school programs run smoothly and stay streamlined, the Educational Partnerships Office requests that one staff member at each high school be designated as the high school’s RCC liaison with the Educational Partnership Office.

Student Support Services
Student Services respectfully guides individuals toward learning through growth and awareness. We provide a range of programs and services designed to promote academic success, student life, and personal development. Services include Academic Support, Career services, Disability services, Latino services, Transfer Center, TRiO, Tutoring Center, and Veterans services.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, work study, scholarships, vet benefits and loans. Over 50% of certificate/degree seeking students were awarded financial aid (scholarships, grants, or loans). RCC offers RCC Foundation Scholarships as well as state sponsored scholarships such as the Office of Student Access and Completion.

Degree Options
The Associate of Applied Science (AAS) and Associate of Science (AS) degrees are intended to prepare you for direct entry into the workforce. The AAS degree may also help you prepare for career advancement, occupational licenses, our study at the baccalaureate level. The Associate of General Studies (AGS) degree is a two-year program designed to provide students the opportunity to acquire a broad education rather than pursuing a specific college major or program. The Associate of Arts Oregon Transfer (AAOT) degree is designed for students planning to transfer into a baccalaureate degree program in the Oregon University System enabling a student to enter as a junior. Certificate of completion (CC) are awarded for occupational content only.

Health Career Programs
Alcohol and Drug Counselor - CC
Basic Health Care - CC
Biology - AAOT
Chemistry - AAOT
Computer Support Technician
Health Care Informatics - AAS
Dental Assistant - CC
Emergency Medical Services - CC
Exercise Specialist - CC
Fire and Life Safety - CC
Fire Science - CC, AAS
Health Care Informatics Assistant - CC
Health/Exercise Science - AAOT
Health Informatics - AS (Transfer to Oregon Tech)
Information Technology - AS (Transfer to Oregon Tech)
Massage Therapy (Entry Level) - CC
Medical Assistant - CC
Medical Coding Specialist - CC
Medical Assistant (Phlebotomy) - CC
Nursing - AAS
Paramedicine - AAS
Pharmacy Technician - CC
Practical Nursing - CC
Pre-dental Hygiene - AGS
Pre-medical Imaging - AGS
Pre-professional Medicine - AGS
Psychology - AAOT
Sterile Processing Technician - CC

For More Information
RCC Redwood Campus
3345 Redwood Highway
Grants Pass, OR 97527-9291
541-956-7500
www.roguecc.edu

RCC Riverside Campus
117 S. Central Avenue
Medford, OR 97501-7221
541-245-7500

RCC/SOU Higher Education Center
101 S. Bartlett
Medford, OR 97501
541-552-8100

RCC Table Rock Campus
7800 Pacific Avenue
White City, OR 97503-1060
541-245-7500
Southern Oregon University

Southern Oregon University (SOU) is a four-year university that specializes in a strong liberal arts and sciences curriculum, and select graduate and professional programs, offering 100 areas of study, including 36 majors. SOU specializes in individual attention offering small class sizes. Situated in the beautiful town of Ashland, SOU combines quality education with a spectacular location. Surrounded by rugged mountains, rivers, and lakes, the beautiful 175-acre campus is home to students from around Oregon, around the United States, and around the World.

SOU’s second campus is in the region’s hub of downtown Medford. Focusing on working students, the Medford campus offers more than fifty classes on evenings and weekends. The new SOU/RCC Higher Education Center is a state-of-the-art facility that creates an new academic culture, integrating Rogue Community College and SOU students in one learning environment, making a seamless transition from a two- to four-year degree.

Academics
SOU is a comprehensive four-year university offering career and technical and lower division college as well as graduate degree programs. SOU provides a career-focused and comprehensive undergraduate experience in 36 areas of study. Pre-professional tracks of one to four years are available in specific areas, as well as master’s degree programs in over a dozen specialties. Evening classes for credit are offered on the main campus and at off-campus centers. Students can earn college transfer credit or work toward a certificate or degree in one of SOU’s career and technical programs. SOU also offers a variety of different ways students can learn ranging from traditional lectures or lecture/lab classes to open-entry/open-exit classes that permit students to begin and end the class when they wish.

Program Options
Online Degrees - SOU offers four undergraduate, two graduate degrees and two certificate programs online in addition to the traditional undergraduate and graduate programs.

Cooperative Pre-Professional programs - Some Pre-Professional are offered in cooperation with various professional schools and institutions. These include: Chiropractic (University of Western States), Dental Hygiene (Oregon Institute of Technology), Medical Technology (OHSU), and Optometry (Pacific University).

Jackson/Josephine Pledge Program - This program for Jackson/Josephine county high school graduates allows the opportunity to graduate in 3 years instead of 4 by applying credit from college coursework taken in high school. The program includes individualized advising, coaching, mentoring and support from a Jackson/Josephine Pledge advisor.

Accelerated Baccalaureate Program (AccBacc) - The AccBacc program for freshman students reduces the number of credits required for graduation by taking into account your high school work. This allows a student to earn a bachelor’s degree in just three years.
**Bridge Program** - SOU’s Bridge Program is a first-year experience that helps promising students transition to college successfully by supporting their social, emotional, and academic strengths. The program is open to graduating Oregon high school students and welcomes underrepresented students.

**Honors College** - The Honors College Program allows students to experience an intense and rigorous education. The Honors College curriculum comprises 50 credits of Honors College coursework that collectively satisfy SOU’s University Studies (general education requirements). The Honors College accepts students from every major and allows for a truly individualized academic plan.

**Advanced Southern Credit (ASC)** - ASC offers students the opportunity to begin a university education while still in high school, without traveling to a university campus. Students take classes offered at their high school that have been approved by SOU, and enroll in SOU at a reduced tuition rate. Students complete ASC classes on site at their high school, and will earn an average of 3-4 college credits per class. ASC courses are accepted by all public universities in Oregon.

**Early Entry (EE)** - SOU allow approved high school students to enroll in and attend courses on the Ashland and Medford campuses, while also completing high school graduation requirements at their local high school. Students who wish to be considered will meet with their high school counselor and Early Entry program coordinator to confirm that they are prepared to handle a college course outside of their high school environment. EE courses are accepted by all public universities in Oregon.

**Counselor Resources**
SOU Admissions staff journey along the west coast and undertake preview events that showcase campus to prospective students. For more information on Counselor Resources contact the Admissions Department at 541-552-6411.

**Student Support Services**
SOU Student Resources provides students with opportunities to be successful. Resources include academic advisement, health & wellness, career preparation, disability resources, diversity & inclusion, veterans resources, support & intervention, and sustainability.

**Financial Aid**
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits and loans. Approximately 61% of certificate/degree seeking students were awarded financial aid (scholarships, grants, or loans). SOU has many merit-based, departmental, and need-based scholarships available.

**Degree Options**
SOU offers Bachelor of Arts or Science, Bachelor or Applied Science, Bachelor of Fine Arts, and Bachelor of Music degrees at the undergraduate level. SOU offers Master of Arts or Science degree as well as Master degrees in specific fields of study.

**Health Career Programs**
**Biology** - Minor, BA, BS
**Chemistry** - Minor, BA, BS
**Biochemistry** - BS
**Forensic Chemistry** - BS
**Clinical Mental Health Counseling** - MA, MS
Healthcare Administration
Community Public Health - BA, BS
Data Analytics - BA, BS
Personnel Management - BA, BS
Health & Physical Education - BA, BS
Human Services - BA, BS
Nursing - (in cooperation with Oregon Health & Sciences University)
Nursing - BSN
Registered Nurse to Bachelor of Science in Nursing - BSN (Online for RN’s with AAS in Nursing)
Accelerated BS - BSN for students with Bachelor’s Degree with a major other than Nursing
Nursing Education - MNE
Health Systems and Organizational Leadership MSN
Accelerated Bachelor’s to Master’s
Accelerated Bachelor’s to PhD

Pre-Professional Programs
Chiropractic Medicine (in cooperation with University of Western States)
Dental Hygiene (in cooperation with Oregon Tech)
Dentistry
Medical Technology (in cooperation with Oregon Health & Sciences University)
Medicine
Occupational Therapy
Optometry (in cooperation with Pacific University)
Pharmacy
Physical Therapy
Physician’s Assistant
Psychology - Counseling, Social Work, or Human Service
Veterinary Medicine

Psychology - Minor, BA, BS

For More Information
Southern Oregon University
1250 Siskiyou Blvd.
Ashland, OR 97520
541-552-7672
Southwestern Oregon Community College (SOCC) is located within two miles of the Pacific Ocean in an area of scenic beauty and mild climate. The 158-acre campus lies completely within the city of Coos Bay and is bordered on the north and east of North Bend.

The college was formed in a tax district election and included Coos and western Douglas counties. Curry County later joined the college district. The district now encompasses over 3,600 square miles and serves a population of nearly 100,000. The college is the only public, post-secondary institution in the region.

Today’s main campus is located on the shore of Upper Empire Lake in a natural tract of coastal pine. In early 2012, SOCC opened a new facility, the Curry Campus, which is located just north of Brookings.

**Academics**
Throughout the history of the college, a comprehensive instructional program has evolved. Instructional offerings include two-year transfer programs, one and two-year professional/technical programs, short course occupational programs, adult education, a high school diploma program, and adult enrichment courses. Classes are offered on the Coos Bay campus, on the Curry campus, and in towns throughout the college district.

**Program Options**
*Degree Partnership Program (DPP)* - the DPP allows undergraduate students to be jointly admitted and enrolled at Oregon State University. DPP is open to all undergraduate students pursuing their Bachelor’s Degree.

*Credit for Prior Learning* - This is an opportunity for SOCC students to be granted credit for verifiable, college-level learning that is acquired outside the college setting through life or work experience.

*Advanced Placement Program (APP)* - High school seniors who participate in the APP may seek advanced placement in a variety of disciplines.

*Challenge* - Students who believe that they have the knowledge and skills from life experience, industry training, or professional certification, may request to challenge a course by petition or by an examination in lieu of class attendance.
Career Pathway (CP) - CP is a series of connected education and training programs and student support services that enable individuals to secure a job or advance in a demand industry and occupation. A CP certificate can usually be completed in less than a year, and prepare a student for employment in high-growth, high-demand industries while also providing a stepping stone to an associate degree, bachelor degree, and beyond.

Distance Learning - Distance education at SOCC provides a student with the opportunity to take classes off campus, allowing them to work around their work and home schedule.

Dual Admission Program (DAP) - The DAP program allows students early and easy access to advising opportunities at the University of Oregon. This program is designed to create a seamless educational experience and provides the opportunity to apply for two colleges concurrently.

Dual Enrollment (DE) - The DE program is designed to create a greater seamless opportunity for students on the southern coast of Oregon through simultaneous enrollment at Southwestern and a two or four-year college. This includes the following institutions; Eastern Oregon University, Klamath Community College, Oregon Health Sciences University - Nursing, Oregon Institute of Technology, Oregon State University, Southern Oregon University, and University of Oregon.

High School Connections - SOCC provides high school students the opportunity to earn college credits while fulfilling high school graduation requirements via either dual credit options taught by high school instructors or enhanced options taught by SOCC faculty on high school campuses. Participating high schools in Coos County include Bandon, Coquille, Marshfield, Myrtle Point, North Bend, Powers, and Winterlakes High Schools, in addition to Reedsport Community Charter School. Participating high schools in Curry County include Brookings Harbor, Gold Beach, and Pacific High Schools.

Counselor Resources
SOCC provides information to high school counselors in order to help them assist high school students with the application process as well as information on programs available to current high school students at SOCC. This includes information on preparing for dual credit, expanded options, advanced diploma, testing, dual credit class information for specific high schools, career pathways, 3.75 scholarship, and student support services (TRIO).

Student Support Services
SOCC provides skills assessment, success courses, tutoring, mentoring, and financial literacy assistance to all students.

TRIO Student Support Services (SSS) - SSS is one of the federally funded TRIO programs for education. The goals of SSS are to help students graduate from SOCC, to encourage students to transfer to a four-year college or university and to assist with the transfer process. To be eligible for SSS, students must apply to the program and meet at least one of the following criteria neither parent has a four-year (bachelor’s) degree, meet the federal low income requirements for TRIO programs, or have a documented disability (physical or learning). SSS services are free and include tutoring, counseling, advising, campus visits to Oregon's four-year schools, cultural enrichment activities and supplemental grant aid for qualified students.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits, work study, and loans. Approximately 24% of students receive federal loans. SOCC offers a variety of institutional tuition scholarships as well as general scholarships.
Degree Options
The Associate of Applied Science (AAS) and Associate of Science (AS) degrees are intended to prepare you for direct entry into the workforce. The AAS degree may also help you prepare for career advancement, occupational licenses, our study at the baccalaureate level. The Associate of Arts Oregon Transfer (AAOT) degree is designed for students planning to transfer into a baccalaureate degree program in the Oregon University System enabling a student to enter as a junior. Certificate of completion (CC) are awarded for occupational content only.

Health Career Programs
- Basic Allied Health Care - CC
- Clinical Laboratory Assistant - CC
- Computer Information Systems - CC, AAS
- Dental Assisting - CC
- Emergency Medical Technician
  - EMS Technician I - CC
  - EMS Technician II - CC
- Fire Science - AS
- Health Care Career Core - CC
- Medical Aide - CC
- Medical Assistant - AAS
- Medical Clerical - CC
- Nursing
  - Advanced Nursing Assistant - CC
  - Basic Nursing Assistant - CC
  - Nursing - AAS
- Paramedicine - AAS
- Pharmacy Technician - CC
- Personal Trainer
  - Aging Adult Specialty - CC
  - Group Exercise Leader - CC

For More Information
SWOCC Coos Campus
Southwestern Oregon Community College
1988 Newmark Avenue
Coos Bay, OR 97420
541-888-2525
www.socc.edu

SWOCC Curry Campus
Curry Campus-Brookings
96082 Lone Ranch Parkway
Brookings, OR 97415
541-813-1667
Springdale Job Corps Center

Job Corps is a no-cost education and career technical training program administered by the U.S. Department of Labor that helps young people ages 16 to 24 improve the quality of their lives through career technical and academic training. The Springdale Job Corps Center is located in Troutdale, a suburban community just east of Portland. The center is set on 52 wooded acres on a plateau above the Sandy River, which flows into the Columbia River.

Academics
In addition to career training, the Springdale Job Corps Center also provides academic training, including basic reading and math. Courses in independent living, employability skills, and career success skills are offered to help students transition into the workplace. We also have several academic programs to help our students achieve their full potential.

Program Options
GED/High School Diploma - One of our top goals at Springdale Job Corps is to ensure that every qualified student obtains their GED or high school diploma prior to leaving the center. Students who don’t already have a high school diploma upon their arrival at Springdale can enroll in our GED program. Springdale Job Corps offers a high school diploma through the Penn Foster online high school curriculum. Both programs meet the requirements of the core competencies being taught throughout the United State.

Student Support Services
The Springdale Job Corps Center offers career planning, on-the-job training, and job placement, driver’s education, and English language learning, along with benefits including residential housing, food service, health and dental care, a bi-weekly basic living allowance, and a clothing allowance.

Financial Aid
Job Corps is fully funded by the federal government and is free to students and their families.

Degree Options
Our work-based learning (WBL) program provides students with opportunities to link to their career technical training with practical, on-the-job activities. Students participating in WBL improve their work habits and attitudes through the identification of goals and aptitudes, and the motivation to complete and further their education.

Health Career Programs
Certified Nurse Assistant - CC
Pharmacy Technician - CC
For More Information
Springdale Job Corps Center
31224 Historic Columbia River Highway
Troutdale, OR 97060-9340
800-733-5627
Tillamook Bay Community College

Tillamook Bay Community College is a community college based in Tillamook, Oregon, that provides adult education services to Tillamook County. TBCC is the smallest community college in Oregon and is proud of its ability to provide individualized support to students.

Academics
TBCC offers a variety of certificates and degrees that can help lead to family wage jobs and advancement in a variety of fields. Certificates take fewer credit hours to complete and Associate degrees can be completed in two years in most cases. TBCC also provides opportunities to obtain an Associate of Arts/Sciences Oregon transfer and the Oregon Transfer model for those students who wish complete a Bachelor’s degree at another four-year institution. TBCC also provides Workforce Training, Community and Continuing Education, as well as a Degree Partnership Program.

Program Options

Degree Partnership Program (DPP) - the DPP allows undergraduate students to be jointly admitted and enrolled at Oregon State University. DPP is open to all undergraduate students pursuing their Bachelor’s Degree.

Workforce Training - This program allows TBCC to provide a customized solution for Workforce Training. This provides workforce training opportunities to company employees as well as training potential employees for high need positions in our area.

Community and Continuing Education - TBCC is committed to life-long learning. This program offers non-credit courses to take for personal enrichment, or a chance to enhance work skills. TBCC partners with the YMCA, NCRD Fitness, and Tillamook Regional Medical Center to offer many continuing and community education courses.

Pre-College Learning - TBCC cares about student success. Programs in Adult Basic Education, GED Preparation, and ESOL Programs and offered up as examples of Pre-College Learning.

Partners for Rural Innovation Center - A collaboration between Oregon State University and TBCC that allows both organizations to share a space, collaborate, and work collectively on issues and opportunities that benefit the county.

Dual Credit - Dual credit classes are taught at the three public Tillamook County high schools. These college-level courses are taught by qualified high school instructors during regular school hours at the local high school. These classes are offered for free for students who meet the academic requirements. For more information talk to your high school counselor.

Expanded Options - This program allows a student to register for regular college classes and earn both high school and college credit. For more information talk to your high school counselor.
Counselor Resources
The admissions process can be completed online. The Student Services team can provide information on TBCC for high school counselors. Additionally, counselors can find information in order to assist first-time TBCC students and current high school students.

Student Support Services
The Office of Student Services provides career education advising, career exploration, disability services, as well as assistance with the admissions, the advisement process, and assistance with the transfer process to a four-year institution if the student desires.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, veterans benefits and loans. Approximately 22% of students receive federal loans. The TBCC Veterans Service Office can assist Veterans who wish to utilize VA educational benefits for the first time or are a Veteran transferring to TBCC from another college. Career to Career scholarships offer qualified students the opportunity of two years of free tuition to attend TBCC. Additionally the TBCC Foundation provides scholarships for eligible students.

Degree Options
The Associate of Applied Science (AAS) and Associate of Science (AS) degrees are intended to prepare you for direct entry into the workforce. The AAS degree may also help you prepare for career advancement, occupational licenses, our study at the baccalaureate level. The Associate of General Studies (AGS) degree is a two-year program designed to provide students the opportunity to acquire a broad education rather than pursuing a specific college major or program. The Associate of Arts Oregon Transfer (AAOT) degree is designed for students planning to transfer into a baccalaureate degree program in the Oregon University System enabling a student to enter as a junior. At TBCC these degrees are not background specific in the Health Care and Science areas, but rather a set series of requirements in a broad range of classes. Most Associate degrees are done in cooperation with another Oregon Community College. Certificate of completion (CC) are awarded for occupational content only.

Health Career Programs
TBCC has developed partnerships with several colleges and Tillamook Regional Medical Center to provide training for several healthcare occupations in Tillamook County. These certificates are granted by partner colleges, but TBCC offers program pre-requisites, general education requirements, related coursework, and sometimes program courses.

Diagnostic Imaging - AAS (through Linn-Benton Community College)
Medical Assisting - CC (through Clatsop Community College)
Medical Laboratory Technology - AAS (through Portland Community College)
Nursing - AAS (through Clatsop Community College)
Occupational Therapy Assistant - AAS (through Linn-Benton Community College)
Pharmacy Technician - CC (through Central Oregon Community College)

For More Information
Tillamook Bay Community College
4301 Third Street
Tillamook, OR. 97141
www.tillamookbaycc.edu
503-842-8222
Job Corps is a no-cost education and career technical training program administered by the U.S. Department of Labor that helps young people ages 16 to 24 improve the quality of their lives through career technical and academic training. The Tongue Point Job Corps Center is located on the former site of the Tongue Point Naval Air Station. The center, near Astoria, is one of the first Job Corps centers in the nation.

Academics
In addition to career training, Tongue Point Job Corps Center also provides academic training, including basic reading and math. Courses in independent living, employability skills, and career success skills are offered to help students transition into the workplace. We also have several academic programs to help our students achieve their full potential.

Program Options
GED/High School Diploma - One of our top goals at Tongue Point Job Corps is to ensure that every qualified student obtains their GED or high school diploma prior to leaving the center. We provide full preparation for the state GED exams, which our students take at nearby Clatsop Community College. Students have the opportunity to earn their high school diplomas at our Tongue Point High School.

Advanced Career Training (ACT) Program - TPJCC offers ACT through a full-time college program at Clatsop Community College. Benefits include advisement, paid tuition/fees/books, housing, meals, and transportation to and from the college of choice.

Student Support Services
The Tongue Point Job Corps Center offers career planning, on-the-job training, and job placement, driver’s education, and English language learning, along with benefits including residential housing, food service, health and dental care, a bi-weekly basic living allowance, and a clothing allowance.

Financial Aid
Job Corps is fully funded by the federal government and is free to students and their families.

Degree Options
Our work-based learning (WBL) program provides students with opportunities to link to their career technical training with practical, on-the-job activities. Students participating in WBL improve their work habits and attitudes through the identification of goals and aptitudes, and the motivation to complete and further their education.
Health Career Programs
Clinical Medical Assistant - CC
Dental Assistant - CC
Medical Office Support - CC

For More Information
Tongue Point Job Corps Center
37573 Old Highway 30
Astoria, OR 97103-7200
800-733-5627
Treasure Valley Community College

Treasure Valley Community College (TVCC) is an accredited two-year school with the mission of providing life-long learning and cultural opportunities for the people of the community. The college is located on 90 acres near the center of Ontario, a town of 10,000 people on the eastern border of Oregon along the Snake River. Ontario is surrounded by mountains on all sides. Opportunities for outdoor recreational activities exist in the immediate area or within a short drive. Students have the opportunity to live on-campus. The Caldwell Center is a satellite of TVCC and offers college preparation, college preparation, college transfer, and professional-technical classes in downtown Caldwell, Idaho. Additionally TVCC provides outreach services in Harney County at the Burns Outreach Center, and the Lakeview Outreach Center.

Academics
TVCC offers more than 80 programs from which to choose, and hundreds of classes that allow TVCC to offer a wide academic variety and excellence to match a students’ goals and interests. The Center for Business, Workforce & Community Learning (CBWCL) provides individual, business, industry, and community growth through training and education. The Laura Moore Cunningham Science Center is a state-of-the-art educational facility featuring technology enhanced classrooms throughout the building, and is one of the best science facilities among colleges in the Pacific Northwest.

Program Options
TVCC offers associate degree diploma and certification programs a variety of disciplines. Transfer programs allow students to complete two years of study at TVCC and continue their studies at four-year colleges. Evening and daytime courses are offered in Outreach Centers located in neighboring towns and on-campus. An Eastern Oregon University Outreach Center is on-campus which provides continuing education opportunities for TVCC students.

Degree Partnership Program (DPP) - the DPP allows undergraduate students to be jointly admitted and enrolled at Oregon State University. DPP is open to all undergraduate students pursing their Bachelor’s Degree.

High School Equivalency Program (HEP) - HEP is a Migrant Education program designed to assist farm workers and their immediate family members in obtaining a high school equivalency or GED certificate.

College Assistant Migrant Program (CAMP) - CAMP is a federally-funded program designed to support students from migrant and seasonal farm worker backgrounds during their first year in college.

Career Pathways - TVCC can ease the transition from high school to community college, from pre-college courses to credit postsecondary programs; and from community college to university.
or employment. TVCC offers a variety of programs to prepare students for a range of career fields including Associate of Applied Science (AAS) degrees, One-Year Certificates of Completion (CC) and Career Pathways Certificates.

Col-Cred - This program features honor classes taught on high school campuses by qualified high school instructors. Students are given both High School and College credit. Cost through TVCC is well below the current regular student cost per credit. Col-Cred is offered at Ontario, Vale, Nyssa, Adrian, Burns, Jordan Valley, Payette, Wilder, and Caldwell High Schools. Check with your high school counselor to determine the classes currently offered at your high school.

College Choice - TVCC offers local high school students the opportunity to enroll in two college courses each quarter at a reduced tuition rate.

Career and Technical Education (CTE) College Credit - TVCC CTE offers high school students college credit in CTE classes taught in high schools by high school instructors. The program is free for Oregon students, and Idaho students are able to use their Fast Forward funds through Idaho’s Advanced Opportunities program. The registration process is facilitated online by the high school teacher. All 9-12 high school students can take CTE classes. For more information check the TVCC CTE webpage.

Idaho Advanced Opportunities - This program allows Idaho students to individualize their high school learning plan and get a jump start on their future. Students may take classes at TVCC online or in person through the program.

Sponsored Dual Credit (2+2/Tech Prep) - This program is a Dual Credit option for students seeking a 2-year degree in a technical field and is designed to award college credit for skills attained while still in high school. At TVCC students can begin earning credit as early as their high school freshman year. Schools in Harney, Malheur, Baker, Grant, Union & Wallowa Counties as well as Idaho Partnering Schools participate in this program. Students should contact the Career Pathways Specialist at 541-881-5589 to determine the programs available at their high school.

Distance Education - TVCC offers a Distance Education program as a convenient option for all students and is especially helpful for those who have demanding work or life schedules, live beyond commuting distance, or may be homebound. Classes are taken and monitored through Blackboard Learning Management System.

Counselor Resources
The Office of Admissions at TVCC can provide help and information to high school counselors and students. Services include help with placements tests in order to determine a student’s starting point in reading/writing/math, as well as submitting transcripts, and covering the admissions process. This office can also assist with financial aid, housing, advisement, registration, and orientation.

Student Support Services
The Student Services Center in the Four Rivers Cultural Center building is the first point of contact for students. The staff can help answer questions, complete transactions, and make appointments as needed for academic advising or class scheduling. Individual assistance in planning a schedule of classes and academic program is available to all students with an Academic Advising Specialist. The center also provides academic support for students with a documented disability through Disability Services. TVCC is proud to offer on-campus counseling services for students. Services offered include but are not limited to: Depression,
Anxiety, Relationship Concerns, Crisis and Safety Planning, ADHD, Self Harm, Stress/ Overwhelmed, Eating and Body Image Concerns, Drugs and Alcohol, and more.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits and loans. Approximately 47% of students receive federal loans. TVCC Foundation Scholarships that strive to remove the financial barriers for students by creating scholarships for qualified and deserving students. One of the Foundation’s goals is to provide scholarships for as many students as possible. Over 100 scholarships covering a wide variety of academic areas are available through the TVCC Foundation.

Degree Options
The Associate of Applied Science (AAS) degree is intended to prepare you for direct entry into the workforce. The AAS degree may also help you prepare for career advancement, occupational licenses, our study at the baccalaureate level. The Associate of Arts Oregon Transfer (AAOT) degree is designed for students planning to transfer into a baccalaureate degree program in the Oregon University System enabling a student to enter as a junior. Certificate of completion (CC) are awarded for occupational content only.

Health Career Programs
Addiction Studies - AAS
Biological Science - AAOT
Chemistry - AAOT
Computer & Information Systems - AAS
Emergency Medical Technician - CC
Medical Assistant - CC, AAS
Medical Transcription - AAS
Nursing - AAS
Office Administration - AAS
Psychology - AAOT
Science - AAOT
Social Work - AAOT
Wildland Fire - CC, AAS

For More Information
TVCC Main Campus
650 College Blvd.
Ontario, OR 97914
541-881-5811

TVCC-Caldwell Center
205 S. 6th Avenue
Caldwell, ID 83605
208-455-6820

Harney County Outreach Center
P.O. Box 756
1100 Oregon Avenue
Burns, OR 97720
541-573-1576
Umpqua Community College (UCC) was established by a vote of greater Douglas County residents. Since its founding as a post-secondary education facility it has grown and changed to meet the diverse needs of the community. More than 15,000 students take one or more classes each year.

UCC is one of the most picturesque colleges in the country, nestled between beautiful tree-studded hills and overlooking a large bend in the Umpqua River. Natural volcanic rock and rustic, cedar shake architecture grace the campus buildings located on 100 acres of land six miles north of Roseburg.

**Academics**

UCC is a comprehensive community college offering career and technical and lower division college classes. In addition to weekday classes, UCC offers some online, evening and Saturday classes. Evening classes for credit are offered on the main campus and at off-campus centers. By selecting from among these classes, students can earn college transfer credit or work toward a certificate or degree in one of UCC’s career and technical programs.

UCC also offers a variety of different ways students can learn ranging from traditional lectures or lecture/lab classes to open-entry/open-exit classes that permit students to begin and end the class when they wish.

**Program Options**

Students of all ages and backgrounds attend UCC. They enroll at UCC for many reasons: lower division transfer credits, training or retraining for new careers, updating their skills, getting a high school diploma, or just increasing their knowledge. Additionally, UCC offers many classes and program options online.

*Degree Partnership Program (DPP)* - The DPP allows undergraduate students to be jointly admitted and enrolled at Oregon State University. DPP is open to all undergraduate students pursing their Bachelor’s Degree.

*Dual Credit* - Dual Credit allows a student to take college-level classes through approved high school teachers at your high school. At UCC over 750 high school in Douglas County are registered in a dual credit classes. Dual credit courses are free to the student. You must talk to your high school counselor to determine the offerings at your high school.

*Expanded Options* - The Expanded Options program was created to provide students with additional options to continue or complete their education and to allow them to earn concurrent high school and college credits through Oregon’s community colleges and universities. Students take classes on or through UCC, and the student’s sponsoring high school covers the cost of tuition and fees. Contact your high school counselor in order to determine eligibility.
**Educational Talent Search** - The TRIIO Talent Search program serves young people in grades seven through 12. In addition to counseling, participants receive information about college admissions requirements, scholarships, and various financial aid programs. This early intervention program helps young people understand their educational opportunities and options.

**Oregon Transfer Module (OTM)** - The OTM is an approved 45-unit subset of general education courses (foundational skills and introduction-to-discipline course) that are common among colleges and universities in the Oregon University System (OUS). Any student holding an OTM will have met the requirements for the transfer module at any institution in the OUS.

**Counselor Resources**
UCC is here to help both high school counselors as well as students get a head start on college. The High School Connections program provides information and resources on dual credit and expanded options, as well as information on UCC programs, connections with UCC faculty, and the UCC scholars program. For more information on this program contact UCC at HSConnections@umpqua.edu.

**Student Support Services**
UCC’s Office of Student Life serves as the primary source of information and advice about extra and co-curricular opportunities and resources, as well as a place where a student can receive social and emotional support. Student Life provides peer mentors to serve as a resource and provide a helping hand to make the academic experience the best it can be.

**Financial Aid**
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits, work study, and loans. Approximately 28% of students receive federal loans. UCC provides over 100 scholarships for qualified students through the UCC Foundations. The UCC Scholars program provides opportunities for eligible students to receive a 12 credit tuition waiver each term, for up to six consecutive terms towards the completion of an Associate's Degree.

**Degree Options**
The Associate of Applied Science (AAS) degree is intended to prepare you for direct entry into the workforce. The AAS degree may also help you prepare for career advancement, occupational licenses, our study at the baccalaureate level. The Associate of Arts Oregon Transfer (AAOT) degree is designed for students planning to transfer into a baccalaureate degree program in the Oregon University System enabling a student to enter as a junior. Certificate of completion (CC) are awarded for occupational content only.

**Health Career Programs**
- Addiction Studies - CC
- Addiction Treatment - CC
- Biology - AAOT
- Case Aid - CC
- Chemistry - AAOT
- Computer Information Systems - CC, AAS
- Communication Studies
  - Speech Communications - AAOT
- Cybersecurity - AAS
- Dental Assisting - CC
- Emergency Medical Services: Paramedic - AAS
- Fire Science - AAS
- Health, Health Education, Health Care Administration - AAOT
- Human Services - AAS, AAOT (with Southern Oregon University)
Medical Imaging Technology - AAOT
Medical Technology - AAOT
Nursing
  Nursing Assistant Level One - CC
  Practical Nurse - CC
  Registered Nurse - AAS
Office Technology
  Front Office Medical Assistant - CC (online)
  Medical Billing & Collections Clerk - CC (online)
  Medical Office Administration - AAS (online)
Pre-Professional Health Care - AAOT
Psychology - AAOT
Respiratory Care - AAOT

For More Information
Umpqua Community College
1140 Umpqua College Road
Roseburg, OR 97470
541-440-4600
The University of Oregon (UO) is a world-class teaching and research university located in the beautiful Willamette Valley of Oregon since 1876. The UO offers a broad spectrum of opportunities for learning in the liberal arts and professional programs in a wide variety of disciplines. Within an easy drive to both the Pacific Ocean and the Cascade Mountains, the University of Oregon is renowned for its research prowess and commitment to teaching. UO is one of just two schools in the Pacific Northwest selected for membership in the prestigious Association of American Universities, a consortium of 62 leading public and private research institutions in the United States and Canada. The UO exists to provide Oregonians and their peers from around the country and the world access to an excellent education.

Academics
There more than 300 academic programs of studies available at UO through nine schools and colleges. Additionally over 100 graduate options are available through certificates and specializations, as well as Master's and Doctoral degrees. There are no fewer than 30 research centers, institutes, and facilities on campus.

Program Options
Robert D. Clark Honors College (RDCHC) - The RDCHC is ranked one of the top 10 public honors colleges in the country. It features small classes and close interaction among students and faculty. It fosters an intense, creative exchange of ideas in a tight-knit, dynamic community.

Global Education Oregon (GEO) - GEO is a study abroad program provider and the UO study abroad office. It offers more than 250 programs in 90 countries.

Advanced Credit - Students may earn credit toward graduation through Advanced Placement courses, International Baccalaureate programs, College-Level Examination Program, Military Credit Evaluation, and Credit by Examination.

Dual Enrollment - Students may dual enroll at the University of Oregon and one of two community colleges; Lane Community College, and Southwestern Oregon Community College.

Prebaccalaureate (Prebac) and Duck Link Programs - The Prebac program allows talented and motivated high school students from any geographic region to enroll in regular University of Oregon classes, with no course credit limit. Duck Link is a special program within the prebaccalaureate admission status, that allows select high school students living in Lane County, Oregon to enroll in up to eight credits per quarter at a reduced fee rate.
Counselor Resources
The UO office of Admissions is staffed by a team of dedicated professional counselors focused on helping students transition to the UO. Eight of these counselors serve specific areas of Oregon. For high school counselors, the admissions office provides information on questions, advanced credit, dual enrollment, as well as web based information resources to help answer student questions about UO. Additionally UO provides digital advising packets, information on academic calendars as well as information on prebaccalaureate programs.

Student Support Services
The Dean of Students at UO offers resources to connect students with others to build relationships and find support from peers. In addition to student support, the office also partners with families through Parent and Family Programs and Parent Family Association to keep parents/families information end connected with outreach efforts.

TRIO - Student Support Services (SSS) features a federally funded TRIO program, one of two at UO. As a college retention program, SSS helps undergraduates meet the rigors of high education and graduate from UO. The TRIO program is designed for students whose socioeconomic backgrounds, educational records, and personal situations suggest they may experience challenges at UO.

IMPACT - The Intercultural Mentoring Program Advancing Community Ties (IMPACT) is a program designed to help you succeed and graduate from UO. IMPACT is a peer-to-peer mentoring program for first generation college students and/or students from underrepresented communities. IMPACT mentors support first-year and transfer students with their transition to UO.

Health Sciences Academic Residential Community (HSARC) - The HSARC is designed for students interested in exploring careers in health, including biomedical research, medicine, pharmacy, veterinary medicine, dental hygiene, public health, or any other health care career. It allows students interested in health care fields to live and interact with one another in a close residential setting. As part of this residential community, you will have the opportunity to connect with health sciences program advisors.

Veterans Services - The UO Office of Veterans Affairs assist veterans in making a seamless transition from military service to the campus community through the Student Veterans Center, Peer Advisors for Veteran Education, and the Veteran and Family Student Association.

First-Year Interest Group (FIG) - FIG’s bring groups of 20 freshmen together for a unique academic experience. FIG students take three courses together during fall term: two lecture courses and a 1-credit College Connections course.

Accessible Education Center (AEC) - AEC facilitates and supports access and inclusion for students with disabilities. A range of academic accommodations including exam adjustments, sign language interpretation, classroom relocations, and adaptive technology services are available to ACE registered students.

Academic Resource Service - UO provides academic support services (University Counseling & Testing Center), Study Help and Tutoring (Teaching and Learning Center), and Academic Advising (Office of Academic Advising, Departmental Advisors, Pathway Oregon, Tutoring and Learning Center).
Additional Services - UO provides services to a diverse community through such organizations as; Lesbian, Gay, Bisexual, Transgender Education and Support Services, Fraternity and Sorority Life, Women’s Center, Men’s Center, and Nontraditional Student Union.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits and loans. Approximately 65% of certificate/degree seeking students were awarded financial aid (scholarships, grants, or loans). Over $256 million every year is awarded through federal, state, institutional, foundation, and private funds are awarded to UO students each year.

Degree Options
As a major research university UO grants Bachelor of Arts (BA) and Bachelor of Science (BS) degrees in over 300 academic programs. UO grants graduate degrees as well as graduate certificates (MS, PhD) in over 100 areas.

Health Career Programs
Applied Information Management (IS) - MS
Biochemistry - Minor, BS
Biology - Minor, BS
Chemistry - Minor, BS
Chemistry and Biochemistry - MS, PhD
Computer Information and Technology - Minor
Counseling, Family, and Human Services - MS
Counseling Psychology - PhD
Disability Studies - Minor
General Science - BS
Human Physiology - BS
Prevention Sciences - MS, PhD
Psychology - Minor, BS

For More Information
University of Oregon
1585 E 13th Ave.
Eugene, OR 97403
541-346-1000
The University of Portland (UP) is a private Roman Catholic university affiliated with the Congregation of Holy Cross. Originally called Columbia University, UP opened in 1901 and the school took its present name in 1935. The school is located on a bluff overlooking the Willamette River in the residential neighborhood of University Park in the northern part of Portland.

**Academics**

UP has six divisions of study: the College of Arts & Sciences, the Pamplin School of Business Administration, the School of Education, the Shiley School of Engineering, the School of Nursing, and the Graduate School. UP is Oregon’s only comprehensive university with schools of business, education, engineering, nursing, a College of Arts and Sciences, and a graduate school. There are more than 40 undergraduate programs and 30 minors, as well as 18 graduate programs. All undergraduates take a core curriculum of classes.

**Program Options**

*Studies Abroad* - For over 50 years UP has offered opportunities for students to explore the world through academic programs abroad and cultivate a global exchange of ideas. These include full-year, semester, and summer programs. This includes 16 programs in 11 countries. In addition to traditional, academically-focused study abroad programs, students can also go abroad as part of one of UP’s special programs which address a wide range of topics. Students may also work towards specific certifications through this program.

*Franz Center for Leadership, Entrepreneurship, and Innovation* - The Franz Center is dedicated to ensuring that all UP graduates are prepared for the evolving challenges of the 21st century by supporting all students in the development of skills, knowledge, and mindsets in the areas of leadership, entrepreneurship, and innovation.

*Dundon-Berchtold Institute* - The Institute offers classes, sponsors public events, and provides stipends and scholarships for faculty-student team research projects related to professional and applied ethics

*STEM Center* - UP STEM (science, technology, engineering, and mathematics) Education and Outreach Center is a collaborative unit among the College of Arts and Sciences, the School of Education, and the Shiley School of Engineering. Its mission is to strengthen STEM education in pre-K through higher education settings.

*Honors Program* - The program offers small classes with rigorous coursework and exceptional intellectual stimulation, a personal faculty mentor for each student, a diverse array of social and cultural experience.

*Undergraduate Scholarly Engagement* - The Office of Undergraduate Scholarly Engagement provides opportunities for students to develop as thinkers, researchers, and public intellectuals beyond the parameters of the classroom.
Core Curriculum - All students at UP, regardless of major, take 13 courses in literature, philosophy, theology, history, math, science, and the social sciences.

Counselor Resources
Admissions counselors travel in the fall and spring, visiting high schools and attending college fairs. Spring receptions give prospective students and their families the opportunity to learn more about UP. For more information on Counselor Resources, high school visits, or receptions, contact the Admission Office at 503-943-7147 or admissions@up.edu.

Student Support Services
The Shepard Academic Resource Center is a resource and a partner for academic needs beyond the classroom. Services include peer academic tutoring and learning assistance through the Learning Commons, Accessible Education Services for students requiring disability accommodation, learning assistance counseling, and services for first-year students, parents, and first generation college students.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits and loans. Approximately 59% of certificate/degree seeking students were awarded financial aid (scholarships, grants, or loans).

Degree Options
Every academic program falls under the College of Arts and Sciences or one of the four professional schools: the Pamplin School of Business, the School of Education, the School of Nursing, or the Shiley School of Engineering. But what’s different here is that everyone takes 13 core courses in the humanities, sciences, and social sciences. The liberal arts curriculum – which includes classes in fine arts, history, English, math, theology, and philosophy – will give you the knowledge base you need in any field of study to solve complex problems and make effective and ethical decisions. UP offers undergraduate and graduate degrees as well as PhD programs.

Health Career Programs
Biology - Minor, BA, BS  
Biomedical Engineering - M/BME  
Chemistry - Minor, BS  
Nursing - BSN, DNP-FNP  
Psychology - Minor, BA  
Social Work - BA  
Neuroscience - Minor

For More Information
University of Portland  
5000 N. Willamette Blvd.  
Portland, OR 97203-5798  
503-943-8000
University of Western States

University of Western States (UWS), formally known as Western States Chiropractic College, is an integrated health sciences university that offers a variety of health and wellness degrees, including a Doctor of Chiropractic degree. Founded in 1904, when it was called Marsh School and Cure, UWS is the second oldest chiropractic university in the world. UWS's campus is located in NE Portland off of Interstate 84 and Interstate 205. UWS also operates four health centers in metropolitan Portland.

Academics
UWS consists of a College of Chiropractic and College of Graduate Studies as well as a Continuing Education division. UWS has evolved into a university offering a variety of health and wellness degrees. Also with the academic focus UWS also offers several regional clinics staffed with highly qualified health care professionals and senior interns.

Program Options
Articulation and Partnerships - UWS maintains articulation agreements with a number of undergraduate colleges and universities. These agreements are designed for students who intend to pursue a chiropractic education at UWS and also wish to receive a degree from their undergraduate institution. To achieve this, UWS Dual Credit credits are transferred back to the undergraduate institution to fulfill requirements for completion of the baccalaureate degree. Oregon partnership schools include Multnomah University, Oregon State University, Portland State University, and Warner Pacific College.

Bachelor of Human Biology - UWS Doctor of Chiropractic (DC) students have the opportunity to complete their undergraduate Bachelor’s degree in Human Biology while enrolled in the DC program, without having to take extra classes. The design of the program is modeled after the general educational components of the traditional liberal arts biology major. The purpose of the BS degree in human biology completion program is to equip students with a solid foundation in health and pre-medical sciences. The program also offers UWS chiropractic students and alumni a means by which to complete an undergraduate degree.

Counselor Resources
For more information on Counselor Resources as well as Admissions Requirements contact the Admissions Office at 800-641-5641.

Student Support Services
For more information on Student Support Services contact Enrollment and Student Services at 503-206-3205.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits, work study, and loans. UWS scholarships are awarded primarily on the strength of application merit, financial need, and/or other qualifying factors.
Degree Options
UWS offers a four-year Doctor of Chiropractic (DC) degree program. The program is a 12 academic-quarter, first-professional doctoral degree. Other master's, residency, and graduate certificates are also offered as is a one-year massage therapy certification program. Chiropractic students are also offered a Bachelor of Science in Human Biology completion program.

Health Career Programs
Biology - BA (in partnership with Multnomah University), BS (in partnerships with Portland State University, or Warner Pacific College)
Chiropractic Medicine - DC
Diagnostic Imaging - MS, Residency
Exercise & Sport Science - MS
Human Biology - BS (for Chiropractic Students)
Human Nutrition & Functional Medicine - MS, Graduate Certificate
Science - BS (in partnership with Oregon State University, or Portland State University)
Sports & Performance Psychology - MS, PhD
Sports Medicine - MS

For More Information
University of Western States
2900 NE 132nd Avenue
Portland, OR 97230
503-206-3206
Warner Pacific University

Warner Pacific University (WPU) is an urban, private, Christian liberal arts university. The school was founded in 1935 as Pacific Bible College in Spokane. The college moved to its current campus of 15 acres in the Mount Tabor neighborhood of Portland in 1940 and was renamed Warner Pacific University. WPU is dedicated to diversity in their student population. 61.5% of students were students of color and 30.5% of students were first-generation college students. WPU is the first four-year college or university in Oregon to receive designation as a Hispanic-Serving institution by the U.S. Department of Education.

Academics
WPU’s traditional undergraduate program offers over 60 majors and minors, seven areas of pre-professional study. WPU’s graduate programs offer career-focused course through a value-based curriculum in evening and online formats in six different graduate programs.

Program Options
Undergraduate Learning Communities - First-year and Transfer Learning Communities are cohort-style courses designed to make sure that each student has a smooth transition to college and is engaged academically, spiritually, and socially. Through a set of three linked core classes over a student’s first year, students are invited to connect learning with context and be curious about the world around them.

Adult Degrees - Accelerated, one night a week, adult degree programs are designed with working professionals in mind. Evening and online classes are available in order to earn an associate or bachelor’s degree. Multiple campus locations allow students to study close to home, and online for some programs.

Counselor Resources
For more information on Counselor Resources, undergraduate admission requirements, and an application checklist contact the admissions office at 503-517-1020.

Student Support Services
Student Support and Success staff at WPU are committed to promoting the success of all students in all areas by providing holistic, integrated, on-campus student services. These services are wide-ranging and include academic success, health and wellness, the Career & Life Counseling office, and disability resources.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits and loans. Approximately 80% of certificate/degree seeking students were awarded financial aid (scholarships, grants, or loans). WPU provides opportunities for incoming and continuing students to earn scholarships to reduce their college costs through merit and talent scholarships.
Degree Options
Students who attend WPU can select from a wide variety of liberal arts degrees and professional programs. WPU offers over 60 Undergraduate, Professional, and Graduate Studies.

Health Career Programs
Biological Science - BA, BS
Chemistry - Minor
Exercise Science - BA, BS
Health Care Administration - BA or BS (Adult Degree)
Health Sciences - BA, BS
Human Development - Minor, BA, BS, (Adult Degree)
Life Sciences - BA, BS
Medical Laboratory Science - BA, BS
Nursing - RN to BSN (Adult Degree)
Pre-Professional
Pre-Chiropractic - BS (with University of Western States)
Pre-Dentistry - BS
Pre-Medicine - BS
Pre-Nursing - BS
Pre-Pharmacy - BS
Pre-Physical Therapy - BS
Pre-Veterinary - BS
Psychology - Minor, BA, BS
Social Work - BA, BS
Sports Medicine - BA, BS
Trauma Intervention - Minor

For More Information
Warner Pacific University
2219 SE 68th Avenue
Portland, OR 97215
503-517-1020
Western Oregon University

Western Oregon University (WOU) is a public university originally established in 1856 as Monmouth University. Originally, a private institution, in 1882, the Oregon State Legislature approved the college's bid to become a state-supported normal school and was named Oregon State Normal School, then Oregon Normal School, Oregon College of Education, Western Oregon State College, and finally in 1997, Western Oregon University. The 157-acre campus is located in the small rural community of Monmouth, located approximately 15 miles west of Salem.

Academics
WOU offers bachelor's degrees (BA, BS, BM, BFA) through its two colleges: the College of Education and the College of Liberal Arts and Sciences. Master's degrees are available in six areas of study. WOU's College of Education is divided into three divisions. The College of Liberal Arts and Sciences offers 30 bachelor's degrees in seven academic divisions. The Center for Academic Innovation serves as the continuing education and professional development office on campus. The Research Institute houses seven Centers focused on information and facilitating change in educational and human service systems to improve the quality of life for all individuals.

Program Options
Honors Program - The Honors Program at WOU is designed to nourish intellectual abilities and cultivate interest in new subjects and activities. This program seeks to foster a way of life in which faculty and students understand that inquiry and learning happen everyday, and in a shared and continuous mode.

Advanced Placement (AP) and International Baccalaureate (IB) - Students who receive qualifying scores in AP exams, may, upon admission to WOU, be granted credit and/or advanced placement in courses toward a bachelor's degree. WOU recognizes and awards IB achievement by awarding credit to students who score 5 or above on higher-level IB exams.

Student Enrichment Program (SEP) - SEP provides services and supportive environment to equip first generation, low income, and students with disabilities with skills to be successful in college. The purpose of this federally funded TRiO Student Support Service is to increase the retention and graduation rates of this student population.

Study Abroad - The Study Abroad and International Exchanges office provides diverse international programs and opportunities to WOU students. WOU has exchanges programs with four universities in Germany, Japan, Sweden, and the United Kingdom respectively.

Counselor Resources
WOU has specific admission counselors to serve specific parts of Oregon. All are able to provide information or answer questions in regards to WOU. For more information on Counselor Resources, contact the WOU Admissions Office at 503-838-8000.
**Student Support Services**
WOU provides a wide variety of student services including the following; Abby’s House/Center for Equity & Gender Justice, Computer Labs/Computing Services, Disability Services, Free Tutoring, Multicultural Student Services & Programs, Peter Courtney Health & Wellness Center, Service Learning & Career Development, Student Enrichment Program (SEP), Student Health & Counseling Center, and Veteran’s Services.

**Financial Aid**
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits and loans. Approximately 80% of certificate/degree seeking students were awarded financial aid (scholarships, grants, or loans). WOU has many merit-based and need-based scholarship opportunities. Students may be automatically considered for academic awards, or may access the Western Oregon Online Scholarship Application for over 80 additional scholarship options.

**Degree Options**
WOU offers Bachelor of Arts and Bachelor of Science degrees in 52 different majors and graduate degrees (Master of Arts, Master of Science) in 18 different fields of study. Additionally, WOU offers endorsements and certificates as well as pre-professional programs.

**Health Career Programs**
- **Biology** - Minor, BA, BS
- **Chemistry** - Minor, BA, BS
- **Community Health Education** - BA, BS
- **Exercise Science** - BA, BS
- **Forensic Anthropology** - Minor
- **Forensic Psychology** - Minor
- **Gerontology** - Minor, BA, BS
- **Health** - Minor
- **Human Biology** - Minor
- **Management and Information Systems** - MS
- **Rehabilitation and Mental Health Counseling** - MS
- **Pre-Professional**
  - Pre-Clinical Lab Science
  - Pre-Dentistry
  - Pre-Medicine
  - Pre-Nursing
  - Pre-Occupational Therapy
  - Pre-Pharmacy
  - Pre-Physical Therapy
  - Pre-Physician Assistant
  - Pre-Veterinary Medicine
- **Psychology** - Minor, BA, BS

**For More Information**
Western Oregon University  
345 Monmouth Ave. North  
Monmouth, OR 97361  
503-838-8000
Willamette University is a private liberal arts college. Founded in 1842 as the Oregon Institute, it is the oldest established university in the western United States. The name was changed to Wallamet University in 1852 and to its current spelling in 1870. Willamette founded the first medical and law school in the Pacific Northwest. The 69 acre campus in Salem is located directly south of the Oregon State Capitol and state government campus. The campus features a residential undergraduate College of Liberal Arts and two professional graduate schools.

Academics
Willamette is home to three schools - the College of Liberal Arts, College of Law, and Atkinson Graduate School of Management. The College of Liberal Arts includes nearly 50 academic programs with ample opportunities for interdisciplinary study. Willamette is part of the Annapolis Group, an American organization of independent liberal arts colleges.

Program Options
*Dual-Degree Programs* - Students interested in pursuing a JD or MBA can enroll in Willamette’s dual-degree programs to earn both their undergraduate and graduate degrees on one campus. This program allows students to earn these degree in less time - five for BA/MBA, or six for BA/ JD. Willamette also offers an MBA/JD combined degree program where students can earn two professional degrees in just four years.

*Tokyo International University of America (TIUA)* - Willamette maintains a successful exchange program with TIUA. Willamette and TIUA students study together in “joint” and “linked” courses. TIUA students can take selected courses. Willamette students can take courses in Japanese language, culture, and society at TIU for one semester or one year.

*College Colloquium* - The first-year seminar is a one-semester course required of all entering first-year students. Seminars are small, averaging 13 students, and are taught by faculty from across the curriculum.

*Debate Union* - The Debate Union, established in 1856 as the Philomathean Society, is the oldest in the Western United States. The Debate Union, a co-curricular program of the College of Liberal Arts, provides opportunities for students to improve their skills in argumentation, advocacy, and public performance.

*Study Abroad* - Willamette provides Summer Programs, Center-based, and Direct Enroll study abroad programs. Currently Summer Programs are offered in four countries. Center-based programs are offered in ten countries, and the Direct Enroll programs are offered in 30 countries. Additionally, hybrid programs are offered in five countries.
Counselor Resources
Willamette provides checklists developed by The Princeton Review for both Juniors and Seniors that can be easily utilized by high school counselors. Willamette has two Cardinal & Gold days during the fall which allow students to explore what the school has to offer. Admission officers conduct high school visits throughout Oregon during the academic year. For additional Counselor Resources contact the Office of Admission at 503-370-6303 or bearcat@willamette.edu.

Student Support Services
Willamette provides a wide variety of student support. Academic support aids the academic efforts, engagement, and services geared toward student success. Academic assistance is available for most courses. Additional services are provided through the following: Student Success Programs and Services, Accessible Education Services, the Bishop Wellness Center, Chaplains’ Office, Counseling Services, Language Learning Center, and the Writing Center.

Financial Aid
Financial aid assistance is available and ranges from federal and state grants, scholarships, vet benefits and loans. Approximately 63% of certificate/degree seeking students were awarded financial aid (scholarships, grants, or loans). Willamette’s approach to aid is both merit and need-driven.

Degree Options
Willamette confers undergraduate (Bachelor of Arts, Bachelor of Music, BA/MBA combined and BA/JD combined) and graduate level degrees (JD, MBA, MLS) as well as professional certifications.

Health Career Programs
Biology - BS
Chemistry - BS
Exercise & Health Science - BS
Pre-Health - BS
Psychology - BS

For More Information
Willamette University
900 State Street
Salem, OR 97301
503-370-6300
Health Career Occupations
Allied Health

The Association of Schools of Allied Health Professions defines the field of allied health as the segment of the health care field “that delivers services involving the identification, evaluation and prevention of diseases and disorders; dietary and nutrition services; and rehabilitation and health systems management.”

There are approximately five million allied health care providers in the United States. They work in more than 80 different professions and represent approximately 60% of all health care providers. The number of allied health care providers is likely to grow as jobs in the health care industry will grow from 15.6 million to 19.8 million between 2010 and 2020. An increasing number of those jobs will require people with bachelor’s and graduate degrees.

Some allied health care providers work collaboratively with other providers, including physicians, nurses, dentists and pharmacists. They may play roles in evaluating and assessing a patient’s needs, keeping the physician and others informed of the patient’s progress and caring for the patient. Others work independently as specialists in exercise, nutrition, health education, speech and daily function.

The allied health professions fall into two broad categories: technicians (assistants) and therapists/technologists. Technicians are trained to perform procedures, and their education lasts less than two years. They are required to work under the supervision of technologists or therapists. Cardiovascular technicians, ophthalmic medical technicians and medical assistants are examples of careers in this category.

The educational process for therapists or technologists is more intensive and includes acquiring procedural skills. In addition, students learn to evaluate patients, diagnose conditions, develop treatment plans and understand the rationale behind various treatments in order to judge their appropriateness and potential side effects. Educational curricula teach students to evaluate patients’ responses to therapy and make appropriate decisions about continued treatment or modification of treatment plans. Anesthesiologist assistant, neurodiagnostic technologist and pathologists’ assistant are three examples of allied health careers in this category.
Anesthesiologist Assistant

Average Salary: $95k - 180k
Years Higher Education: 6
Job Outlook: Excellent

Anesthesiologist assistants are highly skilled professionals who work under the direction of licensed anesthesiologists (specialist physicians) and as part of anesthesia care team to design and implement anesthesia care plans. They accompany the patient before, during and after anesthesia to ensure quality and continuity of care. Anesthesiologist assistants are trained to assist in life-saving measures, such as CPR, and advanced cardiac life support.

The anesthesiologist assistant’s responsibilities include:

- Taking a complete health history of the patient performing physical exams to identify any issues that may affect the anesthesia care plan
- Administering necessary diagnostic and laboratory tests (such as taking blood)
- Preparing the patient to be monitored, using noninvasive and invasive methods, as determined by the physician
- Assisting with preparatory procedures, such as pulmonary artery catheterization, electroencephalographic spectral analysis, echocardiography and evoked potentials
- Pre-testing and calibrating of anesthesia delivery systems and monitors
- Inducing, sustaining and adjusting anesthesia levels
- Ensuring continuity of care through the postoperative recovery period
- Assisting with life support where required, including airway management
- Performing functions in the intensive care unit and pain clinic
- Performing administrative duties, research and clinical instruction

Working Conditions
Anesthesiologist assistants work in hospitals and surgery centers under the direction of a licensed anesthesiologist. The profession maintains a typical work week with options for on-call, evening or weekend assignments.

Salary Range and Outlook
Anesthesiologist assistants are in high demand, because of the need for skilled personnel to deliver anesthesia. Anesthesiologist assistants operate as physician extenders, performing critical tasks that ensure the safety of the patient and promote optimal health outcomes.

The average salary range for anesthesiologist assistants is $95,000-180,000.

Academic Requirements
To become an anesthesiologist assistant, you must first complete a four-year college degree, taking a pre-medical curriculum with course work in general and organic chemistry; advanced college math, including calculus; and general and advanced biology and physics. Once you have a bachelor’s degree, you can apply to a master’s program in anesthesia. Look for a program that is accredited by the Commission on Accreditation of Allied Health Education Programs, works closely with a medical school and is taught by physicians who are board-certified in anesthesiology.

The two-year program focuses on course work that enhances basic science knowledge in physiology, pharmacology, anatomy and biochemistry with special emphasis on the cardiovascular, respiratory, renal, nervous and neuromuscular systems.
The clinical part of your program will provide you with experience in patient monitoring, anesthesia delivery systems, life support systems and patient assessment and in the skills needed to provide compassionate and quality care. During the clinical portion, students administer a minimum of 600 different anesthetics during a variety of surgeries.

A solid grasp of safety protocols and effective communication skills are also essential to help the anesthesiologist assistant excel as part of the treatment team. Once you have completed your master’s program, you will need to pass a certification exam administered by the National Commission for the Certification of Anesthesiologist Assistants.

Other Related Fields

Anesthesia Technology

In this field you will work with the anesthesiologist to ensure adequate stock in the operating room. The bulk of anesthesia technician time is spent preparing equipment and supplies for surgery. In this capacity, you would perform much of your work in a sterile environment. This commitment to sterility is important and the slightest compromise is unacceptable. They ensure airway management equipment such as emergency intubation kits, light wands, fiberoptic bronchoscopes, laryngeal masks and cuffed oropharyngeal airway gear is on hand in every surgery suite.

Other pre-surgery tasks include:
• Preparing patients
• Ensuring properly functioning suctioning equipment is on hand
• Setting up endotracheal tubes (ET)
• Arranging transtracheal jet ventilation devices
• Stocking self-inflating resuscitation bags, breathing circuits and masks
• Ensuring the adequate stock of laryngoscope blades
• Double-checking instrument calibrations
• Ensuring gas cylinders are full, functional and on hand

Programs in Oregon

Anesthesiologist Assistant
University of Colorado School of Medicine - MMS in Anesthesiology (no programs in Oregon)

Anesthesia Technology
Chemeketa Community College - AAS

Resources
American Academy of Anesthesiologist Assistants
American Society of Anesthesiologists
Biomedical Sciences

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<td>$50k - 100k</td>
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With a master’s degree in public health, you may choose to become a biomedical scientist, or microbiologist. These professionals work in the field of health care and works on a great many lab tests and scientific techniques involving samples of tissues and fluids to help doctors better diagnose diseases and other illnesses. These scientists also research how effective treatments are for many diseases. The work of biomedical scientists is essential for the function of many research laboratories and hospital departments. These scientists might work on serious medical problems including cancer, AIDS, malaria, anemia and diabetes. See all Public Health Careers.

Working Conditions

Usually, a biomedical scientist, or microbiologist, will focus on a certain area of science, such as:

- Clinical chemistry: analyzing bodily fluids and toxicology reports
- Medical microbiology: identify the microorganisms that are responsible for diseases
- The science of transfusion: check compatibility of blood donations with that of patients, ensure that blood bank supplies are sufficient
- Haematology: the study of blood and diseases related to blood
- Cytology: various types of cellular analysis, include cervical smears to check for cancer
- Immunology: the study of the immune system and understanding how it fights disease
- Virology: identifying deadly diseases; monitor how effective vaccines are

A biomedical scientist will usually work with high-tech equipment with a lot of automation, as most laboratories today are mostly computerized. Some job duties that you will perform include testing blood and tissue for various enzymes and hormones; analyzing the cultures of cells that are grown from samples of tissues; communicate test results to staff, who use this information to treat sick patients; use IT to analyze and record critical data, writer reports; help to document test and lab results; work on creating new investigational methods and keep in tune with the latest diagnostic breakthroughs.

Most professionals in this field work in Research and Development (R&D), and they conduct research so as to increase knowledge in the field.

A master’s of public health is a good degree to have in this field as it gives you a perspective of not just a scientist, but a good perspective of how illnesses and diseases affect society.

Salary Range and Outlook

The Bureau of Labor Statistics (BLS) reports that the employment of biomedical scientists or microbiologists is expected to grow by 13 percent from 2010-20, which is about average compared to other professions. There will be more of these scientists needed to apply knowledge from research to develop new biological drugs and other processes to improve people’s lives.

As new drugs and treatments are developed, the demand should increase for biomedical scientists and microbiologists. More of these scientists will be needed to conduct research and to create new medicines and treatments.

Many of the projects that you will be involved in as a biomedical scientist or microbiology will require the knowledge and skills of scientists from other fields, including public health,
chemistry, medicine and biochemistry. If you have a broad grasp of microbiology and how it relates to these other fields, you will have the best prospects.

You should remember that much of the research that is done by scientists will be dependent upon federal government funding via the NIH and the NSF. So, the job prospects in this field will always be somewhat dependent on decisions made regarding the federal budget each year. The competition in this field for research grants is intense.

The median wage for biomedical scientists or microbiologists was $65,900 in 2010, according to BLS. The top 10% in the field earned in excess of $115,000 per year. The types of jobs in the field were broken down in the following categories:

- Federal government: $94,600
- R&D in scientific organizations: $68,000
- State government: $63,000
- Pharma and medicine: $62,300
- Colleges: $49,400

A master’s of public health will help you to earn a higher salary, as you have a well-rounded understanding of not just the science of diseases, but how they affect the community.

**Academic Requirements**

To become a biomedical scientist or microbiologist, you will need a bachelor’s degree in microbiology, biochemistry or a related field. Most people who major in microbiology will take coursework in microbial genetics, microbial physiology, environmental microbiology and virology. You also will need to study chemistry, biochemistry and physics. You also may need to take classes in statistics, computer science and mathematics. Your master's in public health will be a strong benefit to you in this field, as you will have the skills and tools to work with the public on how to mitigate the effects of deadly diseases. See online Masters of Public Health (MPH) programs.

You will need to have a great deal of experience working in a laboratory before you begin working. Most programs at colleges in microbiology will include laboratory work, but you should try to get additional laboratory work when possible. It is recommended that you get involved in an internship program and get additional laboratory experience.

To do independent research and work in most universities, you will need to have a PhD in microbiology. It is common for graduate students to study subfields, including virology and bacteriology.

Many microbiology or biomedical scientists start working in a postdoctoral research post. This will often last 2-3 years, where you will work with experienced scientists as you continue to learn about your field. You should try after you have done this research, you may want to attempt to publish some of your original research.

**Other Related Fields**

**Bioengineering**

Bioengineering is an interdisciplinary field that applies engineering principles and quantitative methods to the advancement of knowledge at the molecular and cellular levels through the ecosystem level, and to the development of new and novel biologics, materials, devices, and processes. In practice, bioengineers address issues in the broad areas of bioenvironmental, biomedical and bioprocess technology.
At many universities, life sciences and engineering are more or less parallel cultures, reflected in two almost completely disparate disciplines, where students in one have trouble taking courses in the other. At OSU, bioengineers are trained to work at the interface between these disciplines. Activities in bioengineering are inextricably linked to issues relevant to public health and confidence. Perhaps more than in any other engineering discipline, bioengineers must maintain an awareness of ethical issues in their field, and the patterns of thought that lead to moral judgment and decision-making. Further, the ability to communicate effectively with people from disparate disciplines, both inside and outside of science, is essential to bioengineers.

BioHealth Science
BioHealth Sciences is a degree that is designed for students seeking an interdisciplinary background in the life sciences, public health, and social sciences. A BioHealth Science major usually consists of a comprehensive core with a strong biological and physical science foundation combined with a variety of health and social science courses in a unique blend formulated to meet the needs of students interested in a career in the healthcare field. BioHealth Sciences majors receive excellent training for a variety of professional programs.

Biological Engineering
Biological Engineering is the application of engineering and life-science principles and problem-solving techniques to the optimum use and sustainability of biological resources. The curriculum for this type of major is usually engineering-based with strong emphasis on the life sciences. With undergraduate and graduate options, we bring the insights from biology and the methods of engineering together to provide the products and tools of the future.

Biomedical Engineering
Biomedical engineers design instruments, devices, and software used in healthcare; develop new procedures using knowledge from many technical sources; or conduct research needed to solve clinical problems. They frequently work in research and development or quality assurance. Biomedical engineers design electrical circuits, software to run medical equipment, or computer simulations to test new drug therapies. In addition, they design and build artificial body parts, such as hip and knee joints. In some cases, they develop the materials needed to make the replacement body parts. They also design rehabilitative exercise equipment.

The work of these engineers spans many professional fields. For example, although their expertise is based in engineering and biology, they often design computer software to run complicated instruments, such as three-dimensional x-ray machines. Alternatively, many of these engineers use their knowledge of chemistry and biology to develop new drug therapies. Others draw heavily on math and statistics to build models to understand the signals transmitted by the brain or heart. Some may be involved in sales.

Biomedical Physics
Biomedical Physics combines physics, mathematics, biology, chemistry and engineering in a highly interdisciplinary program. In a Biomedical Physics program you will use quantitative, physical science inspired approaches to problems of the life sciences. This is an ideal program to prepare a student for Medical School, graduate studies, and careers in biophysics, medicine, biomedical engineering, medical physics or any other field requiring physical and technological approaches to medical or biological questions.

Biomedical Sciences
Biomedical science combines the fields of biology and medicine in order to focus on the health of both animals and humans. Biomedical sciences usually involves the study of biochemical and physiological functions, anatomical and histological structures, epidemiology, and pharmacology.
Biophysics
Biophysics is a field of study that applies the theories and methods of physics to understand how biological systems work. Biophysics has been critical to understanding the mechanics of how the molecules of life are made, how different parts of a cell move and function, and how complex systems in our bodies—the brain, circulation, immune system, and others—work. Biophysics is a vibrant scientific field where scientists from many fields including math, chemistry, physics, engineering, pharmacology, and materials sciences, use their skills to explore and develop new tools for understanding how biology, and in turn, all life works.

Bioresource Research
BioResource Research is an interdisciplinary biosciences major that is frequently centered around student research. Students usually take biosciences core courses, complete an option (bioscience/agriculture/natural resource specialization) and do a research project of their choice, usually with a faculty mentor in the program where they are enrolled.

Bioscience Technology
Bioscience technology is a growing and dynamic field that applies life processes to practical uses, such as manufacturing of protein-based drugs ("biologics") and research and development of new medical devices. From pharmaceutical drugs to pacemakers, genetically engineered plants to gene therapy, bioscience technology is at work all around us.

Cellular Biology
Cellular biology is a branch of biology that studies the structure and function of the cell, which is the basic unit of life. Cell biology is concerned with the physiological properties, metabolic processes, signaling pathways, life cycle, chemical composition and interactions of the cell with their environment.

Cell and Developmental Biology
Modern cell and developmental biology brings together a diverse group of disciplines and technologies linked by the common goals of understanding the nature and behavior of cells and of how these cells work together to assemble an organism. Cell biology and developmental biology are sub-disciplines within the larger, more general area of biology. These sub-disciplines demand a genuine interest in the "hard sciences", including a solid foundation in biology, chemistry, mathematics and physics.

Molecular and Cellular Biosciences
This interdisciplinary program provides students with rigorous training in chemical, molecular, cellular and systems biology research toward the completion of a PhD.

Molecular Biology
Molecular biology is an interdisciplinary major designed for students who wish to focus their curriculum and research on molecular and chemical mechanisms of biological processes. This field of study is usually combined with the field of Biochemistry.

Molecular Microbiology and Immunology
Molecular microbiology and immunology integrates many disciplines concerned with the study of the transmission, immunobiology and pathogenesis of bacterial, parasitic, viral, immunological and infectious diseases of public health importance.
Programs in Oregon
Bioengineering
Oregon State University - BS

BioHealth Science
Oregon State University - BS

Biological Engineering
Oregon State University - MS, PhD

Biomedical Engineering
George Fox University - BS
Oregon Health and Science University - MS, PhD
University of Portland - BS, MS

Biomedical Physics
Portland State University - BS

Biomedical Sciences
Corban University - BS

BioPhysics
Oregon State University - BS, MS, PhD

Bioresources Research
Oregon State University - BS

Bioscience Technology
Portland Community College - Certificate, AAS

Cellular Biology
Oregon State University - MS, PhD

Cell and Developmental Biology
Oregon Health & Science University - PhD

Molecular and Cellular Biosciences
Oregon Health & Science University - PhD

Molecular Biology
Concordia University - BS
Lewis & Clark College - BS
Linfield College - BS
Oregon Health Science University - MS, PhD
Oregon State University - MS, PhD
Reed College - BS

Molecular Microbiology and Immunology
Oregon Health & Science University - PhD
Cardiopulmonary Rehabilitation Specialist

Average Salary: $18k - 30k
Years Higher Education: 2 - 4
Job Outlook: Excellent

For patients diagnosed with heart or lung disease, certain lifestyle changes can help reduce health risks and improve quality of life. Cardiopulmonary rehabilitation specialists help patients understand and manage their health problems so they can live longer and do more. Cardiopulmonary rehabilitation specialists work with patients who have been diagnosed with asthma, emphysema, chronic obstructive pulmonary disease, angina, coronary artery disease, heart attack and other conditions.

Cardiopulmonary rehabilitation specialists often meet their patients for the first time just after initial diagnosis or a health crisis, such as a heart attack. Once the patient has been stabilized, the cardiopulmonary rehabilitation specialist is called in to:

- Make sure the patient understands her condition and her medical regimen
- Explain when the patient can safely resume normal activities
- Identify unique risk factors, such as hypertension, smoking, poor diet and being overweight, that may be contributing to the patient's health problems
- Suggest interventions, including medical treatments and lifestyle changes, to reduce health risks
- Educate and support the patient in making key changes, such as eating healthier foods, quitting smoking and increasing physical activity
- Design and monitor an appropriate, customized exercise program
- Improving diet, losing weight and taking certain medications can help patients reduce their health risks and enhance quality of life.

While patients are usually motivated to make healthy changes following their initial diagnosis of heart or lung disease, many revert to old behaviors as time goes by. The cardiopulmonary rehabilitation specialist aims to keep the patient motivated by providing ongoing information and positive support.

Working Conditions
Cardiopulmonary rehabilitation specialists work in hospitals, outpatient clinics and rehabilitation centers. They may meet with patients in an office, an exam room or a supervised exercise facility.

They usually work standard business hours, although they may meet patients and supervise group exercise programs during the evening or on weekends.

Salary Range and Outlook
Cardiopulmonary rehabilitation specialists are often trained in other fields as well, such as nursing, exercise physiology or physical therapy. Their salaries vary widely, depending on their level of training and where they work.

As an entry-level cardiopulmonary rehabilitation specialist, you might expect to earn between $18,000 and $30,000 a year.
Academic Requirements

To become a cardiopulmonary rehabilitation specialist, you can first train as an exercise physiologist, a registered nurse, a physical therapist or a respiratory therapist. There is no individual certification for cardiopulmonary rehabilitation specialists, but the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR) certifies facilities that provide cardiopulmonary rehabilitation services. To gain experience in this field, look for employment in an AACVPR-certified program.

Other Related Fields

Physical Therapist

Physical therapists (PTs) are health care professionals who diagnose and treat individuals of all ages, from newborns to the very oldest, who have medical problems or other health-related conditions that limit their abilities to move and perform functional activities in their daily lives. PTs examine each individual and develop a plan using treatment techniques to promote the ability to move, reduce pain, restore function, and prevent disability. In addition, PTs work with individuals to prevent the loss of mobility before it occurs by developing fitness- and wellness-oriented programs for healthier and more active lifestyles.

Physical therapists provide care for people in a variety of settings, including hospitals, private practices, outpatient clinics, home health agencies, schools, sports and fitness facilities, work settings, and nursing homes. State licensure is required in each state in which a physical therapist practices.

Physiology

Physiologists are specialist biological scientists that conduct research and investigations into living organisms and their various functions. The experts that work in this area can pursue both academic and applied science routes.

Physiology is a fairly broad area of science. Physiologists can study literally any form of life, from single-celled amoebae and viruses, to humans, zebras, and giant redwood trees. Consequently, most physiologists specialize in a specific area, such as clinical physiology, viral physiology, exercise physiology, animal or plant physiology.

The main focus of these careers is on research. Physiologists investigate the biological systems and processes that allow humans, animals, plants and other organisms to function properly and perform effectively. Key areas of study include respiratory, muscular, reproductive and digestive systems.

Physiologists are employed by all kinds of private companies and government organizations, from pharmaceutical companies, the Center for Disease Control (CDC), food manufacturers and the Department of Defense, to universities, scientific research agencies, professional sports organizations and animal sanctuaries.

Registered Nurse

A registered nurse (RN) is a nurse who holds a nursing diploma or Associate Degree in Nursing (ADN), has passed the NCLEX-RN exam administered by the National Council of State Boards of Nursing (NCSBN) and has met all the other licensing requirements mandated by their state’s board of nursing.

RNs are generalists and are not required to choose a specialization. To gain recognition as a specialized nurse professional, RNs typically need to undergo further experience, clinical practice, and education in their specialized field.
In fact, employers may require RNs to prove their specialized competency by becoming certified in their specialty area through a nationally recognized certifying body. For instance, many cardiac nurses gain certification through formal examination by the American Board of Cardiovascular Medicine.

**Respiratory Therapist/Respiratory Care**
A respiratory therapist (RT) is a certified medical professional who specializes in providing healthcare for your lungs. They have advanced knowledge of high-tech equipment, such as mechanical ventilators. RTs work alongside doctors and nurses. They practice in many medical facilities, including emergency rooms, maternity wards, and therapy offices. Some RTs care for people in their own homes.

Respiratory therapists help improve outcomes for people with asthma, pneumonia, emphysema, lung trauma, and other diagnoses. RTs can assess your breathing, recommend exercises, and monitor your progress.

**Programs in Oregon**

**Physical Therapy**
*Pacific University - PhD*

**Physiology**
*Oregon Health Sciences University - PhD*

**Registered Nurse (RN)**
*Blue Mountain Community College - AAS*
*Central Oregon Community College - AAS*
*Chemeketa Community College - AAS*
*Clackamas Community College - AAS*
*Clatsop Community College - AAS*
*Columbia Gorge Community College - AAS*
*Klamath Community College - AAS*
*Lane Community College - AAS*
*Mt Hood Community College - AAS*
*Oregon Coast Community College - AAS*
*Portland Community College - AAS*
*Rogue Community College - AAS*
*Southwest Oregon Community College - AAS*
*Tillamook Bay Community College - AAS*
*Treasure Valley Community College - AAS*
*Umpqua Community College - AAS*

**Respiratory Therapy/Care**
*Mt Hood Community College - AAS*
*Oregon Institute of Technology - BS*
*Umpqua Community College - AAS*

**Resources**
*American Association of Cardiovascular and Pulmonary Rehabilitation*
*American Association of Heart Failure Nurses*
*American Heart Association: Cardiac Rehabilitation page*
Cardiovascular Technologist/Technician

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<td>$27k - 140k</td>
<td>2 - 4</td>
<td>Excellent</td>
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Cardiovascular technologists and technicians assist physicians in diagnosing and treating cardiac (heart) and peripheral vascular (blood vessel) ailments.

**Cardiovascular Technologists**
A cardiovascular technologist works in a cardiac cath lab and performs very complex procedures, including stent implants, cardiac pacemakers and defibrillators and other tests to diagnose heart disease. They take emergency calls and participate in saving the lives of those who are having a heart attack.

Cardiovascular technologists may specialize in three areas of practice:
- Invasive cardiology
- Cardiac sonography
- Vascular technology/sonography

**Working Conditions**
Technologists and technicians generally work a five-day, 40-hour week that may include weekends. Those in catheterization labs tend to work longer hours and may work evenings. They also may be on call during the night and on weekends.

**Salary Range and Outlook**
The median (meaning half make less than that and half make more) salary for cardiovascular technologists and technicians as of May 2015, according to the Bureau of Labor Statistics, is $56,100.

**Academic Requirements**

**Cardiovascular Technologists**
A cardiovascular technologist must go to college to get an associate or bachelor’s degree. One year is dedicated to core courses followed by a year of specialized instruction in one of these specialties:
- Invasive cardiology: for students who plan to work in a cardiac catheterization lab or with the cardiac catheterization suite, which sometimes includes electrophysiology
- Noninvasive cardiology: for students who plan to work in Holter monitor, stress and pacemaker testing
- Noninvasive echo cardiology: for students who plan to work with cardiovascular ultrasound
- Noninvasive vascular cardiology: for students who plan to work in peripheral vascular cardiology

**Cardiovascular Technicians**
To become a cardiovascular technician, you need a high school diploma. You can be trained on the job. You may also choose to attend a certificate program or earn an associate degree.
Other Related Fields

Vascular Technology
Vascular technologists obtain dynamic images of the vascular system using high-frequency soundwaves, known as ultrasound. Although ultrasound is commonly associated with obstetrics and imaging during pregnancy, vascular technologists are specialists in the analysis of blood flow throughout the entire body. From transcranial imaging of vessels in the brain, to infrared detection of blood flow of the capillaries in the toes, vascular technologists assess their patients for a wide variety of vascular diseases and disorders. Blood clots, atherosclerotic plaque, aneurysms and varicose veins are commonly identified and assessed in the vascular laboratory, along with other rare diseases and disorders. Vascular technologists enjoy a high level of independence in the field, working closely with radiologists, cardiologists, and vascular surgeons in the diagnosis and treatment of vascular diseases.

Programs in Oregon

Cardiovascular Technology
Spokane Community College - AAS (no programs in Oregon)

Vascular Technology
Oregon Institute of Technology - BS

Resources

Alliance of Cardiovascular Professionals
American College of Cardiology
American Society of Echocardiography
Community Health Worker

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<th>Job Outlook</th>
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</thead>
<tbody>
<tr>
<td>$39k - 60K</td>
<td>0 - 2</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

Community health workers (CHWs) are frontline public health workers who have a close understanding of the community they serve. This trusting relationship enables them to serve as a liaison/link/intermediary between health/social services and the community to facilitate access to services and improve the quality and cultural competence of service delivery.

Community health workers also build individual and community capacity by increasing health knowledge and self-sufficiency through a range of activities such as outreach, community education, informal counseling, social support and advocacy. (American Public Health Association, 2008)

Community health workers are dedicated individuals who function along a continuum ranging from individual and community development to service delivery and promoting community empowerment and social justice. They often help link people to needed health care information and services.

Community health workers work in all types of settings, including rural, urban and metropolitan areas; border regions (colonias); and the Native American nations. Although their roles vary depending on locale and cultural setting, they are most often found working in underprivileged marginalized communities where people may have limited resources; lack access to quality health care; lack the means to pay for health care; speak English fluently; or have cultural beliefs, values and behaviors different from those of the dominant Western health care system. In these communities, community health workers play an integral role in helping systems become more culturally appropriate and relevant to the people the systems serve.

Community health workers typically have deep roots or shared life experiences in the communities they serve. They share similar values, ethnic background and socio-economic status and usually the same language as the people they serve.

The community health worker serves as a bridge between the community and the health care, government and social service systems.

The community health worker’s responsibilities may include:

- Helping individuals, families, groups and communities develop their capacity and access to resources, including health insurance, food, housing, quality care and health information
- Facilitating communication and client empowerment in interactions with health care/social service systems
- Helping health care and social service systems become culturally relevant and responsive to their service population
- Helping people understand their health condition(s) and develop strategies to improve their health and well being
- Helping to build understanding and social capital to support healthier behaviors and lifestyle choices
- Delivering health information using culturally appropriate terms and concepts
- Linking people to health care/social service resources
- Providing informal counseling, support and follow-up
- Advocating for local health needs
- Providing health services, such as monitoring blood pressure and providing first aid
• Making home visits to chronically ill patients, pregnant women and nursing mothers, individuals at high risk of health problems and the elderly
• Translating and interpreting for clients and health care/social service providers

Community health workers go by many titles, depending on where they work, who they work for and what they do. Common titles include health coach, community health advisor, family advocate, health educator, liaison, promoter, outreach worker, peer counselor, patient navigator, health interpreter and public health aide. In Spanish-speaking communities, community health workers are often referred to as health promoters or promotores(as) de salud.

The role of the community health worker started as a societal position, appointed by and responsible to the community’s members. Advocates and activists dedicated their time and talents to ensuring that local people received the health information, resources and health care services they needed.

The success of their efforts has caused many government agencies, nonprofit organizations, faith-based groups and health care providers to create paid positions for community health workers to help reduce, and in some cases eliminate, the persistent disparities in health care and health outcomes in underprivileged communities. The organizations benefit by gaining access to information about health care needs in these communities, which they can use to improve the design of health services.

**Working Conditions**

Community health workers (CHWs) often live in the community they serve. They spend much of their time traveling within the community, speaking to groups, visiting homes and health care facilities, distributing information and otherwise connecting with local people.

Some community health workers work in health facilities, providing case management, client education, interpretation and follow-up care. Others are employed by government agencies and nonprofit groups to provide community organizing, health education, Medicaid enrollment and preventive care services in the field.

Community health workers may:
- Staff tables at community events
- Provide health screenings, referrals and information
- Help people complete applications to access health benefits
- Visit homes to check on individuals with specific health conditions
- Drive clients to medical appointments
- Deliver health education presentations to schoolchildren and their parents and teachers

Community health workers hired by health care agencies often have a disease or population-based focus, such as promoting the health of pregnant women or children, improving nutrition, promoting immunization or providing education around a specific health issue, such as diabetes or HIV/AIDS.

Community health workers are defined by the trust they receive from the communities they work in. To be effective, community health workers must secure, preserve and develop that trust. This can put the community health worker in a difficult position, particularly when there is a disconnect between program goals and community priorities. For example, communities that rely on their own traditional medical practitioners (such as native healers) may resist efforts by a community health worker to refer patients to Western health care resources. Community health workers must be able to balance their responsibilities to the community with their employer’s agenda.
Salary Range and Outlook
Throughout the United States, the community health worker field is burgeoning, both in interest and demand, yet the practice lacks definition, standards and openly available training opportunities. The field is also rapidly expanding into new areas of health and community wellness as community health workers continue to improve chronic disease management programs, health insurance enrollment, immunization drives, HIV/AIDS treatment, access to mental health services and maternal-child health interventions.

Becoming a community health worker is almost an idiosyncratic process, involving individuals seeking opportunities to help their community through a patchwork of employment opportunities, often known only by word of mouth and with highly varied job requirements and situations. This is unfortunate in that the lack of community health worker identity and standards of practice has led employers to contribute to the confusion about who community health workers are and what they do.

Community health worker salaries vary depending on local economies, wage scales and demand. In major metropolitan areas, recommended starting annual salaries range from $35,000 to $42,000, while senior community health workers can earn $42,000 to $52,000 and supervising community health workers may earn $52,000 to $60,000. Community health managers generally earn salaries above $60,000.

Community health workers often are hired to support a specific health initiative, which may depend on short-term funding sources. As a result, community health workers may have to move from job to job to obtain steady income. This short-term categorical funding of health services is a challenge to the stability and sustainability of the community health worker practice.

Academic Requirements
Community health worker (CHW) training and educational requirements vary across states, cities, employers and employment sectors. The field lacks unified training standards, so trainings tend to be generally local and sometimes employer driven.

A few states have regulated training through various methods, including by developing a standardized curriculum, yet there are very limited examples that follow the recommendations in published promising practices. Until a core role is agreed upon, the development of a nationally recognized curriculum framework will continue to vary.

Recently, however, states are starting to develop training and credentialing criteria more informed by community health worker leadership and by documented promising practices. The setting of community health worker training programs also varies widely. Some states have developed college-based training while others have implemented community-based training resources.

Today, community health workers are being recognized more and more for their contribution to community organizing, increasing access to health and improving health outcomes. This increased attention to the community health worker role by health care providers, community organizations and government officials has created interest in providing appropriate training and supervision.

Qualifications
Qualifications for community health workers vary widely. Some employers require only a high school diploma, while others require a college degree.
Community health workers typically receive up to 100 hours of additional training on the job, through classroom study, job mentoring or a combination. Community health workers are not licensed, but employers may set continuing education requirements.

Several states have begun to develop credentialing programs for community health workers. An effort is also underway to develop state and national standards for training and capacity building for community health workers.

One initiative in particular is focused primarily on collecting and sharing promising practices among community health workers to ensure that training benefits from and is responsive to their experiences, needs and knowledge level. This unique effort was in part a response to the limited success of efforts by states and other regulators to impose standards on the practice without input from community health workers and leaders.

Also in light of this growing interest in regulating the practice, several independent professional associations of community health workers have recently organized to address the rapidly emerging policy issues relevant to their practice.

**Other Related Fields**

**Basic Health Care**
The Basic Health Care two- to three-term certificate prepares students for work in entry-level positions in the health care industry. Students gain knowledge and skills pertinent to work in the medical industry, and are provided a basis of preparation to pursue further training and employment in allied health career fields and beyond. This certificate is unique in that it provides a diverse range of electives allowing students to select from a variety of specialty tracks that guide them toward completion of an additional certificate or degree program.

**Community Health**
The community health program prepares a person to work with individuals, groups and communities to promote health and prevent disease and disability. In this field a student will develop professional skills that include coordinating health education services, sharing accurate health information and teaching classes on positive personal health. Picture someone aiding residents of underserved areas or assisting in third-world countries to help the population learn about healthy life skills.

**Community Health Care Worker**
This career pathway certificate teaches the basic skills needed for employment in an entry level position in a health care setting. The outcomes include practice responsible and confidential communications and apply an understanding of health care laws and ethics are required in health care practice, work in a professional manner in the health care environment, understand and apply medical terminology appropriately, describe the anatomy and physiology of the various systems of the body, demonstrate basic computer skills and, recognize the scope of work the student is legally allowed to perform with their level of training.

**Community Health Education**
A community health education concentration prepares students for a wide variety of careers related to health education. It also provides a foundation for the pursuit of graduate study in public health.
Community Public Health
This subfield of healthcare views health from the global perspective of a geographical location or a community with common health characteristics rather than an individual’s well-being. These healthcare professionals look at health trends of a community structure and educate the public to make better health choices. They work with numerous stakeholders and policymakers to shape and promote the foundations of healthy lifestyles within these communities or populations. One of their main goals is the prevention and detection of disease and injury. Implementing better health initiatives from a global perspective is key in the benefit of any population or community.

Comparative Health Science
The field of Comparative Health Sciences is a multi-disciplinary program offering graduate training towards MS and PhD degrees. This field encourages applicants with interest in complex contemporaneous issues that require multi-disciplinary approach to be addressed. Faculty involved in the program have interests ranging from microbiology, ecology, immunology, nutrition, food science, bio-engineering, veterinary medicine, public health, human health, bioinformatics, mathematical modeling, microbiome, neuroscience and others.

Health Care
This certificate and in some cases associates program is usually recommended for students who wish to continue as health professionals and who want the training to deliver patient-centered care as members of an interdisciplinary team, emphasizing evidence-based practice, quality improvement approaches, and informatics.

Health Care Management
Health Care Management prepares a student for a variety of career options in the rapidly growing health care industry, where health service managers are in high demand. The program of study is usually designed to prepare future health care managers for planning, directing, and coordinating medical and health services. Graduates may manage an entire facility, or a specific clinical area or department, or manage a medical practice for a group of providers.

Health Coaching
The typical health coaching program is usually part of a health sciences program with a concentration in healthy lifestyles coaching and is designed to provide the academic knowledge and skills to allow students to move directly into a range of employment opportunities within the health field or continue their education in discipline-specific programs. Students usually complete a complement of courses that emphasize ethics, communication skills, critical thinking and cultural awareness. The health coaching emphasis brings together coursework from exercise and wellness, nutrition, and health care delivery to give students a strong background in preventative health care.

Health Education
Health educators work with public health departments, schools, government offices and even local nonprofits to design educational programs and other resources to address a community’s specific needs.

Health Promotions
A Health Promotions program consists of an interdisciplinary course of study providing students with specialized training in public health promotion and interventions. Through coursework and community-based experiences, students learn to address factors in the broader social, economic, policy and built environments to improve the health of populations. Students build practice and research skills for population-level interventions, including program development,
implementation and evaluation. Students also can focus on health across the lifespan. Graduates of the program will be able to effectively recognize and assess health disparities, communicate health information, promote health equity and mobilize resources for social change.

**Health Science**
A health sciences program is usually a concentration within a health or science degree program that provides students seeking admittance into professional programs such as medicine, dentistry, physical therapy, and occupational therapy the opportunity to earn an undergraduate degree while completing pre-professional prerequisites.

**Health Studies**
Health studies is a field of study designed to provide a research-oriented opportunity for students with a professional interest in physical activity and exercise. Students must complete each of the common required courses, along with a concentration of physical activity and exercise courses.

**Human Services**
Human services programs prepare students to work for organizations that serve people in need. Students learn the theories, principles and practice of providing services. Human services jobs can include drug abuse counselor, youth worker, mental health aide or probation officer. They may also include jobs that provide services to schools, prisons, government agencies and nonprofit groups.

**Medical Aide**
Medical aide programs prepare students for employment in a variety of medical settings. Rural hospitals serve as health care centers, often combining long-term skilled care with hospital care. Rural health aides are prepared to transcribe physician's orders, assemble charts, and perform medical clerical/medical records tasks as well as provide personal and basic patient care in homes, hospitals, long term care, and assisted living facilities under the supervision of an Registered Nurse (RN) or Licensed Practical Nurse (LPN).

**Medical Office Professional**
A medical office professional program is a certificate program where students will receive training which involves administrative and clinical aspects of health care in clinics and physicians' offices.

**Medical Office Receptionist**
A medical office receptionist program is a certificate program that prepares individuals for employment in medical offices as medical office receptionists.

**Medical Office Specialist**
The medical office specialist program is a certificate program that usually includes the coursework from the medical insurance plus additional courses that prepares the student to secure entry-level employment as a medical office specialist. With coursework in medical terminology, anatomy, physiology, health data content and systems, computer technology, disease, beginning coding and HIPAA, students gain the knowledge and skills necessary to begin a successful office career in the health services field.

**Medical Office Support**
The medical office specialist is a program that prepares individuals to work as support staff work at the front desk of a medical office. They perform a variety of tasks vital to the operation of a
medical office including dealing with patients, filing medical documents and handling insurance forms, and handling anything that occurs in a medical office.

**Pre-Health**
Pre-Health is a liberal arts program that prepares students to pursue additional or graduate coursework in a wide-variety of medical, health, and science related fields.

**Public Health**
Public health is a program that develops students' abilities to understand, analyze, problem-solve and communicate effectively in a complex, rapidly changing world. It integrates health science, social science and humanistic approaches to addressing global health challenges.

**Programs in Oregon**

**Basic Health Care**
- Chemeketa Community College - Certificate
- Mount Hood Community College - Certificate
- Rogue Community College - Certificate
- Southwestern Oregon Community College - Certificate

**Community Health**
- Eastern Oregon University - BS
- Oregon Health Sciences University - PhD
- Portland State University - PhD
- Western Oregon University - BS

**Community Health Care Worker**
- Lane Community College - Certificate

**Community Health Education**
- Portland State University - Bachelor of Science

**Community Public Health**
- Southern Oregon University - BS

**Comparative Health Science**
- Oregon State University - MS, PhD

**Health Care**
- Oregon Health Science University - MS
- Portland Community College - Certificate
- Southwestern Oregon Community College - Certificate
- Umpqua Community College - AAS

**Health Care Management**
- Multnomah University - BS
- Oregon Health Sciences University - Certificate, MS
- Oregon Institute of Technology - BS

**Health Coaching**
- Portland State University - BS

**Health Education**
- Chemeketa Community College - AAS
- Pacific University - PhD
- Southern Oregon University - BS

**Health Promotions**
- Oregon Health Sciences University - MS
Health Science
Concordia University - BS
Pacific University - BS
Portland State University - BS
Warner Pacific University - BS

Health Studies
Mount Hood Community College - BS
Oregon Health Sciences University - MS, PhD
Portland State University - MS

Human Services
Central Oregon Community College - AAS
Lane Community College - AAS
Linn-Benton Community College - AAS
Oregon State University Cascades - BS
Southern Oregon University - BS
Umpqua Community College - AAS
University of Oregon - MS

Medical Aide
Southwestern Oregon Community College - Certificate

Medical Office Professional
Columbia Gorge Community College - Certificate

Medical Office Specialist
Blue Mountain Community College - AAS
Central Oregon Community College - Certificate
Mount Hood Community College - AAS
Treasure Valley Community College - AAS
Umpqua Community College - AAS

Medical Office Support
Blue Mountain Community College - Certificate
Mount Hood Community College - Certificate
Tongue Point Job Corps - Certificate

Pre-Health
Willamette University - BS

Public Health
Central Oregon Community College - AAS
Oregon Health Sciences University - MS
Oregon State University - BS, MS, PhD
Pacific University - BS

Resources
Center for Sustainable Health Outreach
Community Health Worker National Education Collaborative
Community Health Worker Network of New York City
Massachusetts Association of Community Health Workers
National Association of Community Health Representatives (Native Americans)
Cytotechnologist

Average Salary | Years Higher Education | Job Outlook
$60k - 70k | 4 - 5 | Excellent

Cytotechnologists are laboratory professionals who study cells and cellular anomalies. Using a microscope, they examine slides of human cells for any indication that a cell is abnormal and/or diseased (i.e., cancerous or precancerous lesions, infectious agents or inflammatory processes). Cytotechnologists often play a crucial role in helping patients to recover from illness by identifying a disease while it is still at a treatable stage.

Cell specimens are obtained from various body sites, such as the female reproductive tract, the lung, etc., and then placed on slides using special techniques. Cytotechnologists examine the slides microscopically, mark cellular changes that indicate disease and submit a report to the pathologist for final evaluation.

Using the findings of cytotechnologists, pathologists can diagnose and treat disease — in many cases, long before it could be detected otherwise. For instance, in recent years, fine needles are being used to aspirate lesions, even those that are deeply seated in the body. This has greatly enhanced the ability to find and diagnose tumors located in previously inaccessible sites.

As new screening and identification techniques for cancer are developed, cytotechnologists will continue to play an invaluable role in the diagnosis and treatment of disease.

Working Conditions
Most cytotechnologists work in hospitals or commercial laboratories. With experience, they also may work in private industry or in supervisory, research and teaching positions. Cytotechnologists may work independently (when evaluating and reporting on normal cells) or in close collaboration with a pathologist (when examining cells for indications of disease).

Salary Range and Outlook
Employment opportunities and salaries vary in this field, depending on geographic location, experience and ability, but the demand for experienced cytotechnologists is growing and will continue to grow over the next two decades. Cytotechnologists earn an average salary of $61,235 per year while those in supervisory positions earn an average of $71,261 per year.

Academic Requirements
To become a cytotechnologist, you must hold a baccalaureate degree from an accredited college/university, and you must graduate from an accredited cytotechnology program. In general, cytotechnology programs require at least 28 credits of science, including chemistry and biology.

Although the length of each program depends significantly on its organizational structure, most cytotechnology programs involve at least one calendar year of formal instruction. The course of study will include:

- Mathematics and/or statistics
- Scientific method of inquiry
- Laboratory operations
- Basic laboratory techniques
- Cytologic procedures/technologies
- Ancillary testing and related technologies
• Screening and interpretation
• Professional development

After completing the program, graduates have the knowledge and skills to evaluate a wide variety of cytologic preparations. However, to become a certified cytotechnologist, graduates must also take a certification examination.

Other Related Fields

BioChemistry
Biochemistry is a field of science that deals with the chemistry of life processes in plants and animals. A typical program in biochemistry focuses on the scientific study of the chemistry of living systems, their fundamental chemical substances and reactions, and their chemical pathways and information transfer systems, with particular reference to carbohydrates, proteins, lipids, and nucleic acids.

Biology
Biology is the study of life. Programs typically focus on molecular, cellular, and ecological discoveries which form the basis of biology and are applied to the associations that exist among living organisms, including human evolution. Careers in the health care and pre-professional studies in dentistry, medicine, optometry, medical technology, podiatry, veterinary medicine, ecology, marine biology, and genetics are all possibilities for biology students.

Chemistry
Chemistry is the study of matter and the changes it can undergo. Programs typically provide training for students planning careers in the chemical and biological sciences and also for those in biology, health related disciplines, earth sciences, secondary education, business, journalism and law.

Programs in Oregon

Biochemistry
Eastern Oregon University - BS
Linfield College - BS
Mount Hood Community College - AAS
Oregon Health Sciences University - MS, PhD
Oregon State University - BS, MS, PhD
Portland State University - BS
Southern Oregon University - BS
University of Oregon - BS, MS, PhD

Biology
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clackamas Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Lewis & Clark College - BS
Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Multnomah University - BS
Northwest Christian University - BS
Oregon Institute of Technology - BS
Oregon State University - BS
Oregon State University Cascades - BS
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS
University of Portland - BS
University of Western States - BS
Warner Pacific University - BS
Western Oregon University - BS
Willamette University - BS

Chemistry
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Lewis & Clark College - BS
Linfield College - BS
Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Oregon State University - BS, MS, PhD
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS, MS, PhD
University of Portland - BS
Western Oregon University - BS
Willamette University - BS

Cytotechnology
University of California at Davis Medical Center - Post-graduate certificate (no programs in Oregon)

Resources
American Society for Cytotechnology
American Society of Cytopathology
Diagnostic Medical Sonographer

Average Salary: $28k - 87k
Years Higher Education: 2 - 4
Job Outlook: Very Good

Diagnostic medical sonographers use specialized equipment to generate images used for assessing and diagnosing various medical conditions.

Many people associate sonography, which utilizes sound waves, with pregnancy. It’s how a fetus can be seen in the womb. But this technology has many other applications in the diagnosis and treatment of medical conditions in the abdomen, breast, heart and blood vessels and, more recently, in diagnosing and treating musculoskeletal problems.

A diagnostic medical sonographer’s responsibilities may include:

- Taking a patient history
- Preparing and maintaining the diagnostic equipment
- Generating images through the use of sonographic equipment
- Determining if the ultrasound procedure has captured all the necessary images and if the quality is adequate for diagnosis
- Analyzing technical information
- Communicating with and providing a report to the interpreting physician who makes a diagnosis based on the images

Working Conditions
Most full-time sonographers work about 40 hours a week; they may have evening and weekend hours and times when they are on call and must be ready to report to work on short notice. They often work in low-lit examination rooms to better visualize the images they need to obtain. They may also perform ultrasound imaging at a patient’s bedside. At many institutions, sonographers will also aid the radiologist in performing procedures such as biopsies, drain placements or draining fluids.

Salary Range and Outlook
Diagnostic medical sonographers earn a median (half earn more and half earn less) salary of $63,330 per year, according to the Bureau of Labor Statistics.

The outlook for employment as a diagnostic medical sonographer is very good, according to the Bureau of Labor Statistics (BLS). It predicts that employment will grow 26% from 2014 to 2024, much faster than the average for all occupations.

Academic Requirements
High school students who are interested in diagnostic medical sonography, cardiovascular technology or vascular technology should take courses in anatomy, physiology, physics and math.

Colleges and universities offer certificate and two- and four-year programs. Two-year programs are most prevalent. Look for a program that is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). Sonography programs will likely include courses in anatomy, medical terminology, and applied sciences.
Diagnostic medical sonographers can earn certification by passing an exam. Certification specialties include abdominal, obstetrics/gynecology, vascular, and adult or pediatric cardiac. Additional specialties in which sonographers can be credentialed are breast, pediatric, fetal/congenital echocardiography, and phlebology. Most diagnostic medical sonographers have at least one certification, and many earn more than one certification.

Other Related Fields

Diagnostic Imaging
Diagnostic imaging programs typically prepare students to practice as proficient, multi-skilled professionals in culturally diverse health care settings, to demonstrate outcomes required by the American Registry of Radiologic Technologists (ARRT) and program guidelines and to prepare students for application and completion of ARRT certification examinations. This type of imaging allows doctors to see in various parts of the body.

Magnetic Resonance Imaging
Magnetic resonance imaging is a form of medical imaging that measures the response of the atomic nuclei of body tissues to high-frequency radio waves when placed in a strong magnetic field, and that produces images of the internal organs. A typical program teaches students the art and science of Magnetic Resonance Imaging, which utilizes very strong magnetic fields and radio frequencies for imaging the tissues of the body.

Medical Imaging
Medical imaging is the visualization of body parts, tissues, or organs, for use in clinical diagnosis, treatment and disease monitoring. Imaging techniques encompass the fields of radiology, nuclear medicine and optical imaging and image-guided intervention.

Medical Imaging Technology
Medical imaging technology plays an important role in today’s health care system, and workers with the knowledge and skills to perform diagnostic imaging procedures are in high demand. Medical imaging encompasses a wide array of procedures and technologies, and these advance as technology advances. As an example, mammography now offers the option of digital 3D and 4D imaging rather than film 2D, which was an industry standard for years. Because the field is ever-changing, your education will need to be dynamic as well in order to stay relevant as your profession changes with technological advancements.

Programs in Oregon
Diagnostic Imaging
Blue Mountain Community College - AAS
Linn-Benton Community College - AAS
Tillamook Bay Community College - AAS
University of Western States - MS
Diagnostic Medical Sonographer
Oregon Institute of Technology - BS
Magnetic Resonance Imaging
Portland Community College - Certificate
Medical Imaging
Central Oregon Community College - Certificate
Portland Community College - AAS
Medical Imaging Technology
Oregon Institute of Technology - BS
Tillamook Bay Community College - AAS
Umpqua Community College - AAS

Resources
Society of Diagnostic Medical Sonography
American Society of Echocardiography
American Registry for Diagnostic Medical Sonography
Society for Vascular Ultrasound
American Institute of Ultrasound in Medicine
American Registry of Radiologic Technologists
Cardiovascular Credentialing International
Emergency Medical Technician

Average Salary: $35k  
Years Higher Education: 2  
Job Outlook: Excellent

Emergency Medical Technicians (EMTs) and paramedics respond to emergencies, from someone who may be having a heart attack in her home to multi-vehicle accidents on the highway. EMTs are most frequently found in ambulances but some may provide care for patients being transported by air as well.

They provide first-line medical or emergency care for sick and injured people at the scene, which may be in the person’s home, at an accident site or other places and while they are being transported to the hospital for care. They typically operate in teams with one person serving as an emergency vehicle operator while the other continues to provide life-saving emergency care to the patient en route to a medical facility.

The National Association of Emergency Medical Technicians describes four categories of emergency medical practitioners:

- Emergency medical responders (EMRs) are trained in skills to provide immediate lifesaving care for critical patients. Typically, responders can provide on-scene interventions but do not act as the primary caregiver. These EMRs may be members of a volunteer fire department, part of law enforcement, medical reserve corp volunteers or members of an industry response team. Licensure as an EMR requires completion of an accredited training program.
- Emergency medical technicians (EMTs) conduct basic, noninvasive interventions to help save lives and reduce harm at emergency sites. They can do everything a responder does, plus they have the skills needed to transport patients safely. In many places, EMTs provide the majority of out-of-hospital care. To be licensed as an EMT, you must take an accredited course.
- Advanced emergency medical technicians do everything emergency medical responders and EMTs do and can also conduct limited advanced and pharmacological interventions. Advanced emergency medical technicians must complete an accredited course to become licensed.
- Paramedics are the most skilled emergency responders, trained in and capable to do invasive and pharmacological interventions. Licensure requires successful completion of a nationally accredited paramedic program at the certificate or associate’s degree level.

Working Conditions
Most EMTs and paramedics work full-time. They are likely to do shift work that includes weekends, nights and holidays and even 24-hour shift schedules.

EMTs and paramedics may work in either urban or rural settings, though volunteers staff many rural EMT units. They may work for private ambulance services, fire departments, hospitals or other rescue services.

Depending on a system and its coverage area, career opportunities may also exist in areas like wilderness EMS, special operations, special events, hazardous materials, industrial safety, quality management and other areas.

EMTs and paramedics work with other health care professionals, including nurses and physicians, as well as firefighters and police officers.
EMTs and paramedics experience a much larger than average number of work-related injuries or illnesses.

**Salary Range and Outlook**
According the Bureau of Labor Statistics, employment for EMTs and paramedics is expected to grow 23 percent from 2012 to 2022, much faster than most other careers. The average salary for emergency medical technicians (EMTs) and paramedics is $35,000.

**Academic Requirements**
All emergency medical technicians (EMTs) and paramedics must complete a postsecondary educational program. All states require EMTs and paramedics to be licensed; requirements vary by state.

EMTs usually complete a course that takes between 120 and 150 hours to complete. Paramedic classes take longer, between 1,200 and 1,800 hours.

EMTs learn how to:
- Give CPR
- Give oxygen
- Administer glucose to diabetic patients
- Help people who are having asthma attacks or allergic reactions
- Extricate patients and prepare them for transport

Paramedics learn everything EMTs learn in addition to more advanced skills, including how to:
- Administer medications
- Start intravenous lines
- Provide advanced airway management for patients
- Resuscitate patients
- Help people who have suffered trauma

They may take classes in anatomy, physiology, cardiology, medications and medical procedures. EMT and paramedic courses consist of lectures, hands-on skills training, and clinical and/or field internships.

If you are interested in becoming an EMT or paramedic, these are the basic steps to follow:
- Meet the eligibility requirements and prerequisites for attending an EMT or paramedic course.
- Find an accredited EMT or paramedic course.
- Check with your local county and/or state Emergency Medical Services Agency (EMSA) for a list of approved courses.
- Attend and successfully complete an approved EMT or paramedic education course.
- Take and pass the National Registry of Emergency Medical Technicians EMT or paramedic computer-based exam and practical skills examination.
- Apply for and obtain certification.

It should be noted that in Oregon, particularly in rural counties some of the EMT requirements are met through Fire and Life Safety and Fire Science programs.

**Accredited Programs for Paramedics**
The National Registry of EMTs (NREMT) requires successful completion of an accredited program as an eligibility requirement for National EMS Certification at the paramedic level. Currently, 44 states utilize the NREMT in the state examination process for paramedic licensure.
Successful completion of the NREMT exam is recognized in four states that accept National EMS Certification as an option to state-based testing. Only two states require state-based testing for initial licensure of paramedics. Find out more in this PDF from the National Association of State EMS Officials.

Candidates that graduate from a CAAHEP-accredited program retain the ability to apply for national EMS certification that will enhance the ability to apply for reciprocity in the majority of states.

**Other Related Fields**

**Emergency Response and Operations**
Emergency response and operations is a program that develops education, skills and techniques for planning, responding, and mitigating various emergency situations within the student’s specific discipline with emphasis on effective response and operations.

**Emergency Medical Service Management**
Emergency medical service management is a program that offers a diversified educational experience designed to develop strong field provider skills, as well as management and leadership training within EMS. Students with the discipline and drive to successfully complete these programs typically earn eligibility for both state and national licensing exams, and find employment with leading agencies across the Nation.

**Fire and Life Safety**
The fire and life safety certificate program is designed to provide advanced skills and work experience for firefighters aspiring to advance in the profession. It provides courses aimed at upgrading the skills of professional firefighters and preparing personnel for additional job responsibilities.

**Fire Protection Technology**
Fire protection technology is a program that offers the opportunity to begin a career in fire protection technology, preparing you for occupations and advancement in fire suppression, investigation, prevention, emergency medical and rescue services, and hazardous materials technology.

**Fire Science**
Fire science is typically a two-year degree program that prepares a student to qualify for the specialized demands of a highly diversified and technological society, and thereby help gain employment as a firefighter as a result of the training.

**Fire Science Technology**
Fire science technology is typically a two-year degree program designed to prepare students for a career in emergency services that covers Firefighter II, EMT Basic and Apparatus Operator.

**Fire Service Administration**
Fire service administration is typically a two-year program designed for students seeking a career in the fire service industry or upgrading their skills for current fire service employment. This type of program usually allows a student to transfer to a four-year bachelor’s program in the same field.

**Homeland Security and Emergency Management**
A homeland security and emergency management is a program that provides emergency management leadership training as well as the critical thinking and ethical decision-making skills needed for careers in public safety at the local, state and federal government levels including
law enforcement, fire service, planners, critical infrastructure protection, TSA, border patrol, Secret Service, maritime security, Coast Guard, FEMA, and more.

**Paramedicine**
Paramedicine is a program that offers career training for entry-level personnel ranging from EMTs to paramedics. In a typical program during the first year of study, successful completion of the EMT course leads to eligibility to sit for the State and National Registry EMT exams.

**Paramedic Program**
A paramedic program is a healthcare program that trains students to respond to medical emergencies outside of a hospital. Paramedics mainly work as part of emergency medical services (EMS), most often in ambulances.

**Structural Fire Science**
Structural fire science is a program designed to provide students with the necessary skills, knowledge and abilities to enter the fire service or to increase skills, knowledge and abilities for those already employed as a firefighter.

**Wildland Fire Management**
Wildland fire management is a program that typically provides education and training that can lead to seasonal employment in wildland firefighting or to the first step to a career in fire management, the forest industry or park service.

**Wildland Fire Science**
Wildland fire science programs provide students with the hands-on training needed to manage controlled burns, implement fuels planning, work with fire suppression tactics and more. Programs are typically designed to meet US Forest Service requirements, as well as those of other government wildland fire management agencies.

**Wildland Fire Science/Firefighter Type II**
Wildland Fire Science/Firefighter Type II is a certificate program that provides education and training that can lead to seasonal or permanent employment with state, federal and private contract firefighting or within the timber industry.

**Programs in Oregon**

**Emergency Medical Technician**
- Blue Mountain Community College - Certificate, AAS
- Central Oregon Community College - AAS
- Chemeketa Community College - AAS
- Clatsop Community College - Certificate
- Columbia Gorge Community College - Certificate
- Klamath Community College - Certificate
- Lane Community College - Certificate
- Oregon Coast Community College - Certificate, AAS
- Portland Community College - Certificate, AAS
- Southwestern Oregon Community College - Certificate
- Treasure Valley Community College - Certificate
- Umpqua Community College - AAS

**Emergency Response and Operations**
- Klamath Community College - AAS

**Emergency Medical Service Management**
- Clackamas Community College - Certificate
- Oregon Institute of Technology - BS
Rogue Community College - Certificate
**Fire and Life Safety**
Rogue Community College - Certificate

**Fire Protection Technology**
Portland Community College - Certificate, AAS

**Fire Science**
Clatsop Community College - AAS
Rogue Community College - Certificate, AAS
Southwestern Oregon Community College - AAS
Umpqua Community College - AAS

**Fire Science Technology**
Blue Mountain Community College - AAS

**Fire Service Administration**
Central Oregon Community College - AAS
Chemeketa Community College - Certificate
Eastern Oregon University - BS

**Homeland Security and Emergency Management**
Concordia University - BS

**Paramedic Program**
Chemeketa Community College - AAS
Oregon Institute of Technology - AAS

**Paramedicine**
Chemeketa Community College - AAS
Lane Community College - AAS
Rogue Community College - AAS
Southwestern Oregon Community College - AAS

**Structural Fire Science**
Central Oregon Community College - AAS
Klamath Community College - AAS

**Wildland Fire Management**
Clackamas Community College - AAS

**Wildland Fire Science**
Central Oregon Community College - Certificate, AAS
Klamath Community College - Certificate
Treasure Valley Community College - Certificate, AAS

**Wildland Fire Science/Firefighter Type II**
Central Oregon Community College - Certificate
Clackamas Community College - Certificate

**Resources**
National Association of Emergency Medical Technicians
National Association of EMS Educators
National Registry of Emergency Medical Technicians
Genetic Counselor

<table>
<thead>
<tr>
<th>Average Salary</th>
<th>Years Higher Education</th>
<th>Job Outlook</th>
</tr>
</thead>
<tbody>
<tr>
<td>$72k</td>
<td>6</td>
<td>Excellent</td>
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Genetic counselors provide a critical service to individuals and families considering undergoing genetic testing by helping them identify their risks for certain disorders, investigate family health history, interpret information and determine if testing is needed. The genetic counseling process helps people understand and adapt to the medical, psychological and familial implications of genetic contributions to disease.

Most genetic counselors see patients in a clinic or hospital setting, and often work with obstetricians, oncologists and other doctors. Like doctors, genetic counselors can work in a variety of settings and provide different services. They may provide general care or specialize in one or more areas, including:

- Prenatal and preconception: For women and their partners who are pregnant or thinking about becoming pregnant
- Pediatric: For children and their family members
- Cancer: For patients with cancer and their family members
- Cardiovascular: For patients with diseases of the heart or circulatory system and their family members
- Neurology: For patients with diseases of the brain and nervous system and their family members

In addition to counseling, genetic counselors also communicate with laboratories about the tests they offer, advocating for patients with their insurance companies and notifying patients about their test results.

The Bureau of Labor Statistics projects that employment of genetic counselors will grow 29% from 2014 to 2024, much faster than the average for all occupations.

Working Conditions
Genetic counselors work in a variety of settings including universal medical centers, private and public hospitals/medical facilities, diagnostic laboratories, health maintenance organizations, non-for-profit organizations, and government organizations and agencies. They usually work 40 hours a week and don’t generally have to work weekends or evenings.
The median salary (half of genetic counselors earn more and half earn less), according to the Bureau of Labor Statistics is $72,090.

Academic Requirements
If you want to become a genetic counselor, the first step is to get your bachelor’s degree. While many genetic counselors receive a degree in biology, social science or a related field, those degrees are not required for entry into a genetic counseling program.
The next step is to apply for entry into an accredited master’s program in genetic counseling.
Programs last approximately two years and include:

- Courses in human genetics, birth defects, ethics and counseling, among others
- Clinical training
- Thesis or capstone projects based on student conducted research
After earning a degree, genetic counselors become certified by taking and passing a certification exam.

Other Related Fields

Biology
Biology is the study of life. Programs typically focus on molecular, cellular, and ecological discoveries which form the basis of biology and are applied to the associations that exist among living organisms, including human evolution. Careers in the health care and pre-professional studies in dentistry, medicine, optometry, medical technology, podiatry, veterinary medicine, ecology, marine biology, and genetics are all possibilities for biology students.

Programs in Oregon

Biology
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clackamas Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Lewis & Clark College - BS
Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Multnomah University - BS
Northwest Christian University - BS
Oregon Institute of Technology - BS
Oregon State University - BS
Oregon State University Cascades - BS
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS
University of Portland - BS
University of Western States - BS
Warner Pacific University - BS
Western Oregon University - BS
Willamette University - BS

Genetic Counseling
California State University Stanislaus - MS, Stanford University - MS (no program in Oregon)

Resources
Accreditation Council for Genetic Counseling
American Board of Genetic Counseling
American Society of Human Genetics
Canadian Association of Genetic Counsellors
National Society of Genetic Counselors
Health care interpreters facilitate communication between patients with Limited English Proficiency (LEP) and the Deaf and Hard of Hearing and their physicians, nurses, lab technicians and other health care providers. Because of the growing number of LEP patients, the need for health care interpreters has grown swiftly in the last decade, so there is good career potential in this profession.

When a patient has limited ability to speak English, it is nearly impossible for even the most skilled clinician to provide high-quality healthcare services without accurate interpreting performed by a trained, qualified and credentialed interpreter who has a working knowledge of medical terminology and medical systems. If family members, friends or staff who are not trained as health care interpreters try to interpret in health care settings, errors in understanding and/or communication are more likely to occur, posing grave risks to the patient and immense liability to the healthcare provider or institution.

Most health care interpreters are responsible for providing face-to-face interpreting between patients and providers. However, interpreters may also be asked to work with other individuals, such as family members or a patient representative, and they serve to help provide cultural information to facilitate support for a treatment plan.

Health care interpreters often render sight translation of basic health care documents by orally translating a written document into the patient’s language. Health care interpreters may also interpret over the phone (OPI-over the phone or telephonic interpreting) or through video (VRI-video remote interpreting). Health care interpreters frequently educate other members of the health care team regarding the duties, requirements, protocol and ethics and standards of practice involved in health care interpreting.

Despite the career’s challenges, most health care interpreters speak of the intense emotional rewards they derive from their work. Like health care providers, on a daily basis they see that their work in providing language access saves lives and protects health and well-being.

Many health care interpreters perform their work over the telephone or using video technology. Due to limited resources, particularly in rural areas and/or when specific language needs arise for Languages of Lesser Diffusion (LLDs) such as indigenous languages, telephonic interpreting is an industry that has seen considerable growth in the past few years. Health care interpreters and providers may offer these options either full-time or in addition to on-site interpreting.

Throughout the United States, interpreters are key and highly valued members of the health care team. Their responsibilities have evolved greatly in the last decade and are continuing to change to meet needs.
Working Conditions
Health care interpreters work in a variety of health care settings, including hospitals, clinics, private offices, rehabilitation centers and nursing homes. Some interpreters work in only one department while others may work in a number of departments as needed.

Health care interpreters may need to work evenings and weekends or be on call. Since interpreting requires immense concentration and focus, some protocols specify that interpreters be given breaks every two hours; however, it is common for interpreters to work much longer as needed.

In addition to the stress of working in primary care and medical specialty fields, interpreters also confront unique issues related to working in mental health facilities, substance abuse clinics, forensic services, domestic violence programs or similar types of health care settings. Today health care interpreters, may be called upon to work any shift schedule and may also work on call, especially in acute care settings.

Until recently, the primary job prospects for health care interpreters were in urban settings. However, particularly for certain languages because of the increasingly changing demographics of the migrant and immigrant populations, the need is growing in all parts of the country, including many rural settings.

Salary Range and Outlook
According to the U.S. Bureau of Labor Statistics, in 2015, the median (half of the workers earned more and half earned less) annual salary for an interpreter was $44,190. It should be noted that these figures will vary considerably based on numerous factors such as such location, type of institution/organization and employee status (a full- or part-time employee versus a contracted interpreter). The specific language in which an interpreter works may also be a factor.

Academic Requirements
To become a health care interpreter, you need to be far more than simply bilingual, although that is a good start. Certainly, interpreters must have advanced to superior fluency in at least two languages, as well as an in-depth knowledge of the cultures of the languages they are interpreting.

However, you also need to be sensitive to the subtle nuances of meaning in a given language and be able to communicate them in two directions. You must have the skills and knowledge to quickly grasp the intention of a message in its original language, then you must be able to re-express it swiftly and accurately in the target language.

In addition to this kind of language fluency, you need a thorough knowledge of medical terminology in both the target and source languages. You also should be familiar with specific medical procedures, as well as the different clinicians’ roles at the health care facility in which you work.

To accomplish all this, you must have excellent oral communication skills, knowledge of specialized health care terms and concepts and a commitment to adhere to the national code of ethics and national standards of practice for interpreters in health care. One of the standards of practice, for instance, is that a health care interpreter must never add to or subtract from what is communicated by anyone.
Certification and other credentialing requirements vary by state. There are two national certifications for health care interpreters:

- Certification Commission for Health care Interpreters
- National Board of Certification for Medical Interpreters

Minimum requirements for the profession vary greatly from state to state. Nonetheless, most health care institutions prefer to see:

- A certificate of successful completion from a recognized educational institution or training program (whether through a private institution, a two-year college or a four-year college)
- A certificate attesting to level of language proficiency in all of the interpreter’s working languages
- Skills testing in health care interpreting
- Proof of mastery of medical terminology in all working languages

General education and experience, rather than specific academic requirements, are the only other typical prerequisites.

**Programs in Oregon**

**Health Care Interpreter**

*Bellevue College (Washington) - AAS, San Francisco State University (California) - BS (no programs in Oregon)*

**Resources**

- California Healthcare Interpreting Association
- National Council on Interpreting in Health Care (NCIHC)
- Certification Commission for Health Care Interpreters
- Hablamos Juntos
- Limited English Proficiency
- Interpreters Division of the American Translators Association
Every time health care personnel treat a patient, they record what they observed and how the patient was treated medically. This record includes information the patient provides concerning his or her symptoms and medical history, as well as the results of examinations, reports of X-rays and laboratory tests, diagnoses and treatment plans.

Increasingly, this information is maintained electronically in health care information systems. The practice of acquiring, analyzing and protecting digital and traditional medical information vital to providing quality patient care is known as health information management.

Health information management professionals are highly trained in the latest information management technology applications and understand the workflow in any health care provider organization from large hospital systems to private physician practices. They are vital to the daily operations management of health information and electronic health records. They ensure a patient's health information and records are complete, accurate and protected.

Health information management professionals work in a variety of different settings and job titles. They often serve in bridge roles, connecting clinical, operational and administrative functions. These professionals affect the quality of patient information and patient care at every touchpoint in the health care delivery cycle. They work on the classification of diseases and treatments to ensure they are standardized for clinical, financial, and legal uses in health care. Health information management professionals care for patients by caring for their medical data.

Working Conditions
Health information management professionals usually work a 40-hour week, although some overtime may be required. Options for home-based work or evening and night shift schedules may be available in hospitals. Other work environments include pharmaceutical firms, insurance companies, long-term care facilities, public health settings, physician group practices, consulting firms, computer systems design firms and many more settings.

Salary Range and Outlook
The salaries of health information management professions will vary according to education and experience. The American Health Information Management Association reports that new health information graduates with associate degrees earn $20,000 to $30,000 annually while those with bachelor’s degrees earn between $30,000 and $50,000. With a few years of experience, managers can earn $50,000 to $75,000 annually.

The Bureau of Labor Statistics has projected a 15% growth in the number of health information management workers between 2014 and 2024, much faster than the average for all health occupations.

Academic Requirements
Health information management (HIM) professionals may begin their careers with an associate or bachelor’s degree. If you are considering this career, make sure to choose a program that has been accredited by the Commission on Accreditation for Health Informatics and Information Management Education.
In addition to a general education, coursework includes biomedical sciences, legal aspects of health information, coding and management of clinical data, statistics, data analysis, database management, quality improvement methods and computer technology applied to health information systems.

Once you have a bachelor’s degree, you may decide to go on to earn a master’s degree in health information management or health informatics. A number of educational programs now offer master’s degrees in health information management or health informatics. It is anticipated that the health care system will become more complex and that graduate education will be increasingly required to fill the roles of the future.

After graduating, many health information management professionals choose to earn their credentials as either a registered health information technician or a registered health information administrator by successfully completing a national certification exam. Additional certifications are available and may be based on a combination of education and experience.

Other Related Fields

Data Analytics
Data analytics is the process of collecting and analyzing data to reveal trends or patterns of businesses. This allows the healthcare organization to be more efficient and productive in their patient care. This data can come from many aspects of a healthcare organization including facility usage, consumer demographics and preferences, market economics or trends, and employee satisfaction. This allows stakeholders to construct an overall strategy for the organization.

Health Informatics
Health informatics is a program where students learn to use their knowledge of healthcare, information systems, databases and information technology security to gather, store, interpret and manage the massive amount of data generated when care is provided to patients. Students typically well-versed in the language of medical coding, a classification system used throughout the U.S. to identify medical procedures.

Health Information Manager
Health information management is the practice of acquiring, analyzing, and protecting digital and traditional medical information vital to providing quality patient care. It is a combination of business, science, and information technology.

Health Information Technology
Health information technology specialists handle the technical aspects of managing patient health information. Depending on their position, health IT professionals might build, implement, or support electronic health records (EHRs) and other systems that store patient-related data. They know what data is needed, where is it stored, and how the data is used.

Programs in Oregon
Data Analytics
Southern Oregon University - BS
Health Informatics
Oregon Institute of Technology - BS
Rogue Community College - AAS
Health Information Manager
Chemeketa Community College - AAS
Health Information Technology
Central Oregon Community College - AAS

Resources
American Health Information Management Association
Commission on Accreditation for Health Informatics and Information Management Education
A healthcare documentation specialist, sometimes known as a medical transcriptionist or a medical documentation editor, listens to a voice recording made by a physician or other healthcare professional and either transcribes the information into a captured electronic record or reviews and edits a version produced by a speech recognition technology software program for the record. Because the information becomes part of the legal medical record and may serve as the foundation for ongoing decision-making and care, the work that healthcare documentation specialists do is critical.

Editing or transcribing medical reports is highly detailed work that requires patience, focus and attention to detail. Healthcare documentation specialists need extensive knowledge of medical terminology, anatomy and physiology, medical procedures, pharmacology and other medical terms. Because medical records are confidential, transcriptionists cannot discuss the content of the reports they prepare; they must be careful to keep all recordings, paper and electronic files secure and prepared to follow federal guidelines for confidentiality, security and privacy.

Healthcare documentation specialists transcribe or edit what has been dictated. They format information according to guidelines for medical records. And they often find and question inconsistencies and inaccuracies in the physician’s verbal report or the speech-recognized document.

Some healthcare providers and facilities use voice recognition software to aid in the initial oral-to-written transcription. However, these drafts must be carefully proofed against the original recording to ensure accuracy. Further editing is always required to produce a comprehensive and accurate report.

Healthcare documentation specialists may work on a wide range of reports, including medical histories, discharge summaries, physical examination reports, operating room reports, diagnostic imaging studies, consultation reports, autopsy reports, referral letters and other documents.

Working Conditions
Many healthcare documentation specialists work as independent contractors or full- or part-time employees, often working in their own homes. Others are employed in medical offices or hospitals and may spend part of their time performing office duties in addition to documentation. Healthcare documentation specialists who work in an office typically put in a standard 40-hour week. Self-employed workers may choose to work longer hours to increase their income, meet deadlines and balance work and family responsibilities. Healthcare documentation specialists, just as other healthcare providers, often work night and weekend shifts to ensure coverage of health care being provided to patients 24 hours a day, seven days a week and 365 days a year at hospitals, urgent care centers and other healthcare facilities.

They work with every type of healthcare provider, including physicians, nurses, physical therapists, dietitians and other healthcare workers.

Healthcare documentation specialists and editors spend the majority of their time sitting in front of a computer screen and using a headset to listen to their computer or another device that plays back digital voice recordings. A key command or foot pedal may be used to pause and
restart the recording as the documentation specialist keys the words into an electronic file or edits the already-recorded document.

Documentation specialists are at risk of work-related injury, including repetitive motion injuries, eye strain, neck and back pain and other problems related to the nature of their work. There can be pressure to produce reports quickly as well, along with stress associated with ensuring that every report is complete and accurate.

**Salary Range and Outlook**

Salaries vary because healthcare documentation specialists may be paid by the line or they may receive an hourly rate, which may include an incentive for transcribing/editing more than the minimum. Some also receive a salary.

According to the Bureau of Labor Statistics, the median annual wage of medical transcriptionists was $34,890 in May 2015. The median annual wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than $21,600, and the top 10 percent earned more than $50,230.

Because of changes in technology, employment is expected to decline 3% between 2014 and 2024. Transcriptionists who graduate from a training program and those with experience in electronic health records (EHR) management, training and quality assessment are likely to find a job more easily.

**Academic Requirements**

Healthcare documentation specialists need to be able to type accurately and quickly but the even greater challenge for this career is mastering complex medical terminology and critical thinking skills to determine the accuracy of the reports and follow established protocols to deal with inaccuracies.

Students in this field study medical language, anatomy and physiology, disease processes, laboratory terminology, medical procedures, instruments, equipment, pharmacology and other words frequently used in medical reports. They build a library of reference books and online databases, which they use frequently throughout their career. They also must have good command of English grammar, spelling and punctuation. Computer and Internet skills are also necessary.

Training is available at many community colleges and vocational schools and through online education programs. Programs vary in length from 10 months to two years. The Association for Healthcare Documentation Integrity and the American Health Information Management Association oversee and approve industry training programs in healthcare documentation and medical coding. The Association for Healthcare Documentation Integrity maintains a list of approved schools.

Graduates from approved schools are generally better prepared to sit for the registered medical transcriptionist credential, a benchmark that demonstrates job readiness to industry employers. Registered healthcare documentation specialists with a minimum of two years experience can take the exam to become certified healthcare documentation specialists.
Other Related Fields

**Medical Transcription**
Medical transcription is an allied health profession dealing with the process of transcribing voice-recorded medical reports that are dictated by physicians, nurses and other healthcare practitioners. Medical reports can be voice files, notes taken during a lecture, or other spoken material. These are dictated over the phone or uploaded digitally via the Internet or through smart phone apps.

**Programs in Oregon**
**Healthcare Documentation Specialist**
*Everett Community College (Washington) - AAS* (no programs in Oregon)

**Medical Transcription**
*Treasure Valley Community College - AAS*

**Resources**
*Association for Healthcare Documentation Integrity*
Home Care Assistant/Aide

Average Salary: $22k
Years Higher Education: 0
Job Outlook: Excellent

According to the Bureau of Labor Statistics, home care aide is among the top 10 occupations with the largest job growth.

Home care aides help care for physically or mentally ill, injured, disabled or infirm individuals who are confined to their homes or living in residential care facilities. They may also provide daily care services to people with disabilities who work outside the home.

Home care aides work under the supervision of a nurse who may or may not be readily available. They also work closely with family members in the provision of care. Both men and women work as home care aides.

Working Conditions
Most full-time aides work about 40 hours a week, but because patients need care 24 hours a day, some aides work evenings, nights, weekends and holidays, or may “live in.” Many work part-time.

Home care aides spend many hours standing and walking, and they often face heavy workloads. They may be trained in how to move and care for patients, and some may have access to mechanical devices that can reduce the risk of injury. Working as a home care aide can also be emotionally demanding because the patients they care for may be disoriented, irritable or uncooperative.

Academic Requirements
In many cases, you can get a job as a home care aide without a high school diploma or previous work experience. For those home care aides who want to improve their skills, online training is available. Local training may be available through agencies, facilities, groups and organizations. While state certification is not required, professional organizations may set standards of practice for their states. In most situations, there is a requirement to demonstrate competency prior to performing services.

In addition, home care aides who work for Medicare-certified home health agencies must complete a competency evaluation program that meets certain federal regulation standards. This generally involves passing a competency test covering 12 areas and completing a state test.

Some people become home care aides while they pursue education to become nurses, physical therapists, speech therapist or related positions.

Other Related Fields
Medical Aide
A certified medication aide is a certified nursing assistant (CNA) that has completed additional classroom training to be certified to dispense medications to patients while working under the supervision of a Registered Nurse. Training is usually 4 months, and includes 140 hours of supervised clinical practice.
Nursing Assistant
A certified nursing assistant, or CNA, helps patients or clients with healthcare needs under the supervision of a Registered Nurse (RN) or a Licensed Practical Nurse (LPN). A CNA may also be known as a Nursing Assistant (NA), a Patient Care Assistant (PCA), or a State Tested Nurse Assistant (STNA).

Programs in Oregon
Home Care Assistant/Aide
Caregiver Training Institute - Certificate
Medical Aide
Southwestern Oregon Community College - Certificate
Nursing Assistant
Caregiver Training Institute - Certificate
Central Oregon Community College - Certificate
Clackamas Community College - Certificate
Clatsop Community College - Certificate
Columbia Gorge Community College - Certificate
Klamath Community College - Certificate
Oregon Coast Community College - Certificate
Lane Community College - Certificate
Springdale Job Corps Center - Certificate
Umpqua Community College - Certificate

Resources
Home Healthcare Nurses Association
National Association for Home Care and Hospice
National Network of Career Nursing Assistants
Medical Assistant

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<tr>
<th>Average Salary</th>
<th>Years Higher Education</th>
<th>Job Outlook</th>
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<tbody>
<tr>
<td>$31k</td>
<td>1 - 2</td>
<td>Excellent</td>
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</table>

Medical assistants perform routine administrative and clinical tasks to keep the offices and clinics of physicians, podiatrists, chiropractors and optometrists running smoothly. Medical assisting is one of the nation's fastest growing careers, according to the U.S. Bureau of Labor Statistics.

Medical assistants have both administrative and clinical duties. They may answer the telephone, greet patients, fill out medical records and update them as needed, schedule appointments and handle correspondence and billing.

On the clinical side, medical assistants often are the people who take medical histories, prepare patients for examination, assist the doctor during appointments and perform basic laboratory tests, along with other clinical responsibilities.

What a medical assistant does will depend on the office where she or he works, state law and the needs of the assistant's employer.

Working Conditions
While medical assistants work in a variety of settings, most work in a clinic or doctor's office. The medical assistant is a valuable member of a team that provides patient care. They need to be able to multi-task and prioritize their daily responsibilities. Work hours are usually Monday through Friday, although many clinics offer extended evening and weekend hours.

Salary Range and Outlook
The average yearly wage for medical assistants is $31,000.

Academic Requirements
Most employers prefer graduates of formal programs in medical assisting. Such programs are offered in vocational-technical high schools, post-secondary vocational schools, community and junior colleges and colleges and universities. Post-secondary programs usually last either one year, resulting in a certificate or diploma, or two years, resulting in an associate degree.

The American Association of Medical Assistants' website provides information about accredited training programs. The Commission on Accreditation of Allied Health Education Programs website includes a database of accredited programs by state.

Other Related Fields
Clinical Medical Assistant
Clinical medical assistant programs typically train students to perform a variety of tasks to assist physicians in providing patient care, while ensuring that clinics and hospitals run smoothly and efficiently. While clinical medical assistants working in a smaller practice may be required to perform some administrative tasks, those working in larger medical facilities focus mainly on providing support services directly related to patient care.

Medical Administrative Assistant
Administrative medical assistant programs typically train students to work in a role that requires them to provide customer service when working with patients, as well as administrative support for medical facility staff.
Programs in Oregon
Clinical Medical Assistant
*Tongue Point Job Corps Center - Certificate*

Medical Assistant
*Central Oregon Community College - Certificate*
*Chemeketa Community College - Certificate*
*Clackamas Community College - Certificate*
*Clatsop Community College - Certificate*
*Columbia Gorge Community College - Certificate*
*Lane Community College - Certificate*
*Linn-Benton Community College - AAS*
*Mount Hood Community College - Certificate*
*Oregon Coast Community College - Certificate*
*Portland Community College - Certificate*
*Rogue Community College - Certificate*
*Southwestern Oregon Community College - AAS*
*Tillamook Bay Community College - Certificate*
*Treasure Valley Community College - Certificate, AAS*

Medical Administrative Assistant
*Chemeketa Community College - AAS*

Resources
*American Association of Medical Assistants*
*American Medical Technologists*
When you visit your doctor, your medical insurance provider will receive a bill containing medical codes, including CPT, ICD-10 and possibly other codes.

For example, if an X-ray is performed or blood is taken, those services would also be represented by medical codes on your bill. There are thousands of medical codes— one for nearly every type of health care service, procedure and even for medical equipment. Medical coders spend their days reviewing medical records to assign these codes and ensure that the health care providers they support are properly reimbursed for services. Physicians and hospitals depend on accurate coding to receive proper reimbursement, making the role of the coder a valued one.

Coding accurately is not easy. The coder must carefully read the doctor’s and nurse’s notes to precisely determine the services received by the patient. The coder must also understand private payer policies and government regulations for accurate coding and billing. By some estimates, inaccurate or incomplete coding costs the doctors thousands of dollars each year in lost payments. Without competent coders, providers run the risk of losing revenue.

Working Conditions
Medical coders work in every type of health care facility, including doctor’s offices, surgery centers, hospitals and health care systems. Some experienced coders have the ability to work at home through an employer or as a contract worker.

Coding requires extraordinary detail. The coder must carefully review the patient’s chart to learn the diagnosis and itemize every service provided. If a service is overlooked, the provider will not receive payment for it. If the coder chooses the wrong code, the provider may have to return any excess payment or face legal charges for overbilling.

Codes frequently change, so coding professionals must keep up to date on new rules and interpretations. A solid understanding of medical terminology, including anatomy, is also required.

Salary Range and Outlook
Coders earn an average of $45,000 to $65,000 per year, according to a 2015 salary survey conducted by AAPC. Certified coders earn more than non-certified coders. Many employers now require certification for newly hired coders.

Academic Requirements
Earning a bachelor’s degree or master’s degree can strengthen a medical coder’s career; however, it’s not required to show proficiency. What is necessary is to have a solid foundation of anatomy, physiology and medical terminology education. If you want to pursue a career as a medical coder, you should complete a medical coding course of study.

Training in coding skills is available at many community colleges and through online learning centers. Most training programs can be completed in 18 to 24 months. AAPC, a credentialing body for medical coders, offers several medical coding courses.
Your course of study should prepare you to take a certification exam to become a certified professional coder. Certification lets employers know that you understand coding rules and have demonstrated a high level of accuracy in translating patient charts into correctly coded insurance bills. Coders with less than two years’ experience receive a CPC-A (apprentice) designation until their experience is complete. AAPC offers examinations testing your knowledge of coding for physician offices (CPC), outpatient facilities (CPC-H) or payers (CPC-P).

Because coding is based on the nature of the medical services provided, certification is available for specific medical specialties, including evaluation and management, general surgery and obstetrics and gynecology. Continuing education is required to maintain certified status.

Other Relate Programs
Coding Competency
A coding competency program typically is a certificate program that prepares students for an entry-level position as a medical coder in a hospital, clinic, or medical offices. A Medical Coder analyzes medical records (history and physical reports, lab results, x-ray reports, treatment plans, etc.) and assigns codes which classify diagnoses and procedures, while applying the principles of professionalism and ethical conduct.

Coding and Reimbursement Specialist
Coding and Reimbursement Specialist programs are usually one-year programs that prepare students to read and interpret the medical records of patients in all types of health care facilities to obtain detailed information regarding their diseases, injuries, surgical operations and other procedures. These specialist then assign codes using specific code sets.

Electric Health Record
An electric health record program is designed to provide the technical skills and basic knowledge for students interested in a professional setting for electronic health record career. This pathway is a hands-on, theory-based delivery for professionals in the health care industry. Students learn to understand software application and equipment operations, engage in insurance and billing process, complete patient charting, understand and comply with healthcare regulations and quality improvement measures and reporting. This certificate is for individuals seeking skills needed to work in physicians’ offices, hospitals, veterinary offices, behavioral offices, etc.

Medical Billing Specialist
A medical billing specialist program provides a student with a basic knowledge and understanding of established medical codes used by healthcare providers and insurance companies to document patient diagnosis, treatments and procedures and how these codes are applied for billing purposes. Students learn how to read and analyze patient records, determine the correct codes for patient records, use codes for billing purposes, adherence to current healthcare industry regulations and policies, compliance with insurance procedures and allotted benefit coverages, and maintaining patient confidentiality and information security.
Programs in Oregon
Coding Competency
Central Oregon Community College - Certificate
Coding and Reimbursement Specialist
Linn-Benton Community College - Certificate
Electric Health Record
Klamath Community College - Certificate
Medical Billing Specialist
Central Oregon Community College - Certificate
Mount Hood Community College - Certificate, AAS
Umpqua Community College - Certificate
Medical Coding Specialist
Mount Hood Community College - Certificate, AAS
Rogue Community College - Certificate

Resources
AAPC
Medical Dosimetrists

Average Salary: $96k - 123k
Years Higher Education: 5 - 6
Job Outlook: Very Good

Radiation therapy is used to treat malignant cancers by directing an external radiation beam or inserting radioactive seeds or applicators into or near a cancerous tumor. Radiation therapy can help destroy the cancer by killing tumor cells, but it also can damage healthy cells, tissues and organs in the process. Radiation treatment can require one dose or several treatments scheduled over days or weeks.

The medical dosimetrists are a part of the radiation oncology team, which includes a radiation oncologist, medical physicist, radiation therapists and oncology nurses.

Medical dosimetrists ensure that radiation treatment promotes the most lethal radiation dose with the fewest side effects to the patient’s healthy organs.

When a radiation oncologist prescribes radiation to a tumor, a medical dosimetrist creates a plan to deliver the prescribed radiation dose. The medical dosimetrist uses a computer with three-dimensional imaging software to contour normal organs on a treatment planning CT scan. Image fusion of a diagnostic CT, PET/CT or MRI may also be used to help assist the radiation oncologist in determining where the tumor is located. The medical dosimetrist then creates a 3D-conformal or intensity modulated radiation therapy plan and determines an arrangement of beams to deliver the radiation to the tumor, while minimizing damage to normal organs. Physics calculations are done and the medical dosimetrist and radiation oncologist evaluate the dose to the tumor and organs at risk.

Once the radiation oncologist approves the course of treatment, the medical dosimetrist will prepare the plan for treatment and make sure the plan will work as designed. The medical dosimetrist communicates with the radiation therapists in implementing the treatment plan. In addition to planning radiation treatment, Medical Dosimetrists may assist in quality assurance procedures alongside medical physicists, educate medical dosimetry students and/or work on research teams to help improve the effectiveness of radiation therapies.

It is important for medical dosimetrists to have good listening and communication skills. The medical dosimetrist must first listen carefully to the radiation oncologist to understand the treatment goals, accurately document the treatment plan and then explain it to the radiation therapist responsible for the plan’s implementation. Medical dosimetrists must also have excellent computer skills and be good at problem solving.

Working Conditions
Medical dosimetrists are employed in hospitals or cancer treatment centers and typically work a 40-hour week.

Their work can put them in proximity to radioactive materials, so proper safety precautions must be taken to minimize exposure.
Salary Range and Outlook
Medical dosimetrists earn between $96,000 and $123,000.

The Bureau of Labor Statistics anticipates that employment will grow 14% between 2014 and 2024, much faster than the average for all occupations, for radiation therapists, which includes medical dosimetrists.

Academic Requirements
To become a medical dosimetrist, you must complete a four-year college degree, preferably in the physical sciences.

Following graduation, you must apply to an accredited medical dosimetry program. These programs are highly competitive and last anywhere from 12 to 24 months. The program of study involves both classroom education and clinical practice.

Education to become a medical dosimetrist is rigorous, because you must have a thorough understanding of how cancer affects the body, how radiation is used to treat cancerous cells and how to calculate the exact dose of radiation required in achieving the treatment objective. Dosage calculations require knowledge of higher-level math and the ability to visualize bodily structures using computer-generated models.

You’ll also learn all about the equipment and techniques used in radiation therapy and how to protect the safety of the patient and medical personnel.

Certification by the Medical Dosimetrist Certification Board requires passing an examination and meeting continuing education requirements.

Other Related Fields
Radiation Therapy
Radiation therapy programs typically develop radiologists and radiation oncologists who often prescribe radiation therapy for patients who have cancer or other serious diseases. As a radiation therapist, a student will learn to be part of the team that helps plans and administers these treatments, and monitors patients' conditions. You'll use special equipment that produces ionizing radiation to administer therapeutic doses of radiation.

Programs in Oregon
Medical Dosimetrist
Bellevue College (Washington) - AAS (no program in Oregon)

Radiation Therapy
Oregon Health Sciences University - PhD

Resources
American Association of Medical Dosimetrists
Medical Dosimetrist Certification Board
Joint Review Committee on Education in Radiologic Technology
Medical Laboratory Scientist/Technician

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<th>Average Salary</th>
<th>Years Higher Education</th>
<th>Job Outlook</th>
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<td>$25k - 85k</td>
<td>2 - 4</td>
<td>Excellent</td>
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Medical laboratory science professionals (also called clinical laboratory scientists or clinical laboratory technicians) are highly skilled scientists who discover the presence or absence of disease and provide data that help physicians determine the best treatment for the patient. Although they are not often personally involved with patients, medical laboratory scientists and technicians play a crucial role in the process of providing personalized care. They generate vitally important data for identifying and treating cancer, heart disease, diabetes and many other health conditions.

Using sophisticated biomedical instrumentation and technology, as well as highly skilled manual techniques, clinical laboratory professionals:

- Examine and analyze body fluids, tissues and cells
- Identify infective microorganisms
- Analyze the chemical constituents of body fluids
- Identify blood-clotting abnormalities
- Cross-match donor blood for transfusions
- Test blood for drug levels to measure the efficacy of particular treatments
- Evaluate test results for accuracy and help interpret them for the physician

Medical laboratory technicians and clinical laboratory technicians have associate degrees, while medical laboratory scientists have baccalaureate degrees.

Although some of the laboratory work performed by these professionals is the same, laboratory technicians focus on collecting, processing and analyzing biological specimens; performing laboratory procedures; maintaining instruments; and relating findings to common diseases or conditions.

Medical laboratory scientists perform these same tasks, but because they have a more extensive theoretical knowledge base, they conduct more advanced testing, such as molecular diagnostics and highly involved microbiological testing and cross-matching blood for transfusion. They also evaluate and interpret laboratory results, integrate data, solve problems, consult with physicians, conduct research and evaluate new test methods. Medical laboratory scientists also are more likely to advance to management positions.

**Working Conditions**

Medical laboratory technicians and medical laboratory scientists can find challenging employment in a wide range of arenas, including:

- Hospital clinical laboratories
- Commercial or reference laboratories
- Public health laboratories
- Pharmaceutical or chemical industries
- Biotechnology companies
- Forensic and law enforcement laboratories
- Veterinary clinics
- Research and teaching institutions
Transplant and blood donor centers
Fertility clinics
The cosmetics or food industry

Work hours may vary, depending on the work setting, but most hospital and reference laboratories operate 24 hours a day, seven days a week. This lends itself to great flexibility in scheduling work shifts, which can be especially helpful for working parents.

Both laboratory scientists and technicians may spend a lot of time on their feet.

Salary Range and Outlook
The median salary (half earned more than this amount and half earned less) for medical laboratory scientists was $60,520 in May 2015, according to the Bureau of Labor Statistics. The lowest 10% earned less than $41,510, and the highest 10% earned more than $84,300.

The median salary (half earned more than this amount and half earned less) for medical laboratory technicians was $38,970 in May 2015, according to the Bureau of Labor Statistics. The lowest 10% earned less than $25,890, and the highest 10% earned more than $60,810. The Bureau of Labor Statistics forecasts that employment for medical laboratory technicians and medical laboratory scientists will grow 16% between 2014 and 2024, much faster than the average for all occupations.

Academic Requirements
Whether you want to be a medical laboratory technician or a medical laboratory scientist, you will want to start your preparation in high school by taking courses in biology, chemistry, math and other sciences. Look for chances to volunteer in a laboratory so you can see the work and what it involves.

To become a medical laboratory technician, you must earn a two-year associate’s degree from an approved program and pass a certification exam, which you can take through one of two agencies:

- American Society for Clinical Pathology Board of Certification
- American Medical Technologists

Medical laboratory scientists have a baccalaureate degree and have completed an accredited medical laboratory science program. While in college, take courses in mathematics, chemistry and biology. These accredited programs may be located within a hospital system or a university. After graduating, a medical laboratory scientist also must pass a certification exam. Higher levels of training also are available for those who want to pursue a particular field of specialization.

Other Related Fields
Clinical Laboratory Assistant
Clinical Laboratory Assistant programs develop students to work with highly trained laboratory personnel to solve diverse diagnostic puzzles, and can be the first step in a career pathway leading to an inspiring profession in Clinical Laboratory Science or Nursing. Certificate programs usually consist of one academic year, and graduates should be ready for an entry-level position, serving either in the front-line of the laboratory, greeting patients, and collecting specimens or in the back of the laboratory processing specimens for analysis and performing waived testing.
Clinical Laboratory Science
Clinical laboratory science programs may also be called medical technology programs. This program combines the challenges and rewards of medicine with laboratory science. Clinical laboratory scientists perform complex and varied laboratory analyses, and use critical thinking skills in determining the accuracy and validity of test results.

Clinical Medical Assistant
A clinical medical assistant program that prepares a medical support professional to perform a variety of tasks to assist physicians in providing patient care, while ensuring that clinics and hospitals run smoothly and efficiently. While clinical medical assistants working in a smaller practice may be required to perform some administrative tasks, those working in larger medical facilities focus mainly on providing support services directly related to patient care.

Clinical Mental Health Counseling
Clinical mental health counseling is a distinct program and profession with national standards for education, training, and clinical practice. Clinical mental health counselors operate from a wellness perspective, which emphasizes moving toward optimal human functioning in mind, body, and spirit, and away from distress, dysfunction, and mental illness. Counselors also view wellness and pathology as developmental in nature, and take into consideration all levels of a client's environment when conducting assessment and treatment.

Clinical Sleep Health
Clinical sleep health programs provide training and education to aid in the care and management of patients with sleep disorders, primarily sleep apnea.

Clinical Research
Clinical research programs provide formal training for clinicians and scientists who desire to make clinical and translational research either their predominant focus or a substantial part of their long-term career goals. The main objectives of these programs are to prepare a cohort of trained investigators who will be able to successfully compete for federal, foundation, and industry funding and to conduct research and publish their findings.

Life Sciences
Life science programs are intended to form a foundation from which a student can pursue Medical Laboratory Science degrees when coupled with undergraduate work. This program can also be used to fulfill prerequisites for programs leading to other allied health professions.

Medical Technology
Most medical technology programs prepare graduates to find jobs in hospitals, doctor offices and other health care facilities. Students may also choose to pursue a career as an ultrasound technician, radiologist or clinical laboratory technologist.

Programs in Oregon
Clinical Laboratory Assistant
Clackamas Community College - Certificate
Southwestern Oregon Community College - Certificate
Clinical Laboratory Science
Oregon Health Sciences University - BS
Clinical Medical Assistant
Tongue Point Job Corps Center - Certificate
Clinical Mental Health Counseling
George Fox University - MS
Southern Oregon University - MS

Clinical Sleep Health
Oregon Institute of Technology - BS

Clinical Research
Oregon Health Sciences University - MS

Life Sciences
Warner Pacific University - BS

Medical Laboratory Science
Oregon Institute of Technology - BS
Portland Community College - AAS

Medical Laboratory Technician
Blue Mountain Community College - AAS

Medical Technology
Oregon State University - BS

Resources
American Society for Clinical Pathology
American Society for Clinical Laboratory Science
American Medical Technologists
Neurodiagnostic Technologist

Average Salary  $42k
Years Higher Education  1 - 2
Job Outlook  Excellent

Using specialized equipment, neurodiagnostic technologists identify normal and abnormal electrical activity in the central nervous, autonomic and peripheral nervous systems.

By recording electrical patterns throughout these systems, neurodiagnostic technologists provide valuable data that a physician will use to diagnose and treat conditions such as epilepsy, motor neuron diseases, dizziness, seizure disorders, strokes and degenerative brain disease.

The tests performed by neurodiagnostic technologists can also help doctors uncover hidden causes of mental disorders and determine whether a patient is “brain dead.”

Neurodiagnostic technologists perform a number of procedures, including:

- Electroencephalograms (EEG), used to assess brain activity
- Intraoperative neuromonitoring, which tracks brain and nerve function during surgery
- Long-term monitoring in epilepsy and intensive care unit/critical care continuous EEG, used to diagnose seizures and other disorders
- Polysomnograms, used to diagnose sleep disorders
- Evoked potential studies, in which the technologist measures neurological responses to external stimuli to trace electrical pathways
- Nerve conduction studies, which measure the time it takes to send an electrical signal along a nerve to a specific muscle
- Magnetoencephalography to detect and record magnetic fields associated with electrical activity in the brain.
- Autonomic function testing, to detect autonomic system dysfunction.

The EEG is the most common test performed by neurodiagnostic technologists. Technologists also are responsible for ensuring patient safety and maintaining and calibrating equipment.

Neurodiagnostic monitoring procedures can last from an hour or two to prolonged continuous daily monitoring. While acquiring the study, the neurodiagnostic technologist will ensure that the patient is comfortable, answer questions about the procedure and help to relieve any anxiety, while continuously monitoring the recording for artifacts or events that require the attention of an attending physician.

Patients undergoing certain surgical procedures require intraoperative neuromonitoring. In this case, the neurodiagnostic technologist will monitor the patient’s EEG or evoked potentials throughout the procedure, providing the surgeon with ongoing information about the patient’s nerve function and/or brain activity.

Neurologists depend on neurodiagnostic technologists to provide accurate data and analysis. The neurodiagnostic technologist must, therefore, have the knowledge, judgment and critical thinking skills to ensure that the results reported are accurate and complete.

**Working Conditions**

Neurodiagnostic technologists work in hospitals; specialized sleep and epilepsy labs; private practice; independent clinics; patient homes; educational institutions; research facilities; and
equipment design, sales and manufacturing companies. Most procedures are performed in labs supplied with the necessary equipment required to conduct neurodiagnostic studies.

**Salary Range and Outlook**
The career potential for neurodiagnostic technologists is excellent. The Bureau of Labor and Statistics predicts a 22% growth in the number of neurodiagnostic technologists between 2012 and 2022, much faster than the average for all health occupations. There is a continuous need for well-educated neurodiagnostic technologists, and the demand grows as new labs open and existing labs expand.

Salaries range from $31,100 for a neurodiagnostic technology program graduate just entering the field to over $70,000 per year for lab managers and independent contractors. The mean (average) salary for all neurodiagnostic technologists across the country is $41,260, based on 2015 wage data from the Bureau of Labor Statistics. Technologists who hold professional credentials, college degrees and who own their own business command the highest salaries.

**Academic Requirements**
You can start your preparation for a career as a neurodiagnostic technologist in high school by:

- Taking math, science, biology, computer and language courses
- Volunteering at a hospital, rehabilitation center or other facility to gain experience working with seriously ill people

Technologists enter the field through many employment pathways such as formal schooling, on-the-job training or a combination of both. If you are interested in this career, it is a good idea to attend an accredited school specializing in the field. Currently, most of the schools are associated with two-year colleges, with a few located within hospitals or vocational schools. Some schools offer distance-learning programs.

Within two years of graduation, it is recommended that you take and pass a recognized, national examination for professional credentials in an area of neurodiagnostic specialty. Both education and clinical experience are necessary to attain a sufficient knowledge base and clinical expertise.

Neurodiagnostic technologists must have a current CPR/basic cardiac life support certification to take the registry exams.

**Programs in Oregon**

**Neurodiagnostic Technician**

*Bellevue College (Washington)* - AAS (no program in Oregon)

**Resources**

- American Association of Electrodiagnostic Technologists
- American Association of Neuromuscular & Electrodiagnostic Medicine
- American Association of Sleep Technologists
- ASET - The Neurodiagnostic Society
- ABRET Neurodiagnostic Credentialing and Accreditation
- American Academy of Sleep Medicine
- American Board of Sleep Medicine
- American Board of Electrodiagnostic Medicine
- American Clinical Neurophysiology Society
- American Society of Neurophysiological Monitoring
Board of Registered Polysomnographic Technologists
ASET Foundation
The nuclear medicine technologist is a highly specialized health care professional who looks at how the body functions in order to help in diagnosis and treatment of a range of conditions and diseases. Nuclear medicine combines imaging, patient care, chemistry, physics, mathematics, computer technology, and medicine. Nuclear medicine technologists prepare and administer small amounts of radioactive substances called radiopharmaceuticals, as well as other medications, to patients for diagnosis and treatments.

Radiopharmaceuticals are made up of radionuclides—unstable atoms that emit radiation spontaneously. Nuclear medicine technologists use specialized camera systems to detect the radiopharmaceuticals, which then creates a precise picture of the part of the body being imaged. The nuclear medicine technologist monitors the characteristics and functions of tissues or organs in which the radiopharmaceuticals localize. Abnormal areas show higher or lower concentrations of radioactivity than normal. Physicians use these images to diagnose molecular, metabolic, physiologic, anatomic and pathologic conditions.

Nuclear medicine technologists may also operate computed tomography (CT) and magnetic resonance imaging (MRI) scanners that are used in conjunction with nuclear medicine procedures.

The technologist’s responsibilities include:

- Putting the patient at ease, obtaining pertinent history, describing the procedure and answering the patient’s questions
- Administering radiopharmaceuticals and medications for patient imaging and therapeutic procedures
- Monitoring the patient’s physical condition during the course of the procedure
- Processing data and enhancing digital images using advanced computer technology
- Providing images, data analysis and patient information for diagnostic interpretation or therapeutic procedures
- Evaluating images to determine the technical quality and calibration of instrumentation
- Evaluating new protocols

**Working Conditions**

Nuclear medicine technologists generally work a 40-hour week. This may include evening or weekend hours in departments that operate on an extended schedule. Technologists who work in hospitals may need to be on call. Opportunities for part-time and shift work are also available.

**Academic Requirements**

If you are interested in a career as a nuclear medicine technologist, you can begin preparing in high school by taking as many science and mathematics classes as you can.

Nuclear medicine technology programs include:

- Post-baccalaureate one-year certificate programs
- Two-year associate degree
- Four-year bachelor’s degree
As of 2015, the American Registry of Radiologic Technologists only recognizes programs at an associate level or higher.

After successfully completing a nuclear medicine program, graduates need to pass a certification exam to be recognized as nuclear medicine technologists. As of 2017, the Nuclear Medicine Technology Certification Board will require graduation from regionally accredited college and university programs that have structured clinical training sufficient to provide clinical competency in radiation safety, instrumentation, clinical procedures and radiopharmacy.

Other Related Fields

Radiation Health Physics
Radiation health physics is the applied physics of radiation protection for health and health care purposes. It is the science concerned with the recognition, evaluation, and control of health hazards to permit the safe use and application of ionizing radiation.

Programs in Oregon

Nuclear Medicine Technology
Oregon Institute of Technology - BS

Radiation Health Physics
Oregon State University - BS, MS, PhD

Resources

American Registry of Radiologic Technologists
Nuclear Medicine Technology Certification Board
American Society of Radiologic Technologists
American Registry of Radiologic Technologists
Society of Nuclear Medicine and Molecular Imaging
Nurses Aide/Assistant

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<th>Years Higher Education</th>
<th>Job Outlook</th>
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<td>$26k</td>
<td>0 - 1</td>
<td>Excellent</td>
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Wherever there is a need for personal care, nursing assistants (NA), or nurses’ aides, are there. Nursing assistants work in nursing homes, home care, assisted living, Hospice, hospitals, community based long-term care, correctional institutions, and other long-term care settings.

Nursing assistants help patients of all ages perform the most basic daily tasks. They work under a licensed nurse’s supervision, and since they have extensive daily contact with each patient, they play a key role in the lives of their patients and in keeping the nurse up-to-date on vital information about the patients’ conditions.

Nursing assistants provide assistance with such tasks as:

- Dressing
- Bathing and skin care
- Feeding
- Mouth and hair care
- Making beds
- Toileting assistance and catheter care
- Bowel and bladder care
- Taking vital signs (temp, pulse, blood pressures etc)
- Helping patients walk with gait belts, walker, cane and other devices
- Assisting with range-of-motion exercises
- Transfer wheelchair-bound patients using safe patient handling devices
- Turning and positioning bedridden patients regularly
- Reporting all changes to the nurse
- Safety awareness
- Observing, reporting and documentation
- Post-mortem care

FEDERAL LAW (OBRA 87U) requires that nursing assistants who work in nursing homes to pass a state test, be state-approved and be listed on the state registry. Nursing assistants may be certified (CNA), registered (RNA), licensed (LNA) or state tested and approved (STNA).

**Working Conditions**
Due to staffing shortages in recent years, a vast majority of nursing assistants find themselves in the challenging position of attempting to provide quality care for far too many patients at once. The turnover rate for nursing assistants is high, due largely to the job’s heavy workload and physical demands.

**Salary Range and Outlook**
Salaries for this career vary from state to state, and even in differing work environments. Hourly wages can range from $8.80 to $16.99.

**Academic Requirements**
Nursing assistants must complete a state-approved education program in which they learn the basic principles of nursing and complete supervised clinical practice. These programs are found...
in high schools, community colleges, vocational and technical schools, hospitals and nursing homes.

In addition, nursing assistants typically complete a brief period of supervised on-the-job training to learn about their specific employer’s policies and procedures.

A registered nurse generally teaches the classes. The length of training depends on the program. The classes offer the basics of what to expect with the job; however, this is a career in which skill levels and confidence dramatically improve once the nursing assistant becomes involved in the daily routine of actual caregiving.

**Programs in Oregon**

**Nursing Assistant**
Caregiver Training Institute - Certificate
Central Oregon Community College - Certificate
Clackamas Community College - Certificate
Clatsop Community College - Certificate
Columbia Gorge Community College - Certificate
Klamath Community College - Certificate
Lane Community College - Certificate
Oregon Coast Community College - Certificate
Springdale Job Corps Center - Certificate
Umpqua Community College - Certificate

**Resources**
National Network of Career Nursing Assistants
Ophthalmic Laboratory Technician

Average Salary | Years Higher Education | Job Outlook
$20k - 49k     | 0                    | Excellent

Ophthalmic laboratory technicians—also known as manufacturing opticians, optical mechanics or optical goods workers—make prescription eyeglass and contact lenses. Prescription lenses are curved in such a way that light is correctly focused onto the retina of the patient's eye, improving vision. Some ophthalmic laboratory technicians manufacture lenses for other optical instruments, such as telescopes and binoculars.

Ophthalmic laboratory technicians must know and understand how to use machinery. They cut, grind, edge and finish lenses according to specifications provided by dispensing opticians, optometrists and ophthalmologists. They also may insert lenses into frames to produce finished glasses. Although some lenses still are produced by hand, technicians increasingly use automated equipment.

Working Conditions
Ophthalmic laboratory technicians work in laboratories or workshops or in large eyeglass stores. They have limited contact with the public since they work behind the scenes. Their workplaces are generally bright, with running machines. They wear goggles to protect their eyes and spend a good part of their workday standing.

Academic Requirements
Nearly all ophthalmic laboratory technicians learn their skills on the job. Employers who hire trainees usually require that applicants have a high school degree. Manual dexterity and the ability to do precision work are essential; courses in science, mathematics and computers are also valuable.

Other Related Fields
Ophthalmic Medical
Ophthalmic Medical programs typically prepare students to perform ophthalmic procedures under the supervision of a licensed physician.

Programs in Oregon
Ophthalmic Laboratory Technician
*College of Southern Nevada* - Certificate (no programs in Oregon)
Ophthalmic Medical
*Portland Community College* - AAS

Resources
Commission on Opticianry Accreditation
National Academy of Opticianry
Opticians Association of America
The Vision Council
U.S. News and World Report listed ophthalmic medical technician as one of the best health care jobs of 2016 and the need for the ophthalmic medical technicians is expected to grow 25% between 2014 and 2024.

This career is a good fit for those with an interest in science and math, a commitment to helping people and good problem-solving skills.

Ophthalmic medical technicians—also known as allied ophthalmic personnel—work with an ophthalmologist (eye doctor) to provide patient care by performing eye-related clinical tasks such as:

- Taking patient medical histories
- Instructing patients about medications, tests and procedures
- Performing vision and diagnostic tests
- Assisting with patient procedures
- Coordinating patient scheduling
- Supervising and training other allied ophthalmic personnel
- Performing office management duties

Unlike dispensing opticians who fit contact lenses and glasses, ophthalmic medical technicians work directly with an ophthalmologist conducting patient eye examinations and tests. They are “physician extenders,” allowing ophthalmologists to see more patients in a day.

Working Conditions
Ophthalmic medical technicians work 35 to 40 hours per week in a clean, well-lit office setting. They generally do not work on evenings or weekends, but there are exceptions. Because they are in constant contact with patients, ophthalmic medical technicians with outgoing personalities tend to be successful. They must have manual dexterity to operate equipment and spend much of the day walking and standing.

Salary Range and Outlook
Salaries vary depending on level of training, experience, level of certification and location. The average starting salary for an ophthalmic medical technician is $42,500 while the salary average overall is $52,500. Technicians with a lot of experience and a high level of certification earn an average salary of approximately $60,000.

Academic Requirements
You can enter the field two different ways:

- On-the-job training and independent study: Most ophthalmic practices have their own on-the-job training and procedures for entry-level ophthalmic medical technicians who have no experience or education in the field. If you cannot attend an accredited training program, you can study from your own home on your own time.
- Accredited training program: Accredited ophthalmic training programs are available in academic institutions ranging in length from three to six months, two years and four years.
Programs in Oregon
Ophthalmic Medical Technician
Portland Community College - AAS

Resources
Association of Technical Personnel in Ophthalmology
Commission on Accreditation of Ophthalmic Medical Programs
Joint Commission on Allied Health Personnel in Ophthalmology
Dispensing opticians fit eyeglasses and contact lenses, following prescriptions written by ophthalmologists or optometrists. They evaluate the prescription to determine lens specifications and recommend eyeglass frames, lenses and lens coatings after considering the prescription and the customer’s occupation, habits and facial features.

Dispensing opticians measure clients’ eyes, including the distance between the centers of the pupils and the distance between the eye surface and the lens. For customers without prescriptions, dispensing opticians may use a lensometer to record the present eyeglass prescription. They also may obtain a customer’s previous record or verify a prescription with the examining optometrist or ophthalmologist.

Working Conditions
Dispensing opticians work indoors in attractive, well-lighted and well-ventilated surroundings. They may work in medical offices or small stores where customers are served one at a time or in large stores where several dispensing opticians serve a number of customers at once. Opticians spend a lot of time on their feet. Those opticians who prepare lenses must take precautions against the hazards associated with glass cutting, chemicals and machinery. Most dispensing opticians work a 40-hour week, although some work longer hours. Those in retail stores may work evenings and weekends. Some work part-time.

Salary Range and Outlook
Dispensing opticians earn between $21,980 and $55,530, according to the Bureau of Labor Statistics (BLS).

The BLS anticipates that employment will grow 24% between 2014 and 2024, much faster than the average for all occupations.

Academic Requirements
Most dispensing opticians receive training on the job or through apprenticeships lasting two or more years. Some employers, however, seek people with post-secondary training in opticianry. Formal opticianry training is offered in community colleges and a few colleges and universities. The Commission on Opticianry Accreditation accredits programs that award two-year associate degrees in opticianry. There are also shorter programs of one year or less.

Programs in Oregon
Optician (Dispensing)
Charles A. Jones Career & Education Center (California) - Certificate (no program in Oregon)

Resources
National Federation of Opticianry Schools
National Academy of Opticianry
Commission on Opticianry Accreditation
American Board of Opticianry and National Contact Lens Examiners
Orientation and Mobility Specialist

Average Salary: $35k - 80k
Years Higher Specialist: 4 - 5
Job Outlook: Excellent

Orientation and mobility (O&M) specialists teach individuals with visual impairments to travel safely, confidently and independently in their environment. They work with infants, children and adults usually on a one-to-one basis in a home, school, hospital or in the community. Orientation and mobility specialists are different from physical therapists, because they focus on people with vision loss.

In a typical day, an orientation and mobility specialist might orient a college student who is blind to locate classes, the cafeteria and the library on a college campus; instruct a young adult who has low vision in the use of a GPS device; and teach a man who is visually impaired to cross two busy streets to get to the gym after work.

On another day, the specialist might orient a 30-year-old blinded veteran with a dog guide to her new job site; motivate an infant who is totally blind to engage in purposeful movement towards a musical toy; provide counseling to a high school junior who recently lost his vision and will not be able to get his driver’s license; and collaborate with city planners and traffic engineers to develop safe intersection designs for pedestrians who are visually impaired.

Does this sound interesting, rewarding, and different? There is a national shortage of mobility instructors. Jobs can be found worldwide.

If you are interested in working with people who have visual impairments, there are other careers in this category, including:

- Teacher of the Visually Impaired
- Vocational Rehabilitation Counselor
- Certified VISION Rehabilitation Therapist
- Certified Assistive Technology Instructional Specialist for People with Visual Impairments

Working Conditions
O&M specialists work in varied environments including homes, schools, rehabilitation centers, assisted living facilities, hospitals and rural and urban communities. They provide direct service to clients as well as consultative services to administrators, educational systems, medical personnel, government agencies, etc.

The work is challenging as clients deal with their disabilities in a variety of ways. The instructor needs to be flexible in scheduling and in teaching styles. Since every client is different, there is no “cookbook” approach to teaching mobility and nothing about it is routine.

Because of the demands of the job, mobility instructors tend to be in excellent physical shape. They work outdoors as well as indoors, under varying weather conditions. While it doesn’t take place in a classroom behind a desk, it is a teaching profession.

Salary Range and Outlook
Orientation and mobility specialists typically earn between $35,000 and $80,000.
**Academic Requirements**

The first orientation and mobility (O&M) specialists were trained by the military following World War II to help veterans blinded during the war. Training and certification has evolved since then. Orientation and mobility programs offer bachelor’s and master’s degrees. Distance education classes are available. Coursework, a practicum and an internship are required. Some federal stipends for tuition are available. If you decide to major in orientation and mobility, ask the schools you are applying to about federal grants for tuition.

You can find a list of schools on the website of the Association for Education and Rehabilitation of the Blind and Visually Impaired.

Certification for orientation and mobility specialists and other vision professions is available through the Academy for Certification of Vision Rehabilitation and Education Professionals.

**Programs in Oregon**

**Orientation and Mobility Specialist**

*San Francisco State University (California)* - BS (no program in Oregon)

**Resources**

Academy for Certification of Vision Rehabilitation & Education Professionals

Association for Education and Rehabilitation of the Blind and Visually Impaired
Pathologists’ Assistant

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<tr>
<th>Average Salary</th>
<th>Years Higher Education</th>
<th>Job Outlook</th>
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<tbody>
<tr>
<td>$75k - 90k</td>
<td>4 - 6</td>
<td>Excellent</td>
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A pathologists’ assistant is an intensively trained allied health professional who provides anatomic pathology services under the direction and supervision of a licensed, board-certified or board-eligible pathologist. A pathologists’ assistant is qualified to perform all of the surgical and autopsy functions of a pathologist leading up to, but not including, the diagnosis.

Under the direction and supervision of a pathologist, a pathologists’ assistant may provide the following:

- Preparation, gross description and dissection of human tissue surgical specimens
- Preparation of human postmortem examinations
- Instruction of anatomy and physiology, gross pathology, photography and gross dissection skills for surgical specimens as well as autopsy techniques
- Training of pathology residents/fellows, pathologists’ assistant students and other pathology lab personnel (as needed)
- Research
- Procurement of samples for biospecimen banking
- Performance of administrative, budgetary, supervisory, teaching and other such duties as may be appropriate and assigned

By performing such a wide array of tasks, pathologists’ assistants make a significant contribution to a laboratory’s or pathology practice’s effectiveness and cost efficiency.

Working Conditions
Pathologists’ assistants perform in a wide scope of clinical practices. Although the majority of pathologists’ assistants work in academic (medical school/university) and community hospitals, they can also be employed in other areas such as private pathology laboratories, forensic pathology laboratories and morgues, reference laboratories, government healthcare systems and medical teaching facilities.

Some pathologists’ assistants are even self-employed business owners providing their pathology expertise via long- and short-term contract (locum tenens).

Salary Range and Outlook
New program graduate salaries range from $75,000 to $90,000 with experienced pathologists’ assistants earning $100,000 or more annually. Factors that influence a pathologists’ assistant’s salary include experience, workload, setting and regional cost of living. Sign-on, retention and annual bonuses are commonplace.

With a pathologists’ assistant degree, you can find a job virtually anywhere in the United States, as well as in Canada and Australia. The prospects for finding employment are excellent for the foreseeable future.
Academic Requirements
Ten pathologists’ assistant programs have been accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), and all but one require a bachelor’s degree in a science field. Prerequisite undergraduate courses include:

- Biological sciences (human anatomy and physiology preferred)
- Microbiology
- General chemistry
- Organic/biochemistry
- Mathematics (statistics recommended)
- English composition

The NAACLS has a list of accredited pathologists’ assistants programs on its website. See specific programs for admission criteria.

Pathologists’ assistant programs are approximately two years of intense training, culminating in a master’s degree. (One program offers a bachelor’s degree.) The first year is a didactic (classroom/lecture) setting and the second year consists of clinical/clerkship rotations in a hospital/laboratory with hands-on experience.

The American Association of Pathologists’ Assistants and the American Society for Clinical Pathology (ASCP) partnered to achieve national certification for pathologists’ assistants in 2004. To earn the PA (ASCP) designation, an individual must now graduate from a NAACLS-accredited pathologists’ assistant training program and subsequently pass the ASCP board of certification examination.

Every three years, a certified pathologists’ assistant must demonstrate sufficient continuing medical education to maintain certification.

The ASCP provides information regarding certification on its Board of Certification page. Many health professionals choose to go back to school to get a degree to become a pathologists’ assistant. Common first careers include histotechnologists, clinical laboratory scientists, medical laboratory technicians, cytotechnologists, anatomic pathology technicians, autopsy technicians and military medics or hospital corpsman.

Pathologists’ assistants may join the American Association of Pathologists’ Assistants. To join as a student, you must be enrolled in a NAACLS-accredited program.

Other Related Fields
Biochemistry
Biochemistry is a field of science that deals with the chemistry of life processes in plants and animals. A typical program in biochemistry focuses on the scientific study of the chemistry of living systems, their fundamental chemical substances and reactions, and their chemical pathways and information transfer systems, with particular reference to carbohydrates, proteins, lipids, and nucleic acids.

Biology
Biology is the study of life. Programs typically focus on molecular, cellular, and ecological discoveries which form the basis of biology and are applied to the associations that exist among living organisms, including human evolution. Careers in the health care and pre-professional studies in dentistry, medicine, optometry, medical technology, podiatry, veterinary medicine, ecology, marine biology, and genetics are all possibilities for biology students.
Chemistry
Chemistry is the study of matter and the changes it can undergo. Programs typically provide training for students planning careers in the chemical and biological sciences and also for those in biology, health related disciplines, earth sciences, secondary education, business, journalism and law.

Microbiology
Microbiology is the study of all living organisms that are too small to be visible with the naked eye. This includes bacteria, archaea, viruses, fungi, prions, protozoa and algae, collectively known as 'microbes'.

Programs in Oregon

Biochemistry
Eastern Oregon University - BS
Linfield College - BS
Mount Hood Community College - AAS
Oregon Health Sciences University - MS, PhD
Oregon State University - BS, MS, PhD
Portland State University - BS
Southern Oregon University - BS
University of Oregon - BS, MS, PhD

Biology
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clackamas Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Lewis & Clark College - BS
Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Multnomah University - BS
Northwest Christian University - BS
Oregon Institute of Technology - BS
Oregon State University - BS
Oregon State University Cascades - BS
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS
University of Portland - BS
University of Western States - BS
Warner Pacific University - BS
Western Oregon University - BS
Willamette University - BS

Chemistry
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Lewis & Clark College - BS
Linfield College - BS
Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Oregon State University - BS, MS, PhD
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS, MS, PhD
University of Portland - BS
Western Oregon University - BS
Willamette University - BS

Microbiology
Oregon State University - BS, MS, PhD

Pathologists' Assistant
Loma Linda University (California) - MS (no program in Oregon)

Resources
American Association of Pathologists’ Assistants
American Society for Clinical Pathology
College of American Pathologists
National Accrediting Agency for Clinical Laboratory Sciences
Perfusionist

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<tr>
<th>Average Salary</th>
<th>Years Higher Education</th>
<th>Job Outlook</th>
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<tbody>
<tr>
<td>$65k - 135k</td>
<td>4 - 6</td>
<td>Very Good</td>
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Due to the nature of the cardiac surgery, the surgeon needs to work on a still heart, and it is necessary to temporarily replace the patient’s circulatory and respiratory function. It is the responsibility of the perfusionist, a specialized healthcare professional, to assume the function of the heart and/or lungs during these medical procedures.

A perfusionist operates a heart-lung machine, which is an artificial blood pump, which propels oxygenated blood to the patient’s tissues while the surgeon operates on the heart. The perfusionist manages the physiological and metabolic demands of the patient while the cardiac surgeon operates on the heart. It is also the perfusionist’s responsibility to deliver the drug that stops the heart.

A perfusionist generally spends 90% of his or her time in the OR suite for cardiac cases, but now may also find their responsibilities extending to areas such as the cardiovascular intensive care unit (CIVICU) and catheterization laboratory.

The perfusionist measures various blood and other parameters to identify appropriate mechanical, pharmacological and thermal manipulation to maintain a physiological state. To perform these tasks, a perfusionist must have a thorough understanding of both the respiratory and circulatory system and be able to operate complex equipment.

The perfusionist must also be knowledgeable about the equipment available to perform extracorporeal circulation function and is responsible, in consultation with the surgeon, for selecting the appropriate equipment and techniques to be used.

**Working Conditions**

As part of the surgical team, the perfusionist is expected to be up-to-date with the patient’s medical history and current health status. Before the surgery begins, the perfusionist and the surgeon will determine which circulation equipment and techniques will be used.

In the operating room, the perfusionist prepares the heart-lung machine and other critical equipment necessary for the particular operation and verifies its functionality. Once the patient is connected to the machine, the perfusionist continuously monitors patient status to control the rate of blood circulation, hemodynamics, temperature, blood composition and other monitoring devices.

The primary surgeon, working with the anesthesiology team, directs any pharmacological and blood transfusion intervention carried out by the perfusionist. The perfusionist must remain in close communication with the surgical team to inform them of the patient’s condition throughout the surgery to ensure a successful outcome.

Medical centers or third-party perfusion companies most often employ perfusionists. Typically, perfusionists are scheduled to work a regular 40-hour week, but also must be on call on some nights, weekends and holidays. Depending on the program, call responsibilities can be rigorous. In busier facilities that perform a large number of open heart surgeries, perfusionists may work in shifts to ensure that a trained perfusionist is available 24 hours a day.
Outside of clinical work, experienced perfusionists can go on to teach in certification programs, conduct research or work for perfusion equipment manufacturers.

Salary Range and Outlook
Certified clinical perfusionists with experience earn an average of $110,00 per year. Salaries can range from $65,000 to $135,000.

The American Society for Extracorporeal Technology expects hospitals to hire more perfusionists in coming years to compensate for the aging American population. Cardiovascular disease is more common in older people, so more patients may need open heart surgery. Perfusion is also being increasingly incorporated into more types of surgeries involving the correction of congenital heart defects, treatment of heart disease, chemotherapy treatments and emergency trauma cases.

As they become more involved outside of traditional cardiac surgery, there is likely to be more need for perfusionists.

Academic Requirements
Perfusionists typically complete a four-year degree, with courses in biology, chemistry, anatomy and physiology, as well as additional specialized training to satisfy the requirements of certification. A background in science is not required to become a perfusionist.

Accredited perfusion programs offer master’s or bachelor’s degrees and some programs offer a certificate in clinical perfusion. The American Board of Cardiovascular Perfusion administers the certified clinical perfusionist (CCP) credential, which is required for all practicing perfusionists. CCP applicants complete an accredited training program in cardiovascular perfusion and perform a minimum of 75 cases as the primary perfusionist during training to sit for the certification exam. Recertification, including continuing education and work experience, is required on an annual basis.

Since perfusionists work in the operating room and use life-sustaining equipment, they must be able to handle acute stress, perform under severe pressure and pay great attention to detail. Some surgeries can go on for many hours, requiring a high level of mental and physical endurance.

Perfusionists also must keep pace with newest technological changes and continually upgrade their skills and adapt to the latest developments in the profession.

Other Related Programs

Biology
Biology is the study of life. Programs typically focus on molecular, cellular, and ecological discoveries which form the basis of biology and are applied to the associations that exist among living organisms, including human evolution. Careers in the health care and pre-professional studies in dentistry, medicine, optometry, medical technology, podiatry, veterinary medicine, ecology, marine biology, and genetics are all possibilities for biology students.

Chemistry
Chemistry is the study of matter and the changes it can undergo. Programs typically provide training for students planning careers in the chemical and biological sciences and also for those in biology, health related disciplines, earth sciences, secondary education, business, journalism and law.
Physiology
Physiology is the study of normal function within living creatures. It is a sub-section of biology, covering a range of topics that include organs, anatomy, cells, biological compounds, and how they all interact to make life possible.

Programs in Oregon

Biology
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clackamas Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Lewis & Clark College - BS
Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Multnomah University - BS
Northwest Christian University - BS
Oregon Institute of Technology - BS
Oregon State University - BS
Oregon State University Cascades - BS
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS
University of Portland - BS
University of Western States - BS
Warner Pacific University - BS
Western Oregon University - BS
Willamette University - BS

Chemistry
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Lewis & Clark College - BS
Linfield College - BS
Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Oregon State University - BS, MS, PhD
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS, MS, PhD
University of Portland - BS
Western Oregon University - BS
Willamette University - BS

Perfusionist
University of Arizona - MS (no program in Oregon)

Physiology
Oregon Health Sciences University - PhD

Resources
American Academy of Cardiovascular Perfusion
American Society of ExtraCorporeal Technology
Phlebotomist

<table>
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<tr>
<td>$25k - 30k</td>
<td>2 - 4</td>
<td>Excellent</td>
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Phlebotomists collect blood for donation or for testing so the blood can be analyzed in a clinical laboratory. Blood tests are used to diagnose illness, evaluate the effectiveness of medications and determine whether a patient is receiving proper nutrition.

To collect blood from an arm vein, the phlebotomist first applies a tourniquet to the upper arm to slow blood flow. An alcohol swab is used to disinfect a small area near the inside of the elbow. The phlebotomist then locates a vein and inserts a needle, a process called “venipuncture.” Phlebotomists can also sample blood through skin puncture, such as pricking a finger to test a patient’s blood sugar or determine blood type.

The phlebotomist must ensure that all equipment is properly sanitized before it is used to collect blood. Accurate labeling, proper storage and careful transport are also key responsibilities. Misidentification or contamination of a blood sample can have serious consequences, because medical professionals rely on blood test results to diagnose patients and monitor treatment progress.

The phlebotomist also must observe strict safety protocols to avoid direct contact with the blood. Many infectious diseases, including HIV and hepatitis, can be transmitted through blood contact. Even the slightest distraction can lead to a “needlestick” injury and possible infection.

Working Conditions
Phlebotomists work in clinical laboratories, hospitals, community health centers, nursing homes, doctor’s offices, blood donation centers and other health care facilities. They are usually supervised by a clinical laboratory technologist or other medical professional.

Phlebotomists must be extremely accurate and careful. In a busy facility, they may take dozens of blood samples during a typical shift. They must be able to work under pressure without sacrificing accuracy or safety.

Many patients are afraid of needles, so the first job of the phlebotomist is to put the patient at ease. Phlebotomists must be able to handle difficult, emotional and even angry patients. Fine motor skills are needed to successfully insert a needle into a vein. Phlebotomists also must be well-organized, with extremely good attention to detail.

Salary Range and Outlook
Phlebotomists are paid hourly. Wages vary depending on the phlebotomist’s location, shift, education and experience. The average phlebotomist earns $25,177 to $30,470 a year.

Academic Requirements
To become a phlebotomist, you must finish high school and complete a training program. The training program includes study in anatomy, blood collection procedures, proper storage and handling of blood samples and safety precautions. There are more than 200 accredited phlebotomy training programs at community colleges and vocational schools nationwide. Many employers will hire only phlebotomists who have successfully passed the certification exam. To take the exam, you must complete a training program and demonstrate 100 successful venipunctures and 25 skin punctures.
The National Phlebotomy Association requires 200 hours of training, which includes clinical experience. Students also must pass the national certification exam with a score of 70% or better. Continuing education is required to maintain certification. Some states also require phlebotomists to be licensed.

Other Related Fields
Phlebotomy Assistant
The phlebotomy assistant program is usually a one-term program that prepares students to become licensed phlebotomists. Phlebotomists use proper prioritization procedures and coordinate collection of all phlebotomy specimens with other lab personnel.

Phlebotomy Technician
The phlebotomy technician program is usually a one-term program that prepares students to become licensed phlebotomists. Phlebotomists use proper prioritization procedures and coordinate collection of all phlebotomy specimens with other lab personnel.

Programs in Oregon
Phlebotomy
Columbia Gorge Community College - Certificate
Lane Community College - Certificate
Phlebotomy Assistant
Rogue Community College - Certificate
Phlebotomy Technician
Linn-Benton Community College - Certificate

Resources
National Phlebotomy Association
Radiologic Technologist

Average Salary  $45k - 63k
Years Higher Education  1 - 4
Job Outlook  Excellent

Radiologic technologists are the health care professionals who perform diagnostic imaging procedures, such as X-ray examinations, magnetic resonance imaging (MRI) scans and computed tomography (CT) scans. Some of them specialize in specific techniques such as cardiovascular-interventional radiography, mammography or sonography.

Radiologic technologists are responsible for accurately positioning patients and ensuring that a quality diagnostic image is produced. They work closely with radiologists, the physicians who interpret medical images to either diagnose or rule out disease or injury. For the images to be interpreted correctly by the radiologist, the imaging examination must be performed properly by a radiologic technologist.

Employment is projected to grow 21 percent from 2012 to 2022, according to the Bureau of Labor Statistics. As the population grows older, there will be an increase in medical conditions, such as breaks and fractures caused by osteoporosis, which can require imaging to diagnose them.

According to a 2005 survey of radiologic technologists, the top reasons professionals entered this field were that they wanted an interesting career and they wanted to work in a profession that helps people.

Working Conditions
Most full-time radiologic technologists work about 40 hours a week; they may have evening, weekend or on-call hours. Opportunities for part-time and shift work are also available.

Salary Range and Outlook
According to a recent survey by the American Society of Radiologic Technologists, the average national wage for radiologic technologists in 2013 was $62,763 per year. Incomes for entry-level radiologic technologists (those with two years or less experience) averaged $45,878 per year. Technologists who work in specialty areas such as CT or MRI typically earn more.

Academic Requirements
Radiologic technologists are educated in anatomy, patient positioning, examination techniques, equipment protocols, radiation safety, radiation protection and basic patient care. Many radiologic technologists specialize in a particular area of medical imaging, such as mammography or computed tomography (CT scans).

Preparation for this profession is offered in hospitals, colleges and universities, vocational-technical institutes and the U.S. Armed Forces. You can search for accredited programs on the website of the Joint Review Committee on Education in Radiologic Technology or on the website of the American Registry of Radiologic Technologists. Beginning in 2015, individuals must have earned a minimum of an associate’s degree in order to sit for certification exams offered by the American Registry of Radiologic Technologists. Hospitals, which employ most radiologic technologists, prefer to hire those with formal training and national certification. The American Registry of Radiologic Technologists has information on certification.
Other Related Fields

Computed Tomography
Computed tomography (CT) programs are usually one- to two-year programs offered to train students in the imaging procedure that uses special x-ray equipment to create detailed pictures, or scans, of areas inside the body. It is also called computerized tomography and computerized axial tomography (CAT).

Echocardiography
Echocardiography training programs are one- to two-year programs offered by colleges and universities. Students will use sound waves to create images of the heart. In addition to learning to use the sonogram equipment, students may also learn to assist physicians in performing other cardiac procedures through hands-on practice during clinical training. Graduates of the program go on to become echocardiographers, also called cardiac sonographers.

Radiologic Science
Radiologic science and technology programs are designed to teach students how to work with different types of diagnostic imaging exams, including mammography, x-rays and magnetic resonance imaging (MRI). Programs are available at both the undergraduate and the graduate level.

Programs in Oregon
Computed Tomography
- Linn-Benton Community College - Certificate
- Portland Community College - Certificate
Echocardiography
- Oregon Institute of Technology - BS
Radiologic Science
- Oregon Institute of Technology - BS
Radiologic Technology
- Blue Mountain Community - AAS
- Portland Community College - Certificate

Resources
- American Registry of Radiologic Technologists
- American Society of Radiologic Technologists
- Joint Review Committee on Education in Radiologic Technology
Surgical Technologist

Average Salary: $45k
Years Higher Education: 1 - 2
Job Outlook: Excellent

Surgical technologists are members of operating room teams, which include the surgeon(s), anesthesiologist and circulating nurse. Surgical technologists work under the delegatory authority and supervision of the surgeon unless prohibited by state law or hospital policy.

Surgical technologists primarily fulfill the first scrub role. Before an operation, they help prepare the operating room by setting up sterile surgical instruments, equipment and supplies, such as drapes, gowns, gloves, suction tubing, and receiving solutions and medications from the circulator. Surgical technologists assemble the sterile equipment, check to ensure it is all working properly and make adjustments as necessary.

They assist the surgeon with putting on his/her gown and gloves, as well as assisting the surgeon in placing the sterile drapes on the patient to create the sterile field.

During the surgical procedure, the surgical technologist is responsible for anticipating the needs of the surgeon by passing instruments and providing needed supplies such as sponges, performing counts of the sponge, sharps, and instruments, providing solutions and medications to the surgeon, receiving tissue specimens to be passed off to the circulator and ensuring there are no breaks in sterile technique in order to prevent the patient from acquiring a surgical site infection.

Surgical technologists may fulfill the assistant circulator role based on state law and/or hospital policy. In this role, a technologist assists in transporting patients to the operating room helps position the patient on the operating table and prepares the patient for surgery by performing the skin prep of the incision site(s). During the procedure, the surgical technologist will assist with obtaining additional supplies that the first scrub surgical technologist needs, such as sponges or suture; assist with counts; replace full suction containers; provide sterile dressings at the end of the procedure; and assist with moving the patient from the operating room table to the stretcher for transport to the recovery room.

Working Conditions
When not in the operating room, surgical technologists work in clean, well-lighted, cool environments. In the operating room, however, it can become warm under the surgical lights when wearing the sterile gown and gloves. Technologists and other members of the surgical team must stand for long periods and remain alert during operations. At times they may be exposed to communicable diseases and unpleasant sights, odors and materials.

The surgical technologist may have to “pull” emergency call with the other members of the surgical team. If there is an emergency like a car accident or a pregnant mother requiring a Cesarean section, team members on call must come in, no matter what time of the day or night.

Academic Requirements
Surgical technologists receive their training in programs offered by community and junior colleges, vocational schools, universities, hospitals and the military. A program can take from 12 months (for a certificate) to two years (for an associate degree) to complete. Most programs do not require more than a high school education for program entrance, but many do require
applicants to have taken and passed prerequisite courses, including anatomy and physiology, medical terminology, and microbiology.

To be eligible to take the national surgical technology certification examination offered by the National Board of Surgical Technology and Surgical Assisting (NBSTSA), a candidate must have graduated from a:

- Surgical technology program accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) or the Accrediting Bureau of Health Education Schools (ABHES)
- Military program

**Programs in Oregon**

**Surgical Technician**

*Linn-Benton Community College - Certificate*
*Mount Hood Community College - AAS, BS*

**Resources**

*Association of Surgical Technologists*
*National Board of Surgical Technology and Surgical Assisting*
Arts and Humanities in Health Care

The arts and humanities can be good preparation for a health care career because a bachelor's degree in the arts and humanities usually gives you practical skills in communication, creative expression and analytical thinking, among other strengths. A background or interest in the arts and humanities also can make you more well-rounded and well-informed. In addition, there are many colleges and universities that now offer interdisciplinary programs such as majors, minors and certificates in the medical and health humanities that complement coursework in the bio- and social sciences.

Some health professions schools find applicants with an arts or humanities degree have that special “human touch”: they connect readily with others, have a strong sense of historical context and are aware of the ways in which human cultures can affect the whole health care experience. They also are more often multilingual. All of these are highly prized skills in an increasingly global world.

In addition to making you a strong applicant when applying to a health professions program, the arts and humanities may become even more important to you once you start practicing in your chosen field. For many health professionals, the arts are an invaluable creative outlet and reflective tool.

There is a growing and rich body of literature, music and fine arts by, for and about people in the health professions. An increasing number of health practitioners are turning to the creative arts as a way of expressing and coming to terms with the sometimes harrowing task of helping people who are ill and suffering.
Art therapy is an established mental health profession that uses the creative process of art making to improve and enhance the physical, mental and emotional well-being of people at all ages.

It is based on the belief that the creative process involved in artistic self-expression helps people to resolve conflicts and problems, develop interpersonal skills, manage behavior, reduce stress, increase self-esteem and self-awareness and achieve insight. Art therapy integrates the fields of human development, visual arts and the creative process with models of counseling and psychotherapy. Art therapy is used with children, adolescents, adults, older adults, groups and families to assess and treat:

- Anxiety, depression and other mental/emotional problems
- Mental illness
- Substance abuse and other addictions
- Family and relationship issues
- Abuse and domestic violence
- Social/emotional difficulties related to disability or illness
- Personal trauma, post-traumatic stress disorder and loss
- Physical, cognitive and neurological problems
- Psychosocial difficulties related to medical illness

Some art therapists work as part of a health care team that includes physicians, psychologists, nurses, mental health counselors, marriage and family therapists, rehabilitation counselors, social workers and teachers. Together, they determine and implement a client's therapeutic goals and objectives. Other art therapists work independently and maintain private practices with children, adolescents, adults, groups and/or families.

If you’re considering this career, keep in mind that an art therapist needs certain personal qualities – such as sensitivity, empathy, emotional stability, patience, interpersonal skills, insight into human behavior and an understanding of artistic media. An art therapist must be an attentive listener and a keen observer. Flexibility and a sense of humor are also invaluable.

Working Conditions
Art therapists work in a wide variety of settings including:

- Hospitals and clinics, both medical and psychiatric
- Outpatient mental health agencies and day treatment facilities
- Residential treatment centers
- Halfway houses
- Domestic violence and homeless shelters
- Community agencies and nonprofit settings
- Sheltered workshops
- Schools, colleges and universities
- Correctional facilities
- Elder care facilities
- Art studios
- Private practice
Salary Range and Outlook
Salaries for art therapists vary widely, according to a 2009 survey conducted by the American Medical Association. Salaries for those just beginning in the career are generally around $30,000 to $40,000 while those with experience may earn salaries over $100,000. Keep in mind that salaries will vary considerably, depending on experience, location and type of practice.

Academic Requirements
Art therapists must have a master’s degree in art therapy or counseling or a related field with an emphasis in art therapy and must complete the required core curriculum as outlined in the American Art Therapy Association’s (AATA) education standards. AATA-approved art therapy programs generally consist of 48 to 60 semester credits (or approximately 18 months to 2 years of full-time education). The typical curriculum includes:

- History and theory of art therapy
- Techniques or practice in art therapy
- Application of art therapy with people in different treatment settings
- Understanding of group art therapy and counseling methods and skills
- Ethical and legal issues of art therapy practice
- Art therapy assessment
- Standards of practice in art therapy
- Cultural and social diversity
- Thesis or culminating project

In addition, each art therapy student must complete a practicum or internship, involving a minimum of 700 hours of supervised art therapy practice, at least half of which must be spent working directly with patients in individual, group or family formats. There also are opportunities for specialization (i.e., specific patient age groups, practice settings and types of intervention).

After receiving a master’s degree in art therapy, accumulating the required number of supervised hours and submitting professional references attesting to your competency, you may apply to become a registered art therapist (ATR) through the Art Therapy Credentials Board (ATCB). After being granted the ATR, you then can sit for the board certification (ATR-BC) examination. The exam is offered once a year at various locations throughout the United States.

Programs in Oregon
Art Therapy
Lewis & Clark College - MA

Resources
American Art Therapy Association
Art Therapy Credentials Board
Art Therapist

Average Salary  $30k - 80k
Years Higher Education  6
Job Outlook  Excellent

Art therapy is an established mental health profession that uses the creative process of art making to improve and enhance the physical, mental and emotional well-being of people at all ages.

It is based on the belief that the creative process involved in artistic self-expression helps people to resolve conflicts and problems, develop interpersonal skills, manage behavior, reduce stress, increase self-esteem and self-awareness and achieve insight.

Art therapy integrates the fields of human development, visual arts and the creative process with models of counseling and psychotherapy. Art therapy is used with children, adolescents, adults, older adults, groups and families to assess and treat:

- Anxiety, depression and other mental/emotional problems
- Mental illness
- Substance abuse and other addictions
- Family and relationship issues
- Abuse and domestic violence
- Social/emotional difficulties related to disability or illness
- Personal trauma, post-traumatic stress disorder and loss
- Physical, cognitive and neurological problems
- Psychosocial difficulties related to medical illness

Some art therapists work as part of a health care team that includes physicians, psychologists, nurses, mental health counselors, marriage and family therapists, rehabilitation counselors, social workers and teachers. Together, they determine and implement a client’s therapeutic goals and objectives. Other art therapists work independently and maintain private practices with children, adolescents, adults, groups and/or families.

If you’re considering this career, keep in mind that an art therapist needs certain personal qualities – such as sensitivity, empathy, emotional stability, patience, interpersonal skills, insight into human behavior and an understanding of artistic media. An art therapist must be an attentive listener and a keen observer. Flexibility and a sense of humor are also invaluable.

Working Conditions
Art therapists work in a wide variety of settings including:

- Hospitals and clinics, both medical and psychiatric
- Outpatient mental health agencies and day treatment facilities
- Residential treatment centers
- Halfway houses
- Domestic violence and homeless shelters
- Community agencies and nonprofit settings
- Sheltered workshops
- Schools, colleges and universities
- Correctional facilities
- Elder care facilities
- Art studios
- Private practice
Salary Range and Outlook
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Programs in Oregon
Art Therapy
Lewis & Clark College - MA

Resources
American Art Therapy Association
Art Therapy Credentials Board
Medical Illustrator/Animator

<table>
<thead>
<tr>
<th>Average Salary</th>
<th>Years Higher Education</th>
<th>Job Outlook</th>
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<tbody>
<tr>
<td>$62k - 85k</td>
<td>4 - 6</td>
<td>Excellent</td>
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A medical illustrator / animator is a professional artist with extensive training in medicine, science, communication and media technology. As visualization specialists, they create imagery that advances medical science knowledge and empowers health literacy for patients and the public. They have the medical and scientific knowledge to grasp complex information, distill it down and communicate the story in a clear visual narrative that is accurate, educational and engaging.

Medical illustration is a relatively exclusive field: although the need for their services is great, there is just a small cadre of these highly educated artists in practice. The Association of Medical Illustrators (AMI) estimates that there are 2,000 practitioners in North America. Health and science visualization is in demand to keep pace with new discoveries, treatments and technologies. Not surprisingly, then, the employment outlook for medical illustrators is excellent. The majority of professionals have master’s degrees and interdisciplinary science education. The median salary for a medical illustrator or medical animator is $62,000 and can range up to $100,000. Those in supervisory and creative director positions earn a median of $85,000 and up to $175,000 per year (2013 AMI survey data).

Medical illustrators and animators work closely with physicians and scientists. They produce visual content for journals, books, presentations, magazines, advertising, film, television, Web, interactive and mobile media, virtual reality, exhibits and demonstrative evidence for legal proceedings. In addition to producing such material, medical illustrators often function as content developers, creative directors, consultants and administrators within the general field of biocommunication. Many are business owners and entrepreneurs.

The creative work of medical illustrators must meet exacting standards and solve demanding communication challenges. Some specialize in a particular facet of medicine and can become highly respected and sought after for their skills in such areas as:

- Cellular / mechanism of action animation
- Surgical / medical device illustration
- Medical-legal exhibits / mechanism of injury animation
- Medical app design / Health gaming
- Augmented and virtual reality simulation

Another niche specialization is the creation of sculptured anatomical models and medical simulation trainers for teaching and practicing procedures. This includes use of 3D printers and materials applied to create custom prosthetic implants for patients affected by facial or body disfigurement.

There is also an expanding need for interactive e-learning programs for patient education, student courseware, physician education and pharmaceutical/device sales training. Many illustrators become authors and co-authors of textbooks and journal articles.

As more people demand information about their bodies and health care options, the role of medical illustrations and animations in patient education and health literacy initiatives is vital to improving public health and patient outcomes. Indeed, a picture is worth a thousand words.
Working Conditions
Medical illustrators work in a wide range of settings. Many work for medical schools or large academic health centers. Others work in hospitals, medical legal firms, publishing companies, research institutions, veterinary schools or medical education companies. Some medical illustrators work solo, while others are part of large team-based multimedia departments. Experienced medical illustrators also may start their own businesses, head a group of illustrators or become directors of biomedical communication departments.

A growing number of medical animators work in research labs analyzing and modeling research data and molecular interactions to guide the data exploration process as the scientific story is unfolding. Interdisciplinary knowledge in biochemistry, genomics and computational molecular biology enable this close interaction and blur the lines between scientist and artist.

Academic Requirements
Clear communication is a key feature of medical illustration that sets it apart from most fine art. Because content and anatomical accuracy is paramount in the field of medical illustration, it is most rewarding for detail-oriented individuals who genuinely enjoy and have natural ability in both art and science. High school students contemplating medical illustration as a career should take a college preparatory program with as much emphasis on art and science as possible. In college, students should concentrate on art and biological sciences before applying to a master’s program.

The majority of medical illustrators have a master’s degree from an accredited graduate program in medical illustration. There are currently four accredited programs in North America, each accepting between 7 to 20 students each year. The curriculum typically includes both medical science courses and art practice and theory courses.

The Board of Certification of Medical Illustrators is an independent body that administers a two-part test to verify the competency of medical illustrators. The test includes a written exam and a portfolio review. Certification is entirely voluntary. Certification is maintained by obtaining required continuing education credits and renewal every five years.

Programs in Oregon
Medical Illustration (Biomedical Visualization)
University of Illinois-Chicago - MS (no program in Oregon)

Resources
Association of Medical Illustrators
Chiropractic Medicine

Chiropractic medicine focuses on the relationship between the body's main structures—the skeleton, the muscles and the nerves—and the patient's health. Chiropractors believe that health can be improved and preserved by making adjustments to these structures, particularly to the spinal column. They do not prescribe drugs or perform surgical procedures, although they do refer patients for these services if they are medically indicated.

Once derided by the mainstream medical community, chiropractic medicine has become a well-recognized and highly respected health care field. Chiropractic services are covered by health insurance, including Medicare, and chiropractors are bound by the same regulations and ethics as allopathic doctors (M.D.) and osteopathic doctors (D.O.).

Most patients seek chiropractic care for back pain, neck pain and joint problems. However, many patients choose a chiropractor as their primary care doctor, because they prefer treatment plans that do not rely on medication or surgery.

Because of the emphasis on holistic health care, chiropractic medicine is associated with the field of complementary and alternative medicine.
Chiropractic care (also simply “chiropractic”) is a health care discipline that emphasizes the inherent power of the body to heal itself without the use of drugs or surgery. It focuses on the relationship between the body’s structure (primarily the spine) and function (as coordinated by the nervous system) and how that relationship affects the preservation and restoration of health. When appropriate, doctors of chiropractic work in cooperation with the patient’s other health care practitioners.

Chiropractic doctors diagnose and treat patients whose health problems are associated with the body’s muscular, nervous and skeletal systems. Chiropractors believe that interference with these systems can impair normal functioning, cause pain and lower resistance to disease. They are most well known for the hands-on technique they practice to adjust imbalances in the patient’s skeletal system, particularly the spine.

The chiropractic approach to healthcare is holistic, stressing the patient’s overall health and wellness. It recognizes that many factors affect health, including exercise, diet, rest, environment and heredity.

**Working Conditions**
Chiropractors work in clean, comfortable offices. They spend a great deal of time on their feet and use hands-on manipulation techniques to resolve imbalances in the patient’s skeletal system.

The average work week is 40 hours, although longer hours are not uncommon. Solo practitioners set their own hours but may work evenings or weekends in order to accommodate their patients.

**Academic Requirements**
Most chiropractic medicine programs require that applicants have at least three years of undergraduate education, and an increasing number require a bachelor’s degree. In either case, your undergraduate studies must include a prescribed number of prerequisite courses, as defined by the field’s accrediting body, the Council on Chiropractic Education. Accredited chiropractic medicine programs last four years and lead to a Doctor of Chiropractic (D.C.) degree. The standard curriculum covers:

- Anatomy
- Biochemistry
- Physiology
- Microbiology
- Pathology
- Public health
- Physical, clinical and laboratory diagnosis
- Gynecology and obstetrics
- Pediatrics
- Geriatrics
- Dermatology
- Otolaryngology
- Diagnostic imaging procedures
• Psychology
• Nutrition/dietetics
• Biomechanics
• Orthopedics
• Neurology
• First aid and emergency procedures
• Spinal analysis
• Principles and practice of chiropractic
• Clinical decision making
• Adjustive techniques
• Research methods and procedures
• Professional practice ethics

For a list of accredited chiropractic medicine programs, see the Association of Chiropractic Colleges website.

Other Related Fields
Human Biology
Human Biology programs are designed interdisciplinary courses with a focus on human biology at the undergraduate level. There is a wide variation in emphasis ranging from business, social studies, public policy, healthcare and pharmaceutical research.

Pre-Chiropractic
Pre-Chiropractic programs allow students to complete an accelerated undergraduate degree (usually in Biology) and then continue on directly with an affiliated program to complete a Doctor of Chiropractic degree.

Programs in Oregon
Chiropractic Medicine
Multnomah University - DC (in conjunction with University of Western States)
University of Western States - DC

Human Biology
University of Western States - BS

Pre-Chiropractic
Multnomah University - DC (in conjunction with University of Western States)
Southern Oregon University - BS
Warner Pacific University - BS

Resources
American Chiropractic Association
Association of Chiropractic Colleges
Discover Chiropractic
Complementary and Integrative Medicine

The National Center for Complementary and Integrative Health (NCCIH) at the National Institutes of Health describes integrative medicine or health care as bringing conventional and complementary approaches together in a coordinated way.

The Academic Consortium of Integrative Medicine and Health, which has over 63 centers throughout North America as members, including those at Harvard, Stanford, the Mayo Clinic and MD Anderson, defines integrative medicine and health as the field that reaffirms the importance of the relationship between practitioner and patient, focuses on the whole person, is informed by evidence, and makes use of all appropriate therapeutic and lifestyle approaches, health care professionals and disciplines to achieve optimal health and healing.

In general, complementary and integrative health care practitioners take a holistic approach to patient care, treating the patient as a whole person rather than a set of symptoms. They focus both on addressing acute symptoms such as pain, as well as on preventing and caring for patients with chronic disease. The goal of treatment extends beyond healing illness to well-being.

The patient is often an active participant in his or her treatment, making changes in lifestyle to promote good health. The health care team may include physicians, nurse practitioners, nurses, psychologists, acupuncturists, massage therapists, dieticians and other practitioners. The specific therapies recommended are drawn from both conventional and complementary medicine where there is an evidence base supporting their use.

The increasing interest in this area of medicine and health is reflected in the growing scientific evidence base, as well as data collected in 2012 by NCCIH which indicated that over 30% of adults and 12% of children used a complementary approach for their health including dietary supplements, deep breathing and yoga in the previous year.
Acupuncture/Oriental medicine (AOM) is an ancient and empirical system of medicine based on the concept of qi (pronounced “chee”), which is usually translated as energy. AOM treatments identify a pattern of energetic imbalance within a patient and redress that disharmony through a variety of therapies that may include acupuncture needling, cupping, acupressure, exercises such as tai ji and qi gong and Chinese herbal preparations.

AOM is virtually free of the side effects that accompany many modern medical procedures. As a relatively inexpensive form of treatment, it is especially appropriate for reducing health care costs. The success of acupuncture today is due to its efficacy, remarkable safety record, cost-effectiveness and significant public demand.

The prospects for finding a good job in this field are excellent for the foreseeable future. AOM is one of the most requested forms of treatment in the fast-growing field of complementary and alternative medicine and holds promise as one of the key modalities to be used in current and future integrative medical settings. A 2005 Institute of Medicine report noted the widespread use of complementary and alternative medicine in the United States, with patients making more visits to complementary and alternative medicine practitioners than to primary care physicians. Annual out-of-pocket costs for complementary and alternative medicine exceed $27 billion. The Journal of Alternative and Complementary Medicine is the official journal of the Society for Acupuncture Research. It publishes observational and analytical reports on treatments outside the realm of allopathic medicine, including clinical care concepts and case reports. The readers of this publication are largely health care professionals and scientists who are interested in integrating complementary and alternative medicine therapies into their patient care protocols and research strategies.

**Working Conditions**

AOM practitioners can create financially supportive careers with flexible work schedules that are rewarding on many levels. Moreover, an AOM career offers the opportunity for a more balanced lifestyle for practitioners and their clients. AOM practitioners look at their patients from a holistic perspective, taking into account the patient’s physical, mental and emotional health.

Practitioners are able to spend time developing a collaborative relationship with their patients, assisting them in maintaining their health and promoting a consciousness of wellness. The settings in which AOM practitioners work vary from multidisciplinary clinics and hospitals to private practice. Other career options include teaching, translating, publishing or working with an herb or acupuncture supply company.

**Academic Requirements**

Specific academic requirements and programs may vary from one acupuncture/Oriental medicine (AOM) college to another, but in general, a bachelor’s or associate’s degree (or the equivalent, with 60 semester units from an accredited college or university) is required for admission into an AOM program.
The length of training at most accredited AOM schools is three years for acupuncture and four years for the combination of acupuncture and Oriental medicine. The Oriental medicine program includes the study of Chinese herbology.

A number of schools offer multiple language tracks that include Chinese and Korean, in addition to English.

Over 50 colleges nationwide offer graduate training in AOM at the master’s degree level, which is the entry-level degree for the profession. Specialized clinical training at the doctoral level is also available. There are approximately 8,500 students in U.S. AOM schools and about 2,000 graduates annually. The student bodies are very diverse with a variety of ethnic backgrounds and a high number of women.

Graduates from accredited AOM schools, or schools that are in candidacy status for accreditation, are eligible to take the national certification examinations offered by the National Certification Commission for Acupuncture & Oriental Medicine (NCCAOM). With the exception of California, NCCAOM’s examinations are accepted or required in the states that license the practice of AOM. Currently, AOM is regulated by a formal practice act in 44 states and the District of Columbia. Licensure is the most common form of practice authorization in these states.

**Programs in Oregon**

**Acupuncture**
- Oregon College of Oriental Medicine - MAcOM, DOM

**Oriental Medicine**
- National University of Natural Medicine - MSOM, DOM
- Oregon College of Oriental Medicine - MAcOM, DOM

**Resources**
- Accreditation Commission for Acupuncture and Oriental Medicine
- American Association of Acupuncture and Oriental Medicine
- American Organization for Bodywork Therapies of Asia
- Council of Colleges of Acupuncture and Oriental Medicine
- National Center for Complementary and Integrative Health
- National Certification Commission for Acupuncture and Oriental Medicine
- Society for Acupuncture Research
Massage Therapist

Average Salary: $30k
Years Higher Education: 2 - 7
Job Outlook: Excellent

Massage therapists methodically apply focused, hands-on techniques to promote relaxation and increase circulation in the body’s soft tissues (muscles, tendons, connective tissue, etc.). Although the warming and stimulating effect of massage has a positive effect on joint mobility and range of motion, direct work on the skeleton is outside the massage therapists’ scope of practice.

In recent years, massage has gained attention from the National Institutes of Health and other respected sectors of the health care community as a highly effective complementary and alternative medical therapy.

The news about the health benefits of massage should come as no surprise, since it is one of the oldest “healing arts” – dating back to 2700 B.C., when it was first recorded as a therapeutic technique in the ancient traditional Chinese medicine treatise, The Yellow Emperor’s Classic of Internal Medicine.

Today, therapeutic massage is employed throughout the health care system – in hospitals, long-term care facilities and private clinics, for patients ranging from premature infants to the elderly. Many hospices have massage therapists on staff, and massage is frequently offered in wellness centers, drug treatment programs and pain clinics.

While many choose to practice independently, professional massage therapists also may work closely with other members of the health care team – i.e., physicians, physical therapists, rehabilitation counselors, chiropractors and acupuncturists, among others. Virtually all massage therapists in the United States are trained in Swedish and deep tissue techniques; in addition, they may specialize in other methods and adjunct modalities, such as:

- Acupressure
- Connective tissue massage
- Infant massage
- Lomi-Lomi (Hawaiian massage)
- Manual lymphatic drainage
- Pregnancy massage
- Rolfing
- Shiatsu
- Sports massage
- Thai massage
- Trager Method
- Trigger point therapy
- Tui Na (Traditional Chinese Medical massage)

Working Conditions
Massage therapists work in a wide range of settings:

- A home-based or private practice or on-site work in clients’ homes
- Hospitals, nursing homes or wellness centers
- Corporate offices, shopping malls, airport lobbies and similar places
- Fitness centers, salons or hotels
Most massage therapists are sole practitioners, and many work part-time because the work can be physically demanding. Many therapists use their massage practice as an adjunct to another profession, earning approximately half their income from massage. The average amount of hands-on work for most massage therapists is 15 hours per week (excluding administrative tasks, such as keeping client health records, bookkeeping, marketing, scheduling, maintaining supplies, etc.).

**Salary Range and Outlook**
Hourly fees for massage therapy vary widely, depending upon geographic location and work setting. For instance, a massage therapist at a high-end urban salon might charge $75 to $90/hour, whereas a sole proprietor working out of his or her home in a small town may charge no more than $40 or $50. The average nationwide rate is $65/hour, although the rate is generally higher in large metropolitan areas.

**Academic Requirements**
To become a massage therapist, you must graduate from an established program providing supervised instruction that meets state or local minimum requirements. These requirements vary by state from 500 initial hours to 1,000 hours. Most massage therapy schools and programs are accredited by a nationally recognized accrediting organization.

The standard massage curriculum includes coursework in anatomy, physiology, kinesiology, pathology, ethics and business, as well as hands-on work in both basic and specialized massage techniques.

After graduating from massage school, therapists will need to meet state standards, and/or municipal requirements, which usually require passing one of two tests recognized by the regulating body before they can practice.

Becoming nationally certified is optional, but may be a requirement in a few states. To become certified by the National Certification Board for Therapeutic Massage and Bodywork (NCBTMB), a massage therapist must have graduated from a state-licensed massage program with at least 500 hours of formal training and pass the NCBTMB national exam.

**Programs in Oregon**
**Massage Therapy**
- Ashland School of Massage - Certificate
- Central Oregon Community College - Certificate, AAS
- Lane Community College - Certificate
- National University of Natural Medicine - BS
- Oregon School of Massage - Certificate
- Rogue Community College - Certificate

**Resources**
- American Massage Therapy Association
- National Association of Complementary and Alternative Medicines
- National Certification Board for Therapeutic Massage & Bodywork
Dentistry

Today’s dentists are highly sophisticated health professionals who provide a wide range of oral health care services that contribute to the general health and quality of their patients’ lives. They are at the forefront of new developments in dental implants, computer-generated imaging and cosmetic and aesthetic procedures.

Dentists are instrumental in the early detection of oral cancer and systemic conditions that manifest in the mouth. They can also serve as first responders in the event of a large-scale health emergency.

Advances in dental research, including genetic engineering, the discovery of links between oral and systemic diseases, the development of salivary diagnostics and the continued development of new materials and techniques, make dentistry an exciting, challenging and rewarding profession.

ADEA GoDental
ADEA GoDental is the official resource for people on the path to a career in dentistry or dental hygiene. ADEA GoDental’s mission is to inspire, inform and guide students through the process of becoming a dentist or dental hygienist by providing helpful resources to help them prepare for a career in the dental professions, academically and financially. In addition to offering prospective applicants robust information about specialty and practice options, ADEA GoDental provides valuable tips and guidance about how to finance a dental career.

The site and network also offer prospective dental and dental hygiene students the opportunity to interact with the dental community through online and in-person events, social media, blogs and videos. To start participating in the discussion, sign up for the ADEA GoDental monthly newsletter today. Also, be sure to follow ADEA GoDental on Facebook, Twitter and Instagram for updates about upcoming events and the latest news in dental education.
Allied Dental Educator

Average Salary: $40k - 80k
Years Higher Education: 4 - 8
Job Outlook: Excellent

Allied dental health educators prepare students to become dental hygienists, dental assistants and/or dental laboratory technicians. There is an urgent increasing need for allied dental educators because of the growing demand for qualified allied dental professionals as well as growth in the number of these academic programs.

Allied dental educators must be at the forefront of oral health practice, science and technology. Dental science and technology are constantly advancing, so educators must stay informed about new techniques, equipment and evidence-based research so they can prepare their students adequately for the workplace.

In addition to classroom teaching, allied dental educators may supervise students in a laboratory, clinical or community setting. They serve as mentors and role models to students in providing quality oral health care to a variety of patients.

Some educators also help publishers develop new textbooks and other teaching materials, write or evaluate patient education materials, serve on academic committees devoted to improving the allied dental curriculum, consult with manufacturers about the design of dental instruments and equipment, and provide dental educators and practitioners with continuing education programs intended to enhance teaching or practice skills and to introduce new techniques or science-based information.

Some allied dental educators choose to work as oral health educators, developing educational programs to improve oral health among patients in community health settings, including children, elderly, disabled and other underserved populations.

Working Conditions
Allied dental educators usually work as full- or part-time faculty at vocational schools, colleges and universities, academic health centers and dental schools that offer certificates or degrees in dental hygiene, dental assisting and/or dental laboratory technology. All educators are prepared as allied dental professionals and may continue to practice in addition to teaching.

Becoming an allied dental educator is one way for experienced dental hygienists, dental assistants and dental laboratory technologists to give back to their professional community. Mentoring students in mastering new skills can be highly rewarding and provides a new way to share skills polished over the course of a career.

Academics also have many opportunities to work actively with committees and professional organizations shaping the future of the allied dental professions. There are opportunities to travel to meetings, speak, conduct and present research and write for scholarly journals.

Salary Range and Outlook
Allied dental educators are in demand because more teachers are needed to prepare the tens of thousands of allied dental workers that will be needed to fill vacant jobs in the years ahead. Teaching salaries vary depending on the institution, the level of experience, level of education and other factors. A full-time allied dental educator teaching in a community college can earn between $41,000 and $62,000 a year.
In addition to salary, full-time educators generally receive other benefits such as sick leave, vacation time, retirement plans, health insurance and tuition benefits for their family.

**Academic Requirements**
Allied dental educators must have experience as allied dental professionals before becoming educators. In addition, at the very least, they must have a bachelor’s degree. Full-time positions in dental hygiene programs generally require a graduate or doctoral degree.

In addition to those requirements, they must satisfy continuing education requirements to keep their professional certification or licensure up to date.

**Other Related Fields**

**Dental Assistant**
A dental assistant program prepares students to be part of a dental team. Dental assistants are qualified individuals who contribute significantly to the dental team. Dental assistants perform a variety of tasks, from patient care to office and laboratory duties.

**Dental Assistant Technician**
A dental assistant technician program prepares students to be part of a dental team. Dental Techs, also known as Dental Technicians, work in a laboratory environment and construct, fit, and repair dental appliances and devices. Working as a Dental Technician is a great job for those who like hands-on work and have a natural artistic instinct.

**Dental Hygiene**
A dental hygiene program prepares students to be part of a dental team. Dental hygienists are preventive oral health professionals who have graduated from an accredited dental hygiene program in an institution of higher education, licensed in dental hygiene to provide educational, clinical, research, administrative and therapeutic services supporting total health through the promotion of optimum oral health.

**Dental Laboratory Technology**
A dental laboratory technology program prepares a student to be a dental laboratory technician. Dental laboratory technology is the art, science and technology of designing and manufacturing corrective devices for and replacements of natural teeth. A dental laboratory technician communicates and collaborates with the dentist to plan, design and fabricate dental prostheses for individual patients.

**Programs in Oregon**

**Dental Assistant**
- Central Oregon Community College - Certificate
- Chemeketa Community College - Certificate
- Clackamas Community College - Certificate
- Lane Community College - Certificate
- Linn-Benton Community College - Certificate
- Portland Community College - Certificate
- Rogue Community College - Certificate
- Southwestern Oregon Community College - Certificate
- Tongue Point Job Corps Center - Certificate
- Umpqua Community College - Certificate

**Dental Assisting Technician**
- Blue Mountain Community College - Certificate

**Dental Education**
- Oregon Health Science University - DDS
Dental Hygiene
Lane Community College - AAS
Mount Hood Community College - AAS, BS (in conjunction with OIT)
Oregon Institute of Technology - BS
Pacific University - BS
Portland Community College - AAS

Dental Laboratory Technology
Portland Community College - Certificate, AAS

Resources
American Dental Education Association
Dental Assistant

Average Salary       Years Higher Education    Job Outlook
$36k     1 - 2         Excellent

Dental assistants are qualified individuals who contribute significantly to the dental team. Dental assistants perform a variety of tasks, from patient care to office and laboratory duties. The exact responsibilities of a specific dental assistant job will depend on the assistant’s background and credentials as well as state laws and the dentist for whom the assistant works. Dental assistants can also advance to other careers, such as office manager, research associate, dental sales representative, educator, dental laboratory technologist, dental hygienist and dentist.

If you are interested in a career as a dental assistant, you should have:

• An interest in science
• An understanding of the human body
• The ability to communicate effectively
• Manual dexterity
• A desire for continual learning
• The ability to utilize problem-solving skills
• Concern for others
• A willingness to work as part of a team

Dental assistants perform a wide range of tasks, which may include:

• Assisting the dentist in all phases of treatment
• Sterilizing instruments
• Preparing treatment rooms
• Providing patient education and nutritional counseling
• Arranging and confirming appointments
• Preparing dental insurance claims
• Exposing, processing and mounting radiographs
• Performing a variety of intra-oral expanded functions
• Fabricating mouth guards
• Working as members of the dental team
• Performing laboratory procedures
• Selecting and transferring instruments to the dentist
• Placing temporary sedative restorations
• Placing and removing retraction cord
• Placing sealants
• Removing sutures
• Placing and removing periodontal and surgical dressings
• Taking impressions
• Fabricating and placing provisional restorations
• Removing arch wires and ligatures
• Taking and recording vital signs
• Assisting with medical emergency care by providing CPR, first aid and adjunctive services
• Placing sedative bases in a tooth prepared for a permanent restoration
• Placing permanent restorations
• Placing topical anesthetics
• Assisting with the administration of local anesthesia
• Assisting in monitoring nitrous oxide and oxygen sedation
• Applying fluoride
• Preparing teeth for bonding
• Collecting patient data
• Entering data utilizing computer programs
• Performing intra- and extra-oral examinations
• Performing coronal polish

**Working Conditions**
Almost half of all dental assistants have a 35- to 40-hour work week, which may include work on Saturdays or evenings. Dental assistants work in a well-lighted, clean environment. Dental assistants may work in a number of settings, including:

• Private dental offices
• Group practices
• Hospitals
• Insurance companies
• Dental suppliers
• Dental manufacturing companies
• Armed services
• Educational institutions
• Public health facilities

Their work area usually is near the dental chair so that they can arrange instruments, materials and medication and hand them to the dentist when needed. Dental workers may be at risk for exposure to bloodborne pathogens and infectious diseases so they wear gloves, masks, eyewear and protective clothing to protect themselves and their patients. Following safety procedures also minimizes the risks associated with the use of radiographic equipment.

**Salary Range and Outlook**
Most certified and registered or licensed dental assistants with an x-ray license make a minimum hourly wage of $18.00 to start. Salaries vary according to where you live and other factors including experience. Some employers offer uniform allowances, reimbursement for continuing education and professional dues, health benefits and pension plans.

The current job market for dental assistants is stable, and future projections indicate a continued high demand for assisting services. In addition to demand, there are other benefits to a career as a dental assistant, including:

• Opportunities for career advancement
• Gainful employment
• Good hourly wages
• Good working environment
• Flexible hours
• Working as a member of a health care delivery team
• Ability to help others

**Academic Requirements**
If you want to become a dental assistant, you will need to enroll in a post-high school program. You can find those programs at community colleges, vocational schools, technical institutes, universities or dental schools. Graduates of these programs usually receive certificates. Although the majority of academic dental assisting programs take nine to 11 months to
complete, some schools offer accelerated training, part-time education programs or training via distance education.

These are some of the courses you may take in your program:

- Anatomy and physiology
- Chemistry
- Microbiology
- English
- Psychology
- Communication skills
- Dental head and neck anatomy
- Intro to the dental profession
- Dental materials
- Dental specialties
- Medical emergencies
- Practice management
- Dental science
- Dental radiology
- Dental health education
- Clinical assisting

Once you have received your certificate, you can think about certification. To become certified, you will take an exam that evaluates your knowledge. Most dental assistants who choose to become nationally certified take the Dental Assisting National Board’s (DANB) Certified Dental Assistant (CDA) examination.

There are also educational opportunities available for dental assistants who wish to obtain a degree beyond the certificate level. Credits from dental assisting programs may also transfer into associate or baccalaureate degree programs.

**Programs in Oregon**

**Dental Assistant**
- Central Oregon Community College - Certificate
- Chemeketa Community College - Certificate
- Clackamas Community College - Certificate
- Lane Community College - Certificate
- Linn-Benton Community College - Certificate
- Portland Community College - Certificate
- Rogue Community College - Certificate
- Southwestern Oregon Community College - Certificate
- Tongue Point Job Corps Center - Certificate
- Umpqua Community College - Certificate

**Resources**
- American Dental Assistants Association
- American Dental Association
- American Dental Education Association
- Dental Assisting National Board
- National Dental Association
Dental Hygienist

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<tr>
<th>Average Salary</th>
<th>Years Higher Education</th>
<th>Job Outlook</th>
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<tr>
<td>$56k</td>
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Dental hygienists are preventive oral health professionals who have graduated from an accredited dental hygiene program in an institution of higher education, licensed in dental hygiene to provide educational, clinical, research, administrative and therapeutic services supporting total health through the promotion of optimum oral health.

In performing the dental hygiene process of care, the dental hygienist assesses the patient’s oral tissues and overall health determining the presence or absence of disease, other abnormalities and disease risks; develops a dental hygiene diagnosis based on clinical findings; formulates evidence-based, patient-centered treatment care plans; performs the clinical procedures outlined in the treatment care plan; educates patients regarding oral hygiene and preventive oral care; and evaluates the outcomes of educational strategies and clinical procedures provided.

Clinical procedures provided typically include removal of plaque, calculus and stains from the teeth; exposing and processing dental X-rays; applying cavity-preventive agents, such as fluorides and pit and fissure sealants; and administering antimicrobial agents. In some states, they also administer local anesthetics and nitrous oxide; place and carve filling materials, temporary fillings, and periodontal dressings; remove sutures; perform root-planing as a periodontal therapy; and polish restorations. In addition, they can provide clinical and laboratory diagnostic tests for interpretation by other health professionals.

**Working Conditions**

Dental hygienists provide clinical services in a variety of settings such as private dental practice, community health settings, nursing homes, hospitals, prisons, schools, faculty practice clinics, state and federal government facilities and Indian reservations.

In addition to clinical practice, there are career opportunities in education, research, sales and marketing, public health, administration and government. Some hygienists combine positions in different settings and career paths for professional variety. Working in education and clinical practice is an example.

Flexible work hours can be a feature of this profession, with some hygienists working full-time, others part-time.

**Academic Requirements**

Dental hygienists must graduate from an accredited dental hygiene program based in an institution of higher education. Hygienists must also be licensed in the state in which they practice. Requirements for licensure vary from state to state, but generally include successful completion of an accredited entry-level program, successful completion of the written National Dental Hygiene Board examination, a state or regional clinical examination and a state jurisprudence and ethics examination.

Almost all accredited dental hygiene programs minimally offer an associate degree in science or an associate degree in applied science. Applicants to an associate degree granting institution usually complete mandatory pre-requisite coursework prior to beginning the dental hygiene program. Graduates of a four-year college or university are granted a baccalaureate degree in dental hygiene.
Dental hygienists holding an associate degree have opportunities to pursue a baccalaureate degree through degree completion programs specifically designed to advance their education. Many of these programs are offered in either full-time or part-time options and have online or distance education opportunities. Dental hygienists who have completed a baccalaureate degree can pursue a graduate degree in dental hygiene or related discipline. Dental hygienists with advanced degrees have broader opportunities for alternative careers within dentistry, dental education and health care delivery.

Other Related Programs

Pre-Dental Hygiene
Pre-Dental Hygiene programs are for undergraduates who are interested in a career as a dental hygienist. Usually students may choose to complete a pre-dental hygiene studies track in preparation for a dental hygiene program.

Programs in Oregon

Dental Hygiene
Chemeketa Community College - AAS
Lane Community College - AAS
Mount Hood Community College - AAS, BS (in conjunction with OIT)
Oregon Institute of Technology - BS
Pacific University - BS
Portland Community College - AAS

Pre-Dental Hygiene
Central Oregon Community College - AAS
Eastern Oregon University - BS
Pacific University - BS
Rogue Community College - AAS
Southern Oregon University - BS

Resources
American Dental Hygienists' Association
American Dental Education Association
Hispanic Dental Association
National Dental Hygienists' Association
Dental Laboratory Technician

Average Salary: $30k - 70k
Years Higher Education: 0 - 2
Job Outlook: Excellent

Dental laboratory technology is the art, science and technology of designing and manufacturing corrective devices for and replacements of natural teeth. A dental laboratory technician communicates and collaborates with the dentist to plan, design and fabricate dental prostheses for individual patients.

The dentist is responsible for providing dental laboratory with a prescription detailing final treatment choice and for placement of restoration or corrective device in the patient’s mouth. The dental technician aids the dentist in material choices and case design and is responsible for fabrication of the final prostheses or corrective devices.

By fabricating esthetic dental prostheses that work well and by improving the patient’s smile, the dental laboratory technician influences not only patient’s physical and dental health but also improves his or her confidence and self-esteem.

Two types of dental specialties rely heavily on the skills of a dental laboratory technician: Restorative dentistry or prosthodontics is used when the patient loses a part or the entire tooth/teeth due to the decay, disease, illness or accident, and the tooth/teeth must be replaced to maintain normal fit, form and function.

Orthodontics is provided when the tooth/teeth must be moved or stabilized to optimize function, esthetics or to prevent painful dysfunction.

Dental laboratory technology specialties include:

- Crown and bridge
- Ceramics
- Dentures
- Partial dentures
- Implants
- Orthodontics

The profession of dental laboratory technology is:

- An art because each restoration is unique to each patient. The restoration must imitate or improve the beauty and the function of the patient's natural dentition and be in harmony with the rest of the system. The technician's greatest challenge is to create a restoration that looks and feels completely natural in the patient's mouth.
- A science that is advancing rapidly. In order to fabricate the fixed or removable dental prostheses, dental technicians must have a keen knowledge and understanding of tooth anatomy, masticatory functions and the materials and processes utilized in the creation of such devices. A variety of high-tech materials, such as zirconia, ceramics (i.e. lithium disilicate, feldspatic porcelains), plastics (i.e. PMMA, acrylics, composite resins) and metal alloys (i.e. metal substructures, implants, attachments, wires) are utilized in dental laboratories.

Driven by technology today more than ever. In the past decade, technology has taken over dentistry. In fact, the biggest dental advancements came from the field of dental laboratory technology in the form of computer-aided design/computer-aided manufacturing (CAD/CAM) technologies. Today, CAD/CAM is utilized as an integral part of the laboratory’s everyday
practice. With these technological advances and those to come, there is a very high demand for
dental designers who can design and assist in manufacturing of CAD/CAM
restorations. Because of these advances, aspiring dental lab technicians should take courses in
computer skills and programming.

Ideal candidates for this career possess excellent eye-hand coordination, attention to minute
details, ability to recognize the differences in color and shape, manual dexterity and interest in
material sciences and emerging technologies. Dental laboratory technology is ideal for those
who are artistic as well as for those who are business and technology savvy. In fact, this is the
only allied dental field that offers practitioners the chance to become entrepreneurs by opening
their own dental laboratory business.

The changes that affect modern dental laboratory technology are:

• Advancements in material sciences, technologies and manufacturing systems
• New legislations and regulations
• Health care and education
• Aging populations
• Changing practice models and emerging team-based care systems
• Global economies and market adjustments

Due to a shortage of technicians that is already affecting the field, it is certain that there is and
will be a high demand for experienced dental technicians who can handle the needs of an ever-
increasing number of dentists and their patients.

Working Conditions
The work of dental laboratory technicians is extremely delicate and time-consuming. Salaried
technicians usually work 40 hours/week, but self-employed technicians frequently work longer
hours. Dental laboratory technicians generally work in clean, well-lighted and well-ventilated
areas. Technicians usually have their own workbenches, which can be equipped with Bunsen
burners or electric waxes; grinding and polishing equipment; hand instruments, such as
spatulas and carvers; or they can work with computer design software, scanners and milling or
printing equipment.

Most dental technicians are employed in small boutique or commercial dental laboratories with
two to nine or more employees. Other labs are quite large employing more than 100
technicians. In large laboratories, dental laboratory technicians may work their way up to a
supervisory level and may train new technicians. Some private dental offices have their own in-
house laboratories. The military, hospitals, suppliers and manufacturers also employ a large
number of dental technicians.

Experienced technicians may choose to become teachers in dental laboratory technology
programs, sales representatives, technical support representatives or instructors for dental
manufacturers or suppliers.

Salary Range and Outlook
Employment for dental laboratory technicians is expected to grow 7% between 2012 and 2022,
according to the Bureau of Labor Statistics’ Occupational Outlook Handbook. As prosthetics like
veneers and crowns become less expensive, it is expected that there will be an increase in
demand for them. Hourly wages and salaries vary according to location and other factors.
The average wage for dental laboratory technicians who are just starting out is $12.74 per hour and the average salary is $30,000. Dental technicians with a lot of experience make an average wage of $22.79 per hour and the average salary is $70,310 per year.

**Academic Requirements**
Most dental laboratory technicians learn their craft on the job. They begin with simple tasks, such as pouring gypsum material into an impression and progress to more complex procedures, such as making dentures, crowns and bridges or bending wires.

Becoming a fully trained technician requires an average of three to four years of experience on the job, depending upon the individual’s aptitude and ambition, but it may take a few years more to become an accomplished technician.

With technology becoming an ever-increasing part of the dental laboratory technician’s job, it would be useful for aspiring technicians to take courses in computer skills and programming. Formal training in dental laboratory technology is available through community and junior colleges, vocational-technical institutes and the military. Training programs vary greatly both in length and in the level of training they provide. The most advanced training in dental laboratory technology is offered through two-year accredited associate degree programs followed by continuing education programs offered across the country. The American Dental Association website includes a list of accredited dental lab tech programs.

After receiving training, dental lab technicians may become certified by taking and passing the certified dental technician exam. Technicians can be certified in six specialty areas:

- Crowns and bridges
- Ceramics
- Partial dentures
- Complete dentures
- Implants
- Orthodontic appliances

To qualify for certification, technicians must meet technical prerequisites and pass three separate exams. The prerequisites can be met by obtaining one of the following: having at least five years of on-the-job training or experience in dental technology, or by graduating from an accredited dental laboratory technician program.

**Programs in Oregon**
**Dental Laboratory Technology**
*Portland Community College - Certificate, AAS*

**Resources**
- American Dental Association
- American Dental Education Association
- National Board for Certification in Dental Laboratory Technology
- Commission On Dental Accreditation
- The Foundation for Dental Laboratory Technology
- National Association of Dental Laboratories
- What's In Your Mouth?" campaign
Dentist

**Average Salary**: $220k  
**Years Higher Education**: 8  
**Job Outlook**: Excellent

Dentistry is the branch of the healing arts and sciences devoted to maintaining oral health. It is a dynamic health profession, offering opportunities to become a successful, highly respected member of the community.

Dentists enjoy excellent compensation and the high demand for dental care is likely to continue in the future. The realization that oral health can have a serious impact on systemic health drives the expansion of new professional opportunities each year.

A degree in dentistry offers a number of career options, including:

- Academic dentistry
- Private practice either as a general dentist or specialist (self-employed, employee, associate/partner)
- Dental research
- Dental public policy
- International health care
- Federal government (military dentist)

Approximately 80% of all dentists practice general dentistry. General dentists treat all patients, adults and children, in many different treatment facilities and settings. General dentists are graduates of dental school and hold a D.D.S. or D.M.D. degree. The D.M.D. and the D.D.S. are equivalent degrees that are awarded to dental students upon completion of the same types of programs.

Some dental school graduates opt for one or two years of additional education in a general practice residency or advanced education in general dentistry program, rather than immediately going into practice.

General dentists:

- Use the latest techniques and equipment to examine the head, neck and oral cavity to determine the oral health of the patient and identify and diagnose oral conditions that may manifest into systemic disease.
- Use the latest radiographic and computer-generated imaging as well as other specialized diagnostic techniques to identify diseases of the teeth, supporting bone, gingival tissues and other tissues in the oral cavity and head and neck.
- Restore and replace teeth damaged by decay, lost from trauma or disease, with newly developed dental materials, implants and crown and bridge techniques.
- Perform corrective surgery on gums and supporting bones to treat gum disease.
- Extract teeth when necessary using the most up-to-date anesthetic techniques.
- Eliminate pain arising from oral diseases, conditions and trauma, making use of prescriptive medicines to reduce pain and discomfort.
- Correct badly positioned teeth to improve chewing, speech, digestion of food and appearance.
- Oversee the administration and business of private practice and frequently employ and supervise a large number of staff and allied dental personnel to help treat their family of patients.
• Evaluate the overall health of their patients including taking and evaluating comprehensive medical histories.
• Provide instruction and advice on oral health care and preventive measures to maintain healthy oral tissues and prevent oral disease.
• Provide instruction and advice on oral health care, including individualized diet analysis, brushing and flossing techniques, the use of fluoridated products and other specialized preventive measures to maintain healthy oral tissues and prevent oral disease.

There are a number of dental specialties:

• Endodontists diagnose and treat injuries that are specific to the dental nerves and pulp (matter inside the tooth).
• Oral and maxillofacial pathologists study and research the causes, processes and effects of diseases with oral manifestations.
• Oral and maxillofacial radiologists take and interpret conventional, digital, CT, MRI and allied imaging modalities of oral-facial structures and disease.
• Oral and maxillofacial surgeons provide diagnostic services and treatment for injuries, diseases and defects of the neck, head, jaw and associated structures.
• Orthodontists and dentofacial orthopedists diagnose and treat problems related to irregular dental development, missing teeth and other abnormalities.
• Pediatric dentists treat children from birth to adolescence.
• Periodontists provide corrective surgery on gums and supporting bones to treat gum disease.
• Prosthodontists restore and replace teeth damaged by decay or lost from trauma or disease, with fixed or removable appliances constructed with newly developed dental material.
• Dental public health specialists develop policies and programs, such as health care reform, that affect the community at large.

Working Conditions
Approximately 90% of all dentists are engaged in delivery of care through private practices. Full-time dentists spend approximately 36 hours per week in their practices, of which approximately 33 hours per week is spent treating patients. They have great flexibility in determining the number of hours per week they choose to work.

The remaining 10% of dentists teach in dental education programs, conduct research and/or deliver care in the Armed Forces, the Indian Health Service, the U.S. Public Health Service or other clinical settings. Dentists engaged in teaching, research or related positions generally work regular 40-hour workweeks.

Academic Requirements
To practice dentistry in the United States, you must graduate from an accredited dental school. Dental school programs generally last four years. In order to be accepted into dental school, you have to take the American Dental Association’s Dental Admission Test (DAT).

In making admissions decisions, dental schools consider many factors, which may vary from one school to another. For example, many state-supported dental schools are required to accept a majority of students who reside in their home state. Some dental schools consider individuals without a bachelor’s degree, if they have completed a minimum of two years of full-time college study. However, preference is given to candidates who have a college degree by the time they enter dental school.
General criteria used in making admissions decisions include:

- Overall grade point average
- Number of biology, chemistry and physics courses completed and grades earned
- Total credit hours earned prior to enrollment in dental school (preference given to individuals with bachelor's degrees or more)
- Quality of academic preparation, e.g., degree of difficulty of courses, course load
- DAT scores
- Schools also look at a candidate's personal qualities, which can be reflected in the application and through letters of recommendation. For example, they may consider:
  - Awards, honors, scholarships
  - Extracurricular, volunteer, community service, leadership experiences
  - Work experience
  - Research experience
  - Evidence of overcoming hardships, commitment to education, perseverance
  - Knowledge of the profession of dentistry, including job experience or job shadowing

While you do not have to major in science as an undergraduate to be admitted to dental school, you do need to take certain biology, chemistry and physics courses. Work with a health professions advisor while in college to develop a well-rounded course of study that best meets your needs. Pre-dental students also are encouraged to join pre-dental clubs, talk with practicing dentists and, if possible, shadow dentists.

An increasing number of dental schools offer dual degree programs.

In many states, after graduating from dental school and passing your licensing examination, you can begin practicing dentistry immediately. No internship or residency is required. In several states, a one year post-doctoral residency is required in lieu of a licensing examination. Dental school graduates can opt for additional training, either in general practice dentistry or in one of the nine recognized advanced dental education specialties:

- Endodontics
- Oral and maxillofacial surgery
- Oral and maxillofacial radiology
- Oral pathology
- Orthodontics
- Pediatric dentistry
- Periodontics
- Prosthodontics
- Public health dentistry

The cost of a dental education is high, but the income you can earn as a dentist is also significant. Most dental graduates successfully manage loan repayment through a variety of options offered by the federal government, and in some cases, qualify for loan repayment programs that reduce the amount of student loan debt in return for service to designated populations, engaging in research or pursuing academic dentistry. ExploreHealthCareer.org’s Funding Opportunities tool and ADEA GoDental.org’s Money Matters section can help you find additional ways to pay for your education.
Manual Dexterity
In order to perform dental procedures, a dentist must be able to work with precision on an extremely small scale. Additionally, superior eye-hand coordination is critical to ensuring the safety of patients and the integrity of the profession. That's why it's important to develop your manual dexterity if you are interested in a career as a dentist.
In fact, the DAT specifically tests this skill, and most dental school admissions staff will ask you to discuss how you've developed your manual dexterity skills in interviews.

These are some things you can do to fine-tune your motor skills:

- Drawing
- Painting
- Woodcarving
- Sewing/needlepoint
- Crocheting or knitting
- Learning to tie fishing knots
- Learning a musical instrument that requires extensive hand-eye coordination, like a piano or violin

The sooner you start becoming more skillful with your hands, the more advanced you will be when this part of your dental school education begins.

Programs in Oregon
Dental Medicine
Oregon Health Sciences University - DDS

Resources
American Association for Dental Research
American Dental Association
American Dental Education Association
American Student Dental Association
ADEA GoDental
Hispanic Dental Association
National Dental Association
Society of American Indian Dentistry
Student National Dental Association
Environmental Health

The air we breathe, the water we drink, the food we eat, the places we work and the homes we live in – all aspects of our natural and human-made environment – have an impact on our health.

Complex interactions between human genetics and our physical surroundings can give rise to a variety of diseases and health conditions, from individual cases of asthma or cancer to headline-making news, such as E. coli in bags of spinach or lead in children’s toys.

Making Our World a Little Safer
Environmental health professionals work to improve public health by identifying, tracking and addressing environmental risk factors. They go by many titles, including environmental health practitioner, environmental health officer and public health official. Most environmental health professionals specialize in a particular area, such as:

- Reducing air, water, soil, noise or radiation pollution
- Protecting our food supply
- Improving safety in schools, public areas and the workplace
- Ensuring safe living conditions in housing
- Promoting public health with a focus on environmental hazards

Preventing and Mitigating Hazards
Prevention is a key focus of environmental health. Research, education, public policy, improved practices and new technologies developed by environmental health professionals help make our world cleaner and safer.

The work isn’t entirely regulatory. Many companies hire environmental health officers to monitor their internal processes and institute practices that will help protect workers and the public, while reducing the company’s potential liability.

Responding to Threats
When an environmental health threat is identified, the goal is to respond as quickly as possible to contain the hazard and mitigate the damage.

Many environmental hazards cannot be completely eliminated, so environmental health workers aim to reduce exposure, particularly for vulnerable populations such as children, sick people and the elderly.

A Team Effort that Crosses Borders
Environmental health professionals collaborate with and rely upon a wide range of professionals, including chemists, geologists, biologists, meteorologists, physicists, physicians and engineers as well as government officials and the media. The work is becoming increasingly international in scope, since environmental problems often extend beyond borders.

Individuals who succeed in this field tend to be team players with a strong interest in science, a commitment to the public welfare and an ability to see the big picture. The work is varied and interesting, and enables those in the field to apply science to making the world a better place. The related careers below are only a small number of many careers in environmental health you can choose to pursue.
Every time you enter a building, you put your life in the hands of the people who designed and constructed it and those who now maintain it and all the systems inside.

If they have done their jobs right, you have nothing to worry about. The walls are solid. The roof is supported. The floors are steady beneath your feet. There are no rats or termites hiding in the walls. The air inside is safe to breathe. If a fire breaks out, an alarm will warn you, and sprinklers may activate to douse the flames.

You don’t think about these things when you enter a building. Environmental health practitioners who specialize in the safety of our built environment do.

Built environment specialists are environmental health practitioners who monitor the safety of homes, apartments, schools and other buildings. They are trained to assess basic structural soundness and to inspect buildings for evidence of poor maintenance, infestation, fire hazards, blocked exits, lead paint, poor air or water quality, improper sanitation and other potential health concerns.

They often work for government agencies to help enforce codes and standards, and they may be empowered to issue citations, assess fines and even lock down unsafe properties. Other built environment specialists focus on design and planning, applying the latest research about potential hazards, such as asbestos or mold, to improve building design and reduce risks.

**Working Conditions**
Built environment specialists usually work a standard 40-hour week. They spend some time in an office, writing reports and coordinating their work with other professionals. The rest of their time is spent inspecting buildings.

The work can be fast-paced, with tight deadlines and multiple pressures.

Building inspections fall into two general categories: Routine and problem-focused. Routine inspections involve verifying that a building believed to be safe is, in fact, safe. This involves visually examining various parts of the building according to a checklist. Equipment also may be used to assess air quality and test for other potential issues.

Problem-focused inspections happen when a complaint has been filed or the inspector has a reason to believe a structure is unsafe. In this case, the built environment specialist may encounter unpleasant or even dangerous conditions, as well as potential opposition from building owners or management. There may be times when the job can get confrontational, if owners or management oppose inspections.

**Academic Requirements**
Most environmental health practitioners earn a four-year college degree with a scientific major. Some states offer certification for environmental health practitioners who have a specified amount of work experience and pass an examination. Many built environment specialists have a master’s degree in environmental health science or civil engineering.
Because environmental health practitioners must work with many different types of people and report their findings, good written and communication skills are essential. It also helps to have acute senses and be highly observant.

Other Related Fields
Chemistry
Chemistry is the study of matter and the changes it can undergo. Programs typically provide training for students planning careers in the chemical and biological sciences and also for those in biology, health related disciplines, earth sciences, secondary education, business, journalism and law.

Ecological Engineering
Ecological engineering programs prepare students to use ecology and engineering to predict, design, construct or restore, and manage ecosystems that integrate "human society with its natural environment for the benefit of both

Environmental Chemistry and Toxicology
Programs in environmental chemistry and toxicology prepare students for the scientific study of the chemical and biochemical phenomena that occur in natural places as well as the study of science concerned with the nature, effects, and detection of poisons.

Environmental Systems and Human Health
An environmental systems and human health program is usually a ecosystem-based public health training for students who would like to investigate and remediate environmental impacts on human health.

Programs in Oregon
Chemistry
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Lewis & Clark College - BS
Linfield College - BS
Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Oregon State University - BS, MS, PhD
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS, MS, PhD
University of Portland - BS
Western Oregon University - BS
Willamette University - BS
Ecological Engineering
Oregon State University - MS, PhD
Environmental Chemistry and Toxicology
Pacific University - BS

Environmental Health
Portland State University - MS

Environmental Systems and Human Health
Oregon Health Science University - MS

Resources
American Society of Safety Engineers
Association of Environmental Health Academic Programs
Choose a Career in Environmental Health
Environmental Health Services Branch
National Environmental Health Science and Protection Accreditation Council
National Institute of Environmental Health Sciences
National Library of Medicine
Researchers are learning more every day about the steps we can take to protect our health and extend our lives. New studies are revealing how changes in diet and lifestyle can help reduce the risk of many health problems such as cancer and heart disease.

Environmental health advocates are public health officials who work to identify potential threats to public health, increase awareness about the situation and give people the facts they need to protect their health. Environmental health advocates partner with health care professionals to establish health guidelines, which they then promote through local, state and national awareness campaigns. Think about some of the health care tips you’ve read about in newspapers or seen on T.V.

Environmental health advocates have helped increase awareness in the United States about the health effects caused by texting while driving, smoking, eating trans fats and not wearing seatbelts. When new health threats emerge, as AIDS did in the early 1980s, environmental health advocates try to reduce public fear and overreaction by giving people the facts they need to reduce their risk.

Around the world, environmental health advocates educate pregnant women about proper prenatal care, distribute mosquito nets to guard against malaria and vaccinate children against preventable diseases.

Environmental health advocates can be specialists in infectious diseases, epidemiology, statistics or communication. They may focus on a specific health issue or on a narrow aspect of the advocacy process, from analyzing research to monitoring statistics to planning public health campaigns.

A National Strategy to Revitalize Environmental Public Health Services, developed by the Centers for Disease Control and Prevention, lists these priorities for environmental health advocates:

- Environmentally related disease, such as foodborne or waterborne illnesses
- Emerging threats, including West Nile Virus, “bird flu” and MRSA, a bacteria that can cause serious and even deadly “staph” infections that are resistant to antibiotics.
- Complex public health issues, including health conditions that have not been conclusively linked to specific environmental factors and situations where debate about appropriate public health policy is ongoing

**Working Conditions**

Environmental health advocates typically work a standard-40 hour week, although overtime and weekend work may be required, particularly if a public health threat emerges. The work can be fast-paced, with tight deadlines and multiple pressures. Environmental health advocates work for local, state and federal government agencies; consulting firms; and nonprofit organizations.

Much of the work is done in an office environment, analyzing data and developing response strategies. Environmental health advocates may travel within the United States and internationally to attend meetings or make presentations.
**Academic Requirements**
Most environmental health advocates earn a four-year college degree with either a scientific or communications major. Some states offer certification for environmental health advocates who have a specified amount of work experience and pass an examination. Many also have a master’s degree in environmental health science.

Because environmental health advocates must work with many different types of people and report their findings, good written and communication skills are essential. It also helps to have acute senses and be highly observant.

**Other Related Programs**

**Environmental Systems and Human Health**
An environmental systems and human health program is usually a ecosystem-based public health training for students who would like to investigate and remediate environmental impacts on human health.

**Programs in Oregon**

**Environmental Systems and Human Health**
*Oregon Health Sciences University - MS*

**Resources**
American Public Health Association
Choose a Career in Environmental Health
Association of Environmental Health Academic Programs
National Environmental Health Association
National Library of Medicine
National Environmental Health Science and Protection Accreditation Council
National Institute of Environmental Health Sciences
Environmental Health Practitioner

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<td>$45 - 113k</td>
<td>4 - 6</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

Environmental health practitioners are dedicated to protecting public health by monitoring and recommending solutions to reduce pollution levels.

They use specialized equipment to measure the levels of contaminants in air, water and soil, as well as noise and radiation levels. Some also design solutions to reduce pollutants or assist in clean-up and remediation efforts.

Environmental health practitioners can be generalists or become specialized in a specific area:
- Air quality experts work indoors, monitoring allergens, mold and toxins in the air, as well as outdoors, measuring the pollutants generated by businesses, vehicles and agricultural operations.
- Soil specialists focus on risk assessment and reclamation of land contaminated by manufacturing processes, farming, garbage and other hazardous waste.
- Hazardous and solid waste professionals look for ways to minimize waste production, safely move and dispose of waste and, when necessary, expedite clean up of spilled waste.
- Noise abatement specialists protect our quality of life and our hearing by enforcing limits on ambient noise from vehicles, airports, construction and industrial sites, music venues and even the barking dog next door.
- Radiological assessors monitor radiation levels from power plants, medical and other x-ray equipment and natural sources.

Working Conditions
Environmental health practitioners typically work a standard 37 to 40 hour week, although overtime and weekend work may be required, particularly if the environmental health practitioner assists with emergency response activities.

While much of the work is done at a desk, analyzing data and writing reports, most environmental health practitioners also spend a great deal of time in the field, inspecting sites and taking samples. The work can be fast paced, with tight deadlines and multiple pressures. It can get confrontational, as well, particularly for environmental health practitioners who work in enforcement.

They use highly sensitive, and sometimes heavy, equipment to measure contaminant levels. They may be required to wear or carry this equipment for extended periods, don protective gear and work under less-than-sanitary conditions.

Environmental health practitioners work for local, state and federal government agencies, consulting firms and industry. If they work for a regulatory agency, they can be perceived as “environmental police,” intruding on business operations, issuing citations and even forcing temporary shutdowns.
Environmental health practitioners who work as consultants may focus on a specific geographic region or business area, assessing whether certain pieces of land are safe to build houses on, for example. Consultants directly hired by companies may travel to various industrial sites to keep manufacturing operations in compliance with environmental laws.

Other environmental health practitioners serve on broad—even international—emergency planning and response teams, developing rapid-response strategies and racing to sites to speed clean-up efforts following natural and human-made disasters.

**Academic Requirements**
Most environmental health practitioners earn a four-year college degree with a scientific major. Some states offer certification for environmental health practitioners who have a specified amount of work experience and pass an examination. Many environmental health practitioners have a master’s degree in environmental health science.

Acquiring a degree from an accredited environmental health degree program is highly recommended for individuals interested in entering the field of environmental health. Accreditation helps ensure a well-prepared workforce and indicates that an academic program has been found to have the curriculum, faculty, facilities and institutional support necessary to provide quality environmental health education. The National Environmental Health Science and Protection Accreditation Council is the only accreditation body for environmental health degree programs.

Accreditation is important to many employers, as well, including the federal government. For example, only students from accredited programs are eligible to participate in the U.S. Public Health Service’s Commissioned Corps Officer Student Extern Training Program. Because environmental health practitioners must work with many different types of people and report their findings, good written and communication skills are essential. It also helps to have acute senses and be highly observant.

**Other Related Fields**

**Biology**
Biology is the study of life. Programs typically focus on molecular, cellular, and ecological discoveries which form the basis of biology and are applied to the associations that exist among living organisms, including human evolution. Careers in the health care and pre-professional studies in dentistry, medicine, optometry, medical technology, podiatry, veterinary medicine, ecology, marine biology, and genetics are all possibilities for biology students.

**Chemistry**
Chemistry is the study of matter and the changes it can undergo. Programs typically provide training for students planning careers in the chemical and biological sciences and also for those in biology, health related disciplines, earth sciences, secondary education, business, journalism and law.

**Environmental Chemistry and Toxicology**
Programs in environmental chemistry and toxicology prepare students for the scientific study of the chemical and biochemical phenomena that occur in natural places as well as the study of science concerned with the nature, effects, and detection of poisons.
Environmental Systems and Human Health
An environmental systems and human health program is usually a ecosystem-based public health training for students who would like to investigate and remediate environmental impacts on human health.

Integrated Biology
Integrated biology is a program where the study of biological systems is best approached by incorporating many perspectives. It brings together a diversity of disciplines that complement one another to unravel the complexity of biology. It also incorporates the physical sciences and engineering, and the social sciences, as appropriate, to problems being addressing. It works with animals, plants and other organisms and our research spans the levels of the biological hierarchy from molecules to ecosystems.

Microbiology
Microbiology is the study of all living organisms that are too small to be visible with the naked eye. This includes bacteria, archaea, viruses, fungi, prions, protozoa and algae, collectively known as 'microbes'.

Programs in Oregon

**Biology**
- Central Oregon Community College - AAS
- Chemeketa Community College - AAS
- Clackamas Community College - AAS
- Clatsop Community College - AAS
- Concordia University - BS
- Eastern Oregon University - BS
- George Fox University - BS
- Lewis & Clark College - BS
- Linn-Benton Community College - AAS
- Mount Hood Community College - AAS
- Multnomah University - BS
- Northwest Christian University - BS
- Oregon Institute of Technology - BS
- Oregon State University - BS
- Oregon State University Cascades - BS
- Pacific University - BS
- Portland State University - BS, MS, PhD
- Reed College - BS
- Rogue Community College - AAS
- Southern Oregon University - BS
- Treasure Valley Community College - AAS
- Umpqua Community College - AAS
- University of Oregon - BS
- University of Portland - BS
- University of Western States - BS
- Warner Pacific University - BS
- Western Oregon University - BS
- Willamette University - BS
Chemistry
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Lewis & Clark College - BS
Linfield College - BS
Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Oregon State University - BS, MS, PhD
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS, MS, PhD
University of Portland - BS
Western Oregon University - BS
Willamette University - BS
Environmental Chemistry and Toxicology
Pacific University - BS
Environmental Systems and Human Health
Oregon Health and Science University - MS
Integrated Biology
Oregon State University - MS, PhD
Microbiology
Oregon State University - BS, MS, PhD

Resources
American Society of Safety Engineers
Choose a Career in Environmental Health
Association of Environmental Health Academic Programs
Environmental Health Services Branch
Environmental Protection Agency
National Environmental Health Science and Protection Accreditation Council
National Institute of Environmental Health Sciences
Once upon a time, Americans prepared food in their own kitchens, often using ingredients grown in their own gardens. Today, we eat fish caught in Costa Rica, vegetables grown in Chile and juice pressed in China.

And that's when we bother to cook at all. More than 20% of our meals are now prepared at a restaurant or in a commercial processing facility.

The more we rely on others to provide our food, the more we need food safety specialists. According to the Centers for Disease Control and Prevention, more than 76 million Americans contract a foodborne illness every year.

Food safety specialists help to ensure the quality and safety of our food supply. Most become experts in a specific aspect of food production or in a segment of the food industry, such as meat processing.

For food grown in the United States, food safety specialists enforce proper methods of seed selection, fertilization, pest control, harvesting, storage and transport. They make sure foods are properly labeled, kept at the right temperature and taken off the shelves once they expire. Import inspectors are charged with ensuring that food products imported into the United States meet the same safety standards.

For commercially prepared foods, food safety specialists monitor processing operations, inspect equipment and identify potential sources of contamination. Most foodborne illnesses come from bacteria, so cleanliness and temperature control are essential at every stage of production. Food safety specialists also inspect food service operators, such as restaurants and caterers, to enforce health and safety regulations.

Most food safety specialists are employed by government agencies as inspectors or work for a food producer helping to promote full compliance with food safety regulations.

**Working Conditions**
Food safety specialists see a lot of things the rest of us would rather not know. This is not a career for anyone with a sensitive stomach.

Inspections can take food safety specialists into processing plants, onto farms and into other facilities that can be excessively hot, cold, humid, noisy and smelly. Inspectors may be required to wear protective equipment and may be on their feet much of the day, climbing stairs, standing, kneeling and walking on slippery, narrow, uneven or muddy surfaces.

The work can be fast-paced, with tight deadlines and multiple pressures. It can get confrontational as well, if you must close down a facility because of health violations.

**Academic Requirements**
Environmental health practitioners like food safety specialists typically earn a four-year college degree with a scientific major. Some states offer certification for environmental health practitioners who have a specified amount of work experience and pass an examination.
Acquiring a degree from an accredited environmental health degree program is highly recommended for individuals interested in entering the field of environmental health.

Accreditation helps ensure a well-prepared workforce, and indicates that an academic program has been found to have the curriculum, faculty, facilities and institutional support necessary to provide quality environmental health education. The National Environmental Health Science and Protection Accreditation Council is the only accreditation body for environmental health degree programs.

Accreditation is important to employers as well, including the federal government. For example, only students from accredited programs are eligible to participate in the U.S. Public Health Service’s Commissioned Corps Officer Student Extern Training Program.

Experience in the food preparation industry can help you qualify for an entry-level position as a food inspector with the U.S. Department of Agriculture (USDA). USDA food safety specialists must pass a written test and have either a four-year degree or job-related experience that involves ensuring compliance with proper food safety standards.

Because food safety specialists must work with many different types of people and report their findings, good written and communication skills are essential. It also helps to have acute senses and be highly observant.

The National Environmental Health Association offers certification as a registered environmental health specialist or registered sanitarian. According to the association, “credentialed individuals may find positions easier to obtain and may increase their earnings.” Some food safety specialists go on to earn a Master’s of Public Health, with a focus on epidemiology, food safety, infectious diseases, environmental toxicology or health risk assessment.

Other Related Fields

Biology
Biology is the study of life. Programs typically focus on molecular, cellular, and ecological discoveries which form the basis of biology and are applied to the associations that exist among living organisms, including human evolution. Careers in the health care and pre-professional studies in dentistry, medicine, optometry, medical technology, podiatry, veterinary medicine, ecology, marine biology, and genetics are all possibilities for biology students.

Chemistry
Chemistry is the study of matter and the changes it can undergo. Programs typically provide training for students planning careers in the chemical and biological sciences and also for those in biology, health related disciplines, earth sciences, secondary education, business, journalism and law.

Food Science & Technology
Food Science and Technology concerns the chemistry and engineering necessary to deliver safe, appealing and convenient food products from the farm gate to the food marketer. The academic program usually integrates principles and concepts in the physical, biological, and engineering sciences, and applies them to the scientific and technological aspects of food processing.
Microbiology
Microbiology is the study of all living organisms that are too small to be visible with the naked eye. This includes bacteria, archaea, viruses, fungi, prions, protozoa and algae, collectively known as 'microbes'.

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Oregon State University Cascades - BS
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Portland State University - BS, MS, PhD
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Rogue Community College - AAS
Southern Oregon University - BS
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Eastern Oregon University - BS
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Lewis & Clark College - BS
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Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Oregon State University - BS, MS, PhD
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS, MS, PhD
University of Portland - BS
Western Oregon University - BS
Willamette University - BS

Food Science & Technology
Oregon State University - BS, MS, PhD

Microbiology
Oregon State University - BS, MS, PhD

Resources
Association of Environmental Health Academic Programs
Choose a Career in Environmental Health
National Environmental Health Association
National Environmental Health Science and Protection Accreditation Council
National Library of Medicine
According to the U.S. Bureau of Labor Statistics, more than 16 workers are injured on the job every day. Nearly 6,000 workers die from job-related accidents.

Occupational health and safety experts are concerned with the identification, prevention and control of health and safety hazards related to work and the work environment, as well as their prevention and control. They promote health and safety within organizations by developing safer, healthier and more efficient ways of working.

If you pursue a career in this field, you might design programs to control, eliminate or prevent health problems caused by chemical, physical or biological agents. You might advise organizations about using more ergonomically designed equipment or furniture. You might conduct occupational safety inspections or evaluate how well employers adhere to laws, regulations or policies designed to protect their workers’ health and safety.

Working Conditions
Occupational health and safety specialists and technicians work with many different people in a variety of environments. Their jobs often involve considerable fieldwork, and some travel frequently. Many occupational health and safety specialists and technicians work long and often irregular hours.

Academic Requirements
Most environmental health practitioners earn a four-year college degree with a scientific major. Some states offer certification for environmental health practitioners who have a specified amount of work experience and pass an examination. Because environmental health practitioners must work with many different types of people and report their findings, good written and communication skills are essential. It also helps to have acute senses and be highly observant.

Other Related Fields
Biology
Biology is the study of life. Programs typically focus on molecular, cellular, and ecological discoveries which form the basis of biology and are applied to the associations that exist among living organisms, including human evolution. Careers in the health care and pre-professional studies in dentistry, medicine, optometry, medical technology, podiatry, veterinary medicine, ecology, marine biology, and genetics are all possibilities for biology students.

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Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Multnomah University - BS
Northwest Christian University - BS
Oregon Institute of Technology - BS
Oregon State University - BS
Oregon State University Cascades - BS
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS
University of Portland - BS
University of Western States - BS
Warner Pacific University - BS
Western Oregon University - BS
Willamette University - BS

Resources
American Industrial Hygiene Association
American Public Health Association
Association of Environmental Health Academic Programs
Choose a Career in Environmental Health
Environmental Health Services Branch
National Library of Medicine
Occupational Safety & Health Administration
Forensic Science

Forensic science lies at the intersection of science and the law. The word “forensic” comes from the Latin word forensis, which means “to the forum” or with regard to debate or discussion.

Forensic scientists contribute to legal debates by applying scientific methods to the investigation of legal problems. Health care providers in this field include doctors, dentists and toxicologists. In many cases, they serve as frontline workers at the scene of a disaster or crime.

Interest in this fascinating field has exploded with the popularity of television series like “CSI” and “Bones.” Community colleges and four-year universities have responded by creating and expanding educational programs in forensic science. If you are interested in forensic science, make sure before enrolling in a program that the curriculum has been accredited by the Forensic Science Education Programs Accreditation Commission (FEPAC).

Forensic scientists use chemistry, physics, biology, mathematics and even psychology to help protect people, serve justice and promote better public health. In addition to working with law enforcement to help solve crimes, forensic scientists investigate and collect data on employee drug use, doping by athletes and environmental contamination for public use.
Crime Scene Investigator

Average Salary     Years Higher Education     Job Outlook
$27k - 52k     2 - 6     Excellent

Crime scene investigators (CSIs) go by many names, including evidence technician, crime scene technician, forensic investigator, crime scene analyst, criminalistics officer and more. In the past, most CSIs were trained police officers. In fact, most still work out of police stations today. However, the role is increasingly being given to civilians with scientific, rather than law enforcement, expertise.

CSIs spend most of their time in the field, working at crime scenes. The CSI’s job is to:

- Secure the crime scene
- Take detailed measurements
- Sketch and diagram the scene
- Take photographs
- Document evidence taken from the scene (location, nature, etc.)
- Package and label evidence for transfer to the lab
- Attend and photograph autopsies
- Write a report detailing evidence collection procedures and conclusions
- Testify to their findings in court
- Maintain equipment and restock portable evidence collection kits

The physical evidence collected by CSIs may include fingerprints, footprints, trace materials, hair and fibers and biological evidence found at the scene and on the victim’s body.

The evidence collected by the CSI is then transferred to a lab, in strict accordance with chain-of-evidence procedures. In the lab, technicians, including forensic chemists, forensic biologists and forensic toxicologists, analyze the samples. CSIs rarely process evidence, unless they have special training in fingerprint processing or blood spatter analysis, for example.

The CSI then prepares a written report detailing how and where all the evidence was collected. CSIs often must testify in court about their findings.

A CSI’s work is often messy, smelly, long and physically demanding. But most CSIs find helping to solve crimes by uncovering the physical evidence rewarding and challenging.

Working Conditions
A CSI must be prepared to work:

- Long shifts, on call, day or night, on holidays and on weekends
- Anywhere a crime has occurred, including areas that may be unsafe and/or unsanitary
- While wearing protective clothing, eyewear, gloves and other safety equipment
- Carrying heavy equipment
- In every type of environment, from cramped basements to dense brush to a knee-deep murky pond
- In all types of weather
- With body parts, bodily fluids and remains in every state of decomposition
- Around offensive smells and emotionally disturbing sights
- With the latest technology – and to continually learn new technologies and methodologies
- Carefully and methodically, even when under severe time pressures
With a wide range of people, including law enforcement, lab personnel and attorneys

Seeing the results of crimes on a daily basis can be emotionally taxing on the CSI. The workload can be overwhelming and the pressure to “work faster” intense. Being on call can take time away from family and friends, leading to burnout.

Academic Requirements
Educational requirements are often set by the hiring agency. Some require a two-year degree, while others demand a bachelor’s or even master’s degree with extensive study in both scientific subjects and criminal justice.

If you are interested in becoming a crime scene investigator (CSI), start asking questions now. If you want to work as a CSI in a specific city or county, contact the police department or sheriff’s department and ask whether the local CSIs are trained as police officers or civilian CSIs. In many areas, police officers do double duty as CSIs, spending the rest of their time doing police work.

If you decide to train as a police officer, you will likely need several years of experience before you can apply to work as a CSI.

Think ahead. Most CSIs eventually stop working in the field and go back to police work or transfer to the lab as forensic technicians.

Keep your record clean. CSIs must undergo background checks and, while a perfect record is not essential, you will have to answer for any legal infractions, even traffic tickets.

Other Related Fields
Biology
Biology is the study of life. Programs typically focus on molecular, cellular, and ecological discoveries which form the basis of biology and are applied to the associations that exist among living organisms, including human evolution. Careers in the health care and pre-professional studies in dentistry, medicine, optometry, medical technology, podiatry, veterinary medicine, ecology, marine biology, and genetics are all possibilities for biology students.

Chemistry
Chemistry is the study of matter and the changes it can undergo. Programs typically provide training for students planning careers in the chemical and biological sciences and also for those in biology, health related disciplines, earth sciences, secondary education, business, journalism and law.

Forensic Chemistry
A forensic chemistry program covers the application of chemistry and its subfield, forensic toxicology, in a legal setting. Students learn how a forensic chemist can assist in the identification of unknown materials found at a crime scene. Specialists in this field have a wide array of methods and instruments to help identify unknown substances.

Forensic Psychology
Forensic psychology programs are graduate level programs that specialize in applying psychological knowledge to legal matters, both in the criminal and civil arenas. The majority of students in this field already hold graduate degrees in psychology, most often a PhD or a PsyD, however there is growing body of undergraduate programs in this area where students can earn a baccalaureate degree in the field.
Molecular Biology
Molecular biology programs tend to focus on the branch of biology that deals with the structure and function of the macromolecules (e.g., proteins and nucleic acids) essential to life.

Programs in Oregon

Biology
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clackamas Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Lewis & Clark College - BS
Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Multnomah University - BS
Northwest Christian University - BS
Oregon Institute of Technology - BS
Oregon State University - BS
Oregon State University Cascades - BS
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS
University of Portland - BS
University of Western States - BS
Warner Pacific University - BS
Western Oregon University - BS
Willamette University - BS

Chemistry
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Lewis & Clark College - BS
Linfield College - BS
Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Oregon State University - BS, MS, PhD
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS, MS, PhD
University of Portland - BS
Western Oregon University - BS
Willamette University - BS
Forensic Chemistry
Southern Oregon University - BS

Forensic Psychology
Northwest Christian University - BS
Corban University - BS

Molecular Biology
Concordia University - BS
Lewis & Clark College - BS
Linfield College - BS
Oregon Health Science University - MS, PhD
Oregon State University - MS, PhD
Reed College - BS

Resources
International Crime Scene Investigators Association
American Academy of Forensic Sciences
Association for Crime Scene Reconstruction
Forensic Biologist

Average Salary: $27k - 52k
Years Higher Education: 4 - 8
Job Outlook: Excellent

Forensic biologists examine blood and other bodily fluids, hair, bones, insects and plant and animal remains to help identify victims and support criminal investigations. Using technology in the lab and in the field, forensic biologists collect and analyze biological evidence found on clothing, weapons and other surfaces to determine the time and cause of death.

They keep detailed logs and write reports about what they find. Attention to detail is critical, because a single mistake can cause the evidence to be thrown out of court. Senior-level forensic biologists may testify in court about their findings. Forensic biologists may become experts in:

- DNA analysis
- Forensic anthropology
- Forensic pathology
- Forensic entomology
- Forensic botany
- Biological chemistry

In addition to helping solve crimes, forensic biologists may investigate environmental contamination or other public health threats.

Working Conditions
Working so closely with biological material (including every sort of fluid found in the human body) can be messy, smelly and generally unpleasant.

Field work can be particularly dirty work. At crime scenes, forensic biologists collect leaves, insects and other biological material and examine the victim’s clothing and remains (which may be in an advanced state of decomposition). They may sift through the surrounding dirt and even garbage looking for biological evidence.

In the lab, forensic biologists examine this evidence using microscopes and other technology. They photograph and catalog the evidence and perform DNA and other tests on the samples. The work can be repetitive and boring, but the reward comes in finding a critical piece of evidence investigators can use to solve the crime.

Academic Requirements
Forensic biologists are scientists. Most graduate from a four-year college with a degree in biology, biochemistry, molecular biology or forensic biology. They need extensive laboratory experience and may take courses in genetics, biostatistics and general and organic chemistry. They also must be knowledgeable in physics and math. Be sure any program you choose is accredited by the Forensic Science Education Programs Accreditation Commission (FEPAC). A master’s degree in forensic science is usually required in order to advance as a forensic biologist in a crime laboratory.
Other Related Fields

Biochemistry
Biochemistry is a field of science that deals with the chemistry of life processes in plants and animals. A typical program in biochemistry focuses on the scientific study of the chemistry of living systems, their fundamental chemical substances and reactions, and their chemical pathways and information transfer systems, with particular reference to carbohydrates, proteins, lipids, and nucleic acids.

Biology
Biology is the study of life. Programs typically focus on molecular, cellular, and ecological discoveries which form the basis of biology and are applied to the associations that exist among living organisms, including human evolution. Careers in the health care and pre-professional studies in dentistry, medicine, optometry, medical technology, podiatry, veterinary medicine, ecology, marine biology, and genetics are all possibilities for biology students.

Molecular Biology
Molecular biology programs tend to focus on the branch of biology that deals with the structure and function of the macromolecules (e.g., proteins and nucleic acids) essential to life.

Programs in Oregon

Biochemistry
Eastern Oregon University - BS
Linfield College - BS
Mount Hood Community College - AAS
Oregon Health Sciences University - MS, PhD
Oregon State University - BS, MS, PhD
Portland State University - BS
Southern Oregon University - BS
University of Oregon - BS, MS, PhD

Biology
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Concordia University - BS
Lewis & Clark College - BS
Linfield College - BS
Oregon Health Science University - MS, PhD
Oregon State University - MS, PhD
Reed College - BS

**Resources**
American Academy of Forensic Sciences
American Society for Crime Lab Directors
American Society for Microbiology
Forensic Chemist

Average Salary      Years Higher Education    Job Outlook
$27k - 52k          4 - 6         Excellent

Forensic chemists analyze non-biological trace evidence found at crime scenes in order to identify unknown materials and match samples to known substances. They also analyze drugs/controlled substances taken from scenes and people in order to identify and sometimes quantify these materials.

Working in a lab, they run tests on samples collected by investigators. They use a variety of techniques, including microscopy, optical analysis (such as UV, infrared, X-ray), gas chromatography and other technologies. They carefully document their findings and write reports that are used to support criminal investigations. Forensic chemists may also testify to their findings in court.

Working Conditions
Forensic chemists usually work in a laboratory setting, often as employees of local, state or federal government. They often stand or sit for long periods of time, perform repetitive tasks and use highly technical equipment.

They must follow strict procedures regarding the handling and documentation of evidence, as well as scientific protocols to ensure the quality and reliability of tests and equipment. The pressure from law enforcement personnel to speed results can be intense, so the forensic chemist must be able to prioritize well and work efficiently while ensuring that the results are accurate.

Testifying in court requires strong communication skills, including the ability to remain calm in the face of cross-examination and explain complex scientific procedures in a manner juries can understand.

Academic Requirements
A forensic chemist generally has a bachelor’s degree in chemistry, clinical chemistry or another related scientific field. Some universities now offer master’s degrees and even doctoral (Ph.D.) degrees in forensic chemistry.

Be sure any program you choose is accredited by the Forensic Science Education Programs Accreditation Commission (FEPAC).

Other Related Fields
Biochemistry
Biochemistry is a field of science that deals with the chemistry of life processes in plants and animals. A typical program in biochemistry focuses on the scientific study of the chemistry of living systems, their fundamental chemical substances and reactions, and their chemical pathways and information transfer systems, with particular reference to carbohydrates, proteins, lipids, and nucleic acids.
Chemistry
Chemistry is the study of matter and the changes it can undergo. Programs typically provide training for students planning careers in the chemical and biological sciences and also for those in biology, health related disciplines, earth sciences, secondary education, business, journalism and law.

Molecular Biology
Molecular biology programs tend to focus on the branch of biology that deals with the structure and function of the macromolecules (e.g., proteins and nucleic acids) essential to life.

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Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS, MS, PhD
University of Portland - BS
Western Oregon University - BS
Willamette University - BS

Forensic Chemistry
Southern Oregon University

Molecular Biology
Concordia University - BS
Lewis & Clark College - BS
Linfield College - BS
Oregon Health Science University - MS, PhD
Oregon State University - MS, PhD
Reed College - BS
Resources
American Academy of Forensic Sciences
American Association for Clinical Chemistry
American Chemical Society
AOAC INTERNATIONAL
The International Association of Forensic Toxicologists
Society of Forensic Technologists
Forensic Odontologist

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<tr>
<th>Average Salary</th>
<th>Years Higher Education</th>
<th>Job Outlook</th>
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<td>$150k - 185k</td>
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Forensic odontologists are highly experienced, specially trained dentists who use their expertise to help identify unknown remains and trace bite marks to a specific individual. The forensic odontologist may be called in to do so by police officers, the medical examiner or the coroner. In death cases, the forensic odontologist attends the autopsy and takes photographs, cranial measurements, dental impressions and x-rays from the remains. These samples are then compared to those of known missing individuals. If a match can be made, the remains can be identified.

In cases where bite marks are found on the body of a victim or suspected perpetrator, or on food, chewing gum or another item, the forensic odontologist uses the same procedure to try to determine or exclude potential sources of the bite marks.

The forensic odontologist then writes a detailed report explaining what was done and what conclusions can be made and he or she must be prepared to explain the process and justify the findings in court.

Also called forensic dentists, forensic odontologists are typically called in to:

- Identify human remains that cannot be identified using face recognition, fingerprints or other means
- Identify bodies in mass fatalities, such as plane crashes and natural disasters
- Determine the source of bite mark injuries, in cases of assault or suspected abuse
- Estimate the age of skeletal remains
- Testify in cases of dental malpractice

**Working Conditions**

Forensic odontologists usually work as regular dentists much of the time, performing forensic examinations as needed at the request of local law enforcement or the medical examiner. In death cases, the forensic odontologist may go to the crime or disaster scene. Otherwise, the measurements and x-rays are taken as part of the autopsy.

Since crimes and disasters can happen at any time, a forensic odontologist “on call” must be ready to work long hours, day or night, on holidays and on weekends.

The work is highly detailed, demands extremely fine motor skills and requires extraordinary precision and accuracy. Complex equipment, including computers, microscopes and other technologies, may be used in the identification process.

Forensic odontology requires attention to detail and the ability to work patiently to complete a lengthy process step by step without rushing. The forensic odontologist must be able to make conclusions based solely on the physical evidence available.

The forensic odontologist must keep accurate and complete records. Such close involvement with the investigation of crimes and mass disasters can be emotionally disturbing.
Academic Requirements
A forensic odontologist must first earn a Doctor of Dental Science (DDS) or Doctor of Dental Medicine (DMD) degree to become a dentist. Extensive additional training is required in the techniques and methods of forensic odontology, along with hands-on experience, often by shadowing a more senior professional.

To become board certified by the American Board of Forensic Odontology of the American Academy of Forensic Sciences, the forensic odontologist must work 25 cases, accumulate 350 qualification points by attending meetings and other professional development programs and pass a qualifying exam.

Other Related Fields

Dentistry
Dentistry is the branch of the healing arts and sciences devoted to maintaining oral health. It is a dynamic health profession, offering opportunities to become a successful, highly respected member of the community.

Programs in Oregon
Dental Medicine
Oregon Health Science University - PhD

Resources
American Academy of Forensic Sciences
American Board of Forensic Odontology
American Society of Forensic Odontology
Forensic Pathologist

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Forensic pathologists, or medical examiners, are specially trained physicians who examine the bodies of people who died suddenly, unexpectedly or violently.

The forensic pathologist is responsible for determining the cause (the ultimate and immediate reasons for the cessation of life) and manner of death (homicide, suicide, accidental, natural or unknown).

To determine the identity of the victim and the time, manner and cause of death, the forensic pathologist:

- Studies the medical history
- Evaluates crime scene evidence including witness statements
- Performs an autopsy to uncover evidence of injury or disease
- Collects medical and trace evidence from the body for further analysis

In addition to anatomy, the forensic pathologist may draw upon specialized knowledge and training in:

- Toxicology
- Firearms/ballistics
- Trace evidence
- Serology (blood analysis)
- DNA technology

They also ensure that procedures regarding evidence collection are followed, and coordinate their work with law enforcement operations.

A city, county or state may appoint a forensic pathologist to act as a medical examiner. Clinical forensic pathologists examine living patients, usually in cases where sexual assault or abuse is suspected.

Once all the evidence is analyzed, the forensic pathologist prepares a written report and may also testify to these findings in court.

Becoming a forensic pathologist is not easy. It takes a minimum of 13 years of education and training after high school to become a forensic pathologist. It also takes a strong stomach because it can be a gruesome, smelly and disgusting job. And you need to have a lot of confidence in order to defend your conclusions in the face of opposition from lawyers, the media and even the victims’ families.

**Working Conditions**

Some forensic pathologists work for the city, county or federal government, while others work in hospitals, medical schools or with a private or group practice that contracts autopsy services to government agencies.
Forensic pathologists spend most of their time in the lab, performing autopsies or examining tissue samples under the microscope. This can involve standing for extended periods and working with small tools.

A typical workday can last 10 to 12 hours or longer, particularly if the forensic pathologist must examine a distant death site. Part of the workday also may include writing official reports and making court appearances.

The physical demands are not great, but over time, the forensic pathologist may become emotionally affected by continual exposure to graphic violence.

**Academic Requirements**
If you are interested in this field, you will need to be strong in all areas of science. Forensic pathology draws on biology, physics, chemistry, even psychology and anthropology. Communication skills are also important since half the job of being a forensic pathologist is writing reports and giving testimony.

A forensic pathologist must first earn a bachelor’s degree, then a medical degree, either an M.D. or D.O. Extensive additional education and training is required, including four to five years of training in anatomic, clinical and/or forensic pathology and a one-year residency or fellowship in forensic pathology.

Once training is completed, a forensic pathologist must pass an exam to become board certified.

**Other Related Fields**
**Allopathic Medicine**
Allopathic medical programs train physicians, who are on the front line of medicine. As practitioners, they work in solo or group practices examining patients and obtaining medical histories; ordering, performing and interpreting diagnostic tests; and prescribing and administering treatment for patients suffering from injury or disease. They also counsel patients about illness, injuries, health conditions and preventive healthcare (diet/fitness, smoking cessation, etc.).

**Osteopathic Medicine**
An osteopathic physician, or D.O., is a board-certified physician who is fully licensed to practice in every state and in more than 65 countries worldwide. As licensed physicians, they diagnose, treat, prescribe medications and perform surgery. D.O.s are trained to focus on the whole person, working in partnership with patients to help them achieve a high level of wellness by focusing on health promotion and disease prevention.

**Programs in Oregon**
**Allopathic Medicine**
Oregon Health Science University - MD

**Osteopathic Medicine**
College of Osteopathic Medicine of the Pacific-Northwest - DO

**Resources**
American Academy of Forensic Sciences
American Society for Investigative Pathology
National Association of Medical Examiners
National Board of Medical Examiners
Forensic Toxicologist

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If you are fascinated by the effects chemicals can have on the human body, this may be the career for you. Forensic toxicologists perform scientific tests on bodily fluids and tissue samples to identify any drugs or chemicals present in the body. Working in a lab, the forensic toxicologist performs tests on samples collected by forensic pathologists during an autopsy or by crime scene investigators. They use highly sophisticated instruments, chemical reagents and precise methodologies to determine the presence or absence of specific substances in the sample. As part of a team investigating a crime, a forensic toxicologist will isolate and identify any substances in the body that may have contributed to the crime, such as:

- Alcohol
- Illegal or prescription drugs
- Other chemicals
- Poisons
- Metals
- Gases, such as carbon monoxide

The work requires patience and the ability to follow specific steps to achieve reliable results. The forensic toxicologist must document every step of the process and take care to follow rules regarding chain of custody for physical evidence.

The field of forensic toxicology has grown to include drug and alcohol testing for employers and traffic enforcement officials as well as testing animal samples for wildlife criminal investigators and testing for “date rape” drugs and performance-enhancing substances.

Forensic toxicologists also work on cases involving environmental contamination, to determine the impact of chemical spills on nearby populations.

Investigators rely on the forensic toxicologist to make reliable conclusions about the impact a specific amount of a specific substance would have on a specific individual. Often, this requires the professional to form an educated opinion based on science and experience.

If asked to testify in court, the forensic toxicologist must be prepared to justify that opinion and to explain complex methodologies in terms a jury can understand.

**Working Conditions**

Most forensic toxicologists work in labs run by law enforcement agencies, medical examiners or private drug testing facilities. They often must sit or stand for long periods of time. The tests they perform require very fine motor skills and a dogged commitment to following rigorous scientific protocols.

Working with bodily fluids and tissue samples can be messy and smelly. The forensic toxicologist is also exposed to details about crimes, which can be emotionally difficult.

The workload can be significant, and when the samples come from a crime scene, the pressure to perform tests faster can be strong. The forensic toxicologist must be able to resist this pressure, work efficiently without rushing and prioritize effectively.
Academic Requirements
Because the science of forensic toxicology is constantly advancing, it’s important that, if you are interested in this field, you enjoy learning. Keeping pace with new technologies, methodologies and chemicals demands constant learning.

A forensic toxicologist generally has a bachelor’s degree in chemistry, clinical chemistry, pharmacology or another scientific field. Some universities now offer master’s degrees and doctoral degrees in forensic toxicology. Be sure that you choose a bachelor’s or master’s program in forensic science that is accredited by the Forensic Science Education Programs Accreditation Commission (FEPAC).

Professionals who have several years of experience in the field can obtain certification from the American Board of Forensic Toxicology, the American Board of Clinical Chemistry and the American Board of Toxicology.

Other Related Fields
Chemistry
Chemistry is the study of matter and the changes it can undergo. Programs typically provide training for students planning careers in the chemical and biological sciences and also for those in biology, health related disciplines, earth sciences, secondary education, business, journalism and law.

Environmental Chemistry and Toxicology
Programs in environmental chemistry and toxicology prepare students for the scientific study of the chemical and biochemical phenomena that occur in natural places as well as the study of science concerned with the nature, effects, and detection of poisons.

Pharmacology
Pharmacology programs focus on the study of how a drug affects a biological system and how the body responds to the drug. The discipline encompasses the sources, chemical properties, biological effects and therapeutic uses of drugs. These effects can be therapeutic or toxic, depending on many factors.

Programs in Oregon
Chemistry
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Lewis & Clark College - BS
Linfield College - BS
Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Oregon State University - BS, MS, PhD
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS, MS, PhD
University of Portland - BS
Western Oregon University - BS
Willamette University - BS

Environmental Chemistry & Toxicology
Pacific University - BS

Pharmacology
Oregon Health Science University - PhD

Resources
American Academy of Forensic Science
Society of Forensic Toxicology
The International Association of Forensic Toxicologists
As this century grows older, the U.S. population will be aging right along with it. In fact, by mid-century, one in five Americans will be 65 years old or older, and more than 10 million Americans will be over age 85.

As we age, we not only may need more care but more expert care for the types of health conditions and concerns we’re likely to face. That’s why geriatrics is a fast-growing field. Geriatrics is the medical field dedicated to the care of older adults. Physicians, nurses, pharmacists, social workers, mental health professionals and many other health professionals may choose to specialize in geriatrics. Health care workers who care for older adults often work as a team, providing comprehensive care for patients, their caregivers and other family members too.

Opportunities in geriatrics careers and health care careers that include care of older people are projected to grow as the U.S. population ages.
Geriatric Pharmacist

Average Salary $89k - 150k
Years Higher Education 6 - 8
Job Outlook Excellent

Open your grandmother’s medicine cabinet, and you’ll probably find many bottles of pills. Older people are more likely to be taking a variety of medications to manage multiple chronic health issues such as hypertension, diabetes, arthritis, Alzheimer’s disease, pain, and other diseases and conditions associated with aging, as well as occasional problems like colds or infections.

Geriatric pharmacists, also known as consultant pharmacists, specialize in dispensing medication and counseling older patients about those medications. Like all pharmacists, they label medications and dispense them as prescribed by a physician or other health professional, but some geriatric pharmacists don’t dispense medications at all.

Rather, these pharmacists work solely in a consultative role as part of the health care team taking care of older adults in skilled nursing facilities, assisted living facilities, hospice facilities and numerous other care sites. Their main role in these settings is to ensure the best management of medications to foster better patient health.

They tend to take extra time to speak with their patients to:
• Explain when and how to take the medication
• Describe any potential side effects, including possible adverse reactions
• Ensure that the new medication won’t interact with any other prescriptions, nutritional supplements or over-the-counter medications the patient is taking or contribute to a medication-related misadventure such as lightheadedness, which can lead to falls
• Make adjustments in dosage or recommend changes in medications to alleviate unwanted side effects
• Perform routine tests, such as blood-sugar and blood-pressure monitoring
• Answer questions about medication management and other health concerns
• Help patients save money by recommending generics or special insurance programs

Preventing adverse reactions is a key goal of the geriatric pharmacist. According to the Institute of Medicine, medication errors kill more than 100,000 people each year, including errors in medication dosing or administering a drug. Because older patients take more drugs, their risk of interaction is higher. Geriatric pharmacists are trained to screen for and help reduce these risks. They can also help ensure that patients take their medication correctly and consistently.

Patients don’t always understand the importance of taking medications as prescribed. If they attribute a side effect, such as fatigue or sleeplessness, to the drug, they may stop taking it. A geriatric pharmacist can probe for these situations and either make a change in the patient’s regimen or emphasize the need for taking the medication as ordered by the health care provider.

Working Conditions
Many geriatric pharmacists work in or near hospitals, long-term care facilities, assisted living centers and housing communities with large elderly populations. They may work in a pharmacy based in a health care facility or in a retail pharmacy, serving older customers.
In addition to dispensing medication, they consult with patients, confer with physicians and review medical charts. While most work normal business hours, like most health professionals, geriatric pharmacists may have to be on call some evenings, weekends and holidays.

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Salary Range and Outlook
Full-time pharmacists earn between $89,000 and $150,600 per year, according to the Bureau of Labor Statistics (BLS). Salaries vary greatly depending on experience, setting (for example, federal VA hospitals, private long-term care pharmacy, or in a solo practice). The demand for geriatric pharmacists is expected to grow as the Baby Boomer generation ages.

Academic Requirements
Geriatric pharmacists must complete the same training program required of all pharmacists: completion of a pharmacy degree (PharmD or RPh). Some states require a special consultant pharmacist license. Check with your state Board of Pharmacy as to requirements to practice as a consultant pharmacist in the state(s) in which you are licensed.

The Commission for Certification in Geriatric Pharmacy (CCGP) first began certifying geriatric pharmacists in 1997. To become certified, a pharmacist must be licensed, have at least two years of work experience, pass a written exam and fulfill continuing education requirements.

Other Related Fields
Pharmaceutical Sciences
A program in pharmaceutical sciences combines a broad range of scientific disciplines that are critical to the discovery and development of new drugs and therapies.

Programs in Oregon
Pharmaceutical Sciences
Oregon State University - MS, PhD
Pacific University - BS/MS, PhD

Resources
American Association of Colleges of Pharmacy
American College of Clinical Pharmacy
American Pharmacists Association
American Society of Consultant Pharmacists
American Society of Health-System Pharmacists
Board of Pharmacy Specialties
Commission for Certification in Geriatric Pharmacy
Geriatric psychiatrists can greatly improve quality of life for patients who have mental illnesses and for their families. Geriatric psychiatrists specialize in the diagnosis and treatment of mental health issues that occur more commonly in older patients, such as dementia, depression, anxiety, late life addiction disorders and schizophrenia.

The geriatric psychiatrist uses knowledge of biological, psychological and social factors in working with patients. Because older patients often face physical as well as mental health issues, geriatric psychiatrists strive to treat the patient as a “whole” person. They take into consideration a patient’s overall health and emotional state, as well as available social supports.

Older patients also may be dealing with multiple problems such as:

- Grief over the loss of a spouse or lifelong friends
- Feelings of isolation or lack of purpose
- Stress over financial issues
- Fears of illness or death
- Emotional problems related to health concerns (for example, coping with pain or a cancer diagnosis)
- Problems coping with changes around them

The geriatric psychiatrist starts by taking a complete history of the patient’s health, family supports living situation and general mental status. Tests may be conducted to aid in diagnosis. In many cases, they consult with the patient’s family members to obtain information about the patient’s situation and to ensure that the patient understands and is able to follow the treatment plan. The geriatric psychiatrist may also recommend resources to help the family, if they need assistance to support the patient.

Many patients who see a geriatric psychiatrist are also seeing other health care providers. The geriatric psychiatrist often consults with these other providers to determine how other health issues or medications may be affecting the patient’s mental status.

A geriatric psychiatrist can choose from a number of career options, including clinical practice, researcher, academic or clinician educator.

**Working Conditions**

Geriatric psychiatrists work in private and group practices, as well as long-term care facilities, assisted living centers, veteran’s hospitals and academic institutions. As with other physicians, geriatric psychiatrists working in inpatient facilities may have to be on call nights and weekends.

**Salary Range and Outlook**

The number of people over age 65 is expected to double in the next 20 years, so demand for geriatric psychiatrists will no doubt increase.

Geriatric psychiatrists earn an average salary of $155,000 per year. Compensation varies greatly depending on the size of the doctor’s practice, the practice setting and the focus of the doctor’s work.
Academic Requirements
Geriatric psychiatrists first train to become allopathic physicians (MD) or osteopathic physicians (DO). Following medical school (which lasts four years), the doctor must complete a residency (which is another four years) in general psychiatry and a one-year fellowship in geriatric psychiatry. Some obtain additional fellowship training in research or educational scholarship.

To become board-certified in geriatric psychiatry, the doctor must pass two examinations, first to become board-certified in psychiatry and then to be certified in the subspecialty of geriatric psychiatry. The American Board of Psychiatry and Neurology administers both exams.

Certification is not required to practice, but it is a demonstration of the doctor’s specialized knowledge and skills, and may be required by certain employers. Recent changes in Medicare regulations allow identification of patient care provided by geriatric psychiatry subspecialists.

Other Related Fields
Allopathic Medicine
Allopathic medical programs train physicians, who are on the front line of medicine. As practitioners, they work in solo or group practices examining patients and obtaining medical histories; ordering, performing and interpreting diagnostic tests; and prescribing and administering treatment for patients suffering from injury or disease. They also counsel patients about illness, injuries, health conditions and preventive healthcare (diet/fitness, smoking cessation, etc.).

Osteopathic Medicine
An osteopathic physician, or D.O., is a board-certified physician who is fully licensed to practice in every state and in more than 65 countries worldwide. As licensed physicians, they diagnose, treat, prescribe medications and perform surgery. D.O.s are trained to focus on the whole person, working in partnership with patients to help them achieve a high level of wellness by focusing on health promotion and disease prevention.

Programs in Oregon
Allopathic Medicine
Oregon Health Science University - MD
Geriatric Psychiatry
Oregon Health Science University - Fellowship
Osteopathic Medicine
College of Osteopathic Medicine of the Pacific-Northwest - DO

Resources
American Association for Geriatric Psychiatry
American Board of Psychiatry and Neurology
Geriatric Staff Nurse

Average Salary: $57k - 73K
Years Higher Education: 4 - 6
Job Outlook: Excellent

Geriatric staff nurses focus on caring for older adults. As the U.S. population ages, this career is in high demand. According to the U.S. Census, by 2050 more than 20% of Americans—88 million people will be over age 65. Yet less than 1% of registered nurses and 3% of advanced practice registered nurses are certified in geriatrics, according to the American Geriatric Society.

Geriatric nurses are educated to understand and treat the often complex physical and mental health needs of older people. They try to help their patients protect their health and cope with changes in their mental and physical abilities, so older people can stay independent and active as long as possible.

Geriatric nurses must enjoy working with older people. They must be patient, listen extremely carefully and balance the needs of their patients with sometimes conflicting demands from family members.

When working with their patients, a geriatric nurse will:

- Assess the patient’s mental status and cognitive (thinking) skills
- Understand patient’s acute and chronic health issues
- Discuss common health concerns, such as falls, incontinence, changing sleep patterns and sexual issues
- Organize medications
- Educate the patient about personal safety and disease prevention
- Explain and recommend adjustments to the patient’s medication regimen to ensure adherence
- Link the patient with local resources as needed

Many older people have health conditions that do not require hospitalization, but must be treated with medication, changes in diet, use of special equipment (such as a blood sugar monitor or walker), daily exercises or other adaptations. Geriatric nurses help design and explain these healthcare regimens to patients and their families. They often function as “case managers,” linking families with community resources to help them care for elderly members.

Working Conditions
Geriatric nurses work in a variety of practice settings such as hospitals, nursing homes, rehabilitation facilities, senior centers, retirement communities and patients’ homes. They often work as part of a care team that includes physicians, social workers, nursing aides, physical and occupational therapists and other caring professionals.

In hospitals, geriatric nurses tend to work with treatment teams that have large older patient populations, such as outpatient surgery, cardiology, rehabilitation, ophthalmology, dermatology and geriatric mental health (treating older patients with psychiatric conditions, such as Alzheimer’s, anxiety and depression).

In rehabilitation and long-term care facilities, geriatric nurses manage patient care from initial assessment through development, implementation and evaluation of the care plan. They may also take on administrative, training and leadership roles.
Salary Range and Outlook
Because of the aging population, there is increasing demand for geriatric nurses, especially in nursing homes and health care facilities that have a high older patient population. Bilingual nurses, particularly those fluent in both Spanish and English, are needed. The average salary for a geriatric nurse is $63,382, but salaries vary greatly depending on your experience, education and where you work.

Academic Requirements
In preparation for a career in geriatric nurses, many individuals volunteer at a local senior center, nursing home or hospice and seek experiences working with patients who have mobility issues, sensory (hearing and sight) deficits, cognitive impairments, and chronic and terminal disease. It is important to assess your ability to handle the physical and emotional challenges of working with patients who may not ever “get well.”

To become a geriatric nurse, you must become a registered nurse by first earning a Bachelor of Science in Nursing at an accredited four-year college or an associate degree or diploma. After graduation, you must pass a national licensing exam called the NCLEX-RN before you can practice as a nurse.

Once you have gained some work experience, you can pursue certification as a geriatric nurse. With additional education at the graduate level, you can become a gerontological nurse practitioner or geriatric clinical nurse specialist. Graduate education is typically required for specialist, administrative or supervisory roles, and for geriatric nursing research.

Other Related Fields
Registered Nurse
A registered nurse (RN) is a nurse who holds a nursing diploma or Associate Degree in Nursing (ADN), has passed the NCLEX-RN exam administered by the National Council of State Boards of Nursing (NCSBN) and has met all the other licensing requirements mandated by their state’s board of nursing. RNs are generalists and are not required to choose a specialization. To gain recognition as a specialized nurse professional, RNs typically need to undergo further experience, clinical practice, and education in their specialized field. In fact, employers may require RNs to prove their specialized competency by becoming certified in their specialty area through a nationally recognized certifying body.

Programs in Oregon
Registered Nurse (RN)
Blue Mountain Community College - AAS
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clackamas Community College - AAS
Clatsop Community College - AAS
Columbia Gorge Community College - AAS
Klamath Community College - AAS
Lane Community College - AAS
Mount Hood Community College - AAS
Oregon Coast Community College - AAS
Portland Community College - AAS
Rogue Community College - AAS
Southwest Oregon Community College - AAS
Tillamook Bay Community College - AAS
Resources
American Nurses Association
Geriatrician

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Every single day, more than 10,000 people living in the United States reach age 65. As aging occurs, their bodies change. Older adults encounter a variety of acute (sudden, severe) and chronic (ongoing) health conditions that make their medical care more complex. More than half of adults age 65 or older, for example, have three or more medical problems, such as heart disease, diabetes, arthritis, Alzheimer’s disease and/or high blood pressure.

A geriatrician is an allopathic or osteopathic health care provider who is specifically trained to evaluate and manage the unique health care needs and treatment preferences of older people. Most become certified in internal or family medicine and pursue additional training in treating the special health needs of older patients in order to become board certified in geriatric medicine.

Geriatricians focus on maintaining patient well-being and independent functioning. They diagnose and treat conditions that may commonly occur with age. If they suspect cancer, neurological problems or other serious health issues, they may also refer patients to specialists and work with interdisciplinary teams to coordinate care. Geriatricians may also work with other health professionals who specialize in caring for older adults, including geriatric nurses, geriatric pharmacists, physical therapists, occupational therapists and mental health professionals.

Because many of their patients take a variety of pills every day, geriatricians must closely monitor the side effects of prescribed medications and be aware of potential drug interactions. They also balance the potential benefit of a treatment against the possible risks. For example, while a 30-year-old patient might have surgery to repair a broken bone, the same surgery might pose too many risks for a patient in her 80s.

Geriatricians pay close attention to their patients’ physical and mental functioning. They often are the first to inform a patient when he or she should no longer consider driving or might want to think about transitioning to a supportive living facility. They may also be the first to engage patients and families in advance care planning discussions about long-term care, hospice care, etc.

**Working Conditions**

Geriatricians work in private practices, group practices, long-term and post-acute care facilities and hospitals. They face the same challenges confronting all physicians, including the need for more resources and strategies for building effective relationships with patients and their families. Because patients are usually older, geriatricians also must be emotionally prepared to handle physical and mental decline and death.

On the other hand, geriatricians are gaining new treatment tools and working in a field filled with growing need and rewarding opportunities. Research is improving treatment options for conditions that affect older people, and advances in medical technology now enable geriatricians to treat illnesses and injuries in new ways. Laparoscopic surgery, for example, now makes possible a wide range of surgical procedures that were once considered too risky for older patients.
Academic Requirements
Geriatricians must complete a four-year undergraduate degree, followed by medical school and a three-year residency, usually in internal or family medicine. Following residency, the physician may practice for a while or apply directly to a geriatric medicine fellowship program.

During geriatric training, geriatricians learn about the many conditions and risks that affect the elderly. They study the impact of aging on the human body and mind, learn how to measure and monitor physical and mental function. During their fellowship, geriatricians work with elderly patients, mastering the “soft skills” necessary to earn patient trust and provide compassionate, effective care. They learn how to assess potential health concerns, as well as social, mental and other problems.

Other Related Fields

Aging Services
Aging services programs usually focus on teaching students how to enhance and sustain the quality of life for older adults who are poor, frail or incapacitated, and who have little support.

Allopathic Medicine
Allopathic medical programs train physicians, who are on the front line of medicine. As practitioners, they work in solo or group practices examining patients and obtaining medical histories; ordering, performing and interpreting diagnostic tests; and prescribing and administering treatment for patients suffering from injury or disease. They also counsel patients about illness, injuries, health conditions and preventive healthcare (diet/fitness, smoking cessation, etc.).

Gerontology
Gerontology programs are where students will learn about how and why we age, ways to reduce stigma around aging and optimize the aging process, the purpose, strengths, and challenges of programs and services for improving the quality of life for older people and their families, and ways to take advantage of the resource that older adults represent and shape places that work for people of all ages and abilities.

Long Term Care
Long term care programs tend to focus on learning how to treat and assist patients with chronic diseases, the disabled, elderly and many others who comprise a large population of individuals who need extended care.

Osteopathic Medicine
An osteopathic physician, or D.O., is a board-certified physician who is fully licensed to practice in every state and in more than 65 countries worldwide. As licensed physicians, they diagnose, treat, prescribe medications and perform surgery. D.O.s are trained to focus on the whole person, working in partnership with patients to help them achieve a high level of wellness by focusing on health promotion and disease prevention.

Programs in Oregon

Aging Services
Portland State University - BS

Allopathic Medicine
Oregon Health Science University - MD

Geriatrics
Oregon Health Science University - Fellowship
Gerontology
Clackamas Community College - Certificate
Oregon State University - Graduate Certificate
Pacific University - Graduate Certificate
Portland Community College - Certificate, AAS (numerous specialties)
Portland State University - Graduate Certificate
Western Oregon University - BS

Long Term Care
Concordia University - BS
Mount Hood Community College - AAS, BS (in conjunction with Concordia University)

Osteopathic Medicine
College of Osteopathic Medicine of the Pacific-Northwest - DO

Resources
Alzheimer's Association
American Federation for Aging Research (AFAR)
American Geriatrics Society
American Society on Aging
Eldercare Workforce Alliance
The Gerontological Society of America
Health in Aging Foundation
National Council on Aging, Inc.
Health Administration/Management

Health care is a business and, like every other business, it needs good management to keep it running smoothly. Today, an estimated 300,000 people serve in health administration, from middle management to CEO positions at organizations that range in size from one or two staff members to major international companies employing hundreds of thousands of employees. They are the business side of health care and their responsibilities include developing policy, coordinating and directing planning, maintaining an efficient and effective organizational structure, managing the organization’s assets, and analyzing the organization’s profitability and efficiency. A health care management career requires leadership skills, specialized knowledge of the health care industry, financial management, human resources, health care technology and informatics.

As the large baby-boom population ages and people remain active later in life, the health care industry as a whole is likely to see increased need for medical services. That means there will be more need for managers to supervise and coordinate health care services. In fact, according to the Bureau of Labor Statistics (BLS), employment in the field of health care management is projected to grow 17% from 2014 to 2024, much faster than the average for all occupations.

In addition to facilities like hospitals and nursing homes, the BLS projects that there will be more need for health care managers in health care practitioners’ offices as well. As some services previously provided in hospitals shift to those practitioners, medical group practices are also likely to become larger, creating a need for managers to oversee the business side of the practices.
Health Administrator

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<tr>
<th>Average Salary</th>
<th>Years Higher Education</th>
<th>Job Outlook</th>
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<tbody>
<tr>
<td>$50k - 170k</td>
<td>4 - 6</td>
<td>Excellent</td>
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Health care administrators, also known as health services managers and health care managers, direct the operation of hospitals, health systems and other types of organizations. They have responsibility for facilities, services, programs, staff, budgets, relations with other organizations and other management functions, depending on the type and size of the organization. Unlike clinicians, health administrators or managers do not deal directly with patients on a day-to-day basis. Instead, they help to shape policy, make needed changes and lead our nation’s health-related organizations in a way that serves individual patients by helping to improve the health care system.

Some help to shape health care policy by pursuing careers with local, state or federal agencies (such as the Food and Drug Administration and Centers for Medicare & Medicaid Services) or health-related national associations, such as the Red Cross or the American Hospital Association.

Careers in this field require professionalism and leadership skills, in-depth knowledge of health care delivery and financial structure, an understanding of medical language and how patient care organizations are structured and operate.

Recent graduates can find entry-level jobs in either line management, such as director of admissions or marketing or vice president of human resources, or in staff positions, like managed care analyst, risk management analyst or sales consultant. Opportunities are available across the country, in large cities as well as in small rural communities.

Working Conditions
Most health administrators work 40 hours a week, though there may be times that longer hours are necessary. Since the facilities they manage (nursing homes, hospitals, clinics, etc.) operate around the clock, a manager may be called at all hours to deal with issues. You can find administrator/managers in hospitals, physician group practices, nursing homes and home health agencies. They also work in the public sector, for example in health departments, or in the private sector, such as with pharmaceutical companies, health insurance providers, consulting firms or companies that make medical supplies and equipment. Generally, health care administrators work in offices. Most work full-time and some are called upon to work more than 40 hours a week. Depending on the position and organization, health care administrators may need to be on call in the evenings and weekends in case of emergencies. Some travel may also be involved, since managers may need to inspect satellite facilities, attend meetings, etc.

Salary Range and Outlook
The median salary for medical and health services managers, as reported by the Bureau of Labor and Statistics was $94,500 in May 2015. Salaries will vary according to type of organization, location and experience, among other factors. An estimated 300,000 people serve in health administration, from middle management to CEO positions. The Bureau of Labor Statistics projects that employment in this career will grow 17% between 2014 and 2024, much faster than average.
Academic Requirements
Degrees in health management/administration are available at the baccalaureate, master’s and doctoral levels:

An undergraduate program provides the basic knowledge, skills and applied studies needed for entry-level positions. Some students may also get an undergraduate degree to qualify to apply to a graduate program.

Graduate programs offer students a lot of flexibility, from a master’s degree in health administration, health management, or public health, degrees in business with course concentration in health services management or joint degrees—a master’s degree in both business administration and public health, for example. You can search for a certified undergraduate program on the Association of University Programs in Health Administration’s website. You can search for an accredited program on the Commission on Accreditation of Healthcare Management Education’s website.

College graduates can apply for a graduate program, no matter what their undergraduate degree is in, from health care management and business, to biology, sociology, policy, public health, government, social work or allied health professions. Some coursework in economics and statistics is helpful, but not generally a requirement. The Health Administration, Management and Policy Centralized Application Service is a centralized application service designed for students applying to graduate programs in health administration, health care management and health policy.

Programs generally last two years and include coursework in health care policy and law, marketing, organizational behavior, health care financing, human resources, and other health care management topics. This program may also include a supervised internship, residency, or fellowship.

Health care practitioners may also opt to get an undergraduate or graduate degree in health management/administration in order to prepare for leadership positions within their clinical specialty.

Medical and health services managers must be familiar with management principles and practices. A master’s degree in health services administration, long-term care administration, health sciences, public health, public administration or business administration is the standard credential for most generalist positions in this field. However, a bachelor’s degree is adequate for some entry-level positions in smaller facilities, at the departmental level within health care organizations and in health information management.

Other Related Fields
Allied Health
The allied health professions fall into two broad categories: technicians (assistants) and therapists/technologists. Technicians are trained to perform procedures, and their education lasts less than two years. They are required to work under the supervision of technologists or therapists.

Health Care Administration
Health care administrators train individuals to become health care administrators. Health care administrators are individuals or groups of people who act as the central point of control within hospitals. These individuals may be previous or current clinicians, or individuals with other backgrounds. There are two types of administrators, generalists and specialists. Generalists are individuals who are responsible for managing or helping to manage an entire facility. Specialists
are individuals who are responsible for the efficient operations of a specific department such as policy analysis, finance, accounting, budgeting, human resources, or marketing.

**Health Care MBA**
Health care MBA programs tend to allow individuals to study for and receive dual degrees in Health Care Administration as well as graduate degree in Business Administration.

**Health Care Management**
Health Care Management programs is a rapidly growing area of the Health Care Industry that is ideal for those individuals who like the idea of working in Health Care but do not want to provide direct patient care.

**Programs in Oregon**

**Allied Health**
*Lane Community College - AAS*
*Oregon Institute of Technology - MS*

**Health Administration**
*George Fox University - BS*
*Linfield College - Certificate, BS*
*Portland State University - MS*

**Health Care Administration**
*Concordia University - BS*
*Mount Hood Community College - AAS, BS*
*Pacific University - MS*
*Southern Oregon University - BS*
*Umpqua Community College - AAS*
*Warner Pacific University - BS*

**Health Care MBA**
*Portland State University - BS, MBA*

**Health Care Management**
*Multnomah University - BS*
*Oregon Health Science University - MS, Graduate Certificate*
*Oregon Institute of Technology - BS*

**Resources**

*American College of Healthcare Executives*
*American Public Health Association*
*Association of University Programs in Health Administration*
*American Hospital Association*
*Commission on Accreditation Healthcare Management Education*

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Informatics

Health or medical informatics is a discipline that includes all aspects of health care information science, from fundamental research to clinical applications. Medical informatics encompasses all means of understanding and promoting the effective organization, analysis, management and use of information in health care. Although the medical informatics field shares the general scope of these interests with some other health care specialties and disciplines, medical informatics has developed its own areas of emphasis and approaches that have set it apart.

People who work in medical informatics are highly educated in both information science and health care. They understand how to acquire, store, protect, retrieve and use a wide range of information about health and medicine. They understand the "ins and outs" of computerized and non-computerized information systems and also are familiar with clinical guidelines, workflows and medical terminology.
Dental Informatics

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<th>Average Salary</th>
<th>Years Higher Education</th>
<th>Job Outlook</th>
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<tbody>
<tr>
<td>$85k - 110k</td>
<td>8 - 13</td>
<td>Good</td>
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Dental informatics specialists look for ways to use computers and new technologies to enhance the practice of dentistry. Dental informatics specialists create theoretical models that help dental researchers test new ideas, systems and approaches.

A model for oral cancer, for example, would include information about symptoms of the disease and biological processes that affect cancer growth. Tools built on this model can help dentists diagnose patients quickly and accurately. Researchers can use the model to test theories about how to treat disease.

The field of dental informatics is only about 20 years old, but it has great potential to improve dental research, education and patient care. Dental informaticians study a range of important issues, including:

- Creating an electronic oral health record
- Developing devices that enable dentists to record patient information while examining the patient
- Enabling teledentistry
- Compiling geographic information for dental epidemiology studies
- Developing standardized vocabularies for dental diagnosis and treatment
- Supporting genetic studies in oral health
- Developing software for dental education
- Creating virtual reality simulators that let dental students practice clinical skills
- Developing automated systems to simplify dental office management

**Working Conditions**
Experts in dental informatics typically work in a university, dental school, government agency or research organization associated with a large corporation.

Dental informaticians work on long-term research projects that require patience and attention to detail.

They usually work as part of a team that may include researchers from other disciplines, as well as technicians and students. They must keep informed about developments in related areas of computer science, information science, cognitive science, telecommunications, linguistics, engineering and other areas, so they can find ways to apply new developments to dental research and practice.

**Salary Range and Outlook**
Salaries for dental informaticians will vary according to where they work and the type of work they do. In addition, degrees influence salaries—whether an informatician has a master’s degree or doctorate and whether he or she has a professional degree in dentistry as well.
Academic Requirements
Dental informatics is a subdomain within biomedical informatics that requires extensive education in one or more academic areas. Some dental informaticians train as dentists and receive their informatics training in postdoctoral programs or enroll in advanced degree programs after they have gotten their dental education.

Many colleges and universities offer informatics degrees and have programs and training opportunities in dentistry and other health care disciplines through which students can focus their training.

The American Medical Informatics Association maintains a comprehensive list of academic and training programs in informatics.

Other Related Fields
Dental Medicine
Dentistry programs focus on the healing arts and sciences devoted to maintaining oral health. It is a dynamic health profession, offering opportunities to become a successful, highly respected member of the community.

Health Care Informatics
Health informatics programs (also called Health Information Systems) focus on the information technology used to organize and analyze health records to improve healthcare outcomes. Health Informatics deals with the resources, devices and methods to utilize acquisition, storage, retrieval, and use of information in health and medicine.

Health Informatics
Health informatics (also called health care informatics, healthcare informatics, medical informatics, nursing informatics, clinical informatics, or biomedical informatics) is a program that focuses on information engineering applied to the field of health care, essentially the management and use of patient healthcare information.

Programs in Oregon
Dental Medicine
Oregon Health Science University - DDS

Health Care Informatics
Rogue Community College - AAS

Health Informatics
Oregon Institute of Technology - BS
Rogue Community College - AAS

Resources
American Dental Association
American Dental Education Association
American Medical Informatics Association
Nursing Informatics

<table>
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<tr>
<th>Average Salary</th>
<th>Years Higher Education</th>
<th>Job Outlook</th>
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<tbody>
<tr>
<td>$100k</td>
<td>4 - 6</td>
<td>Very Good</td>
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The International Medical Informatics Association (IMIA) defines nursing informatics as the “science and practice (that) integrates nursing, its information and knowledge, with management of information and communication technologies to promote the health of people, families, and communities worldwide.” The application of nursing informatics knowledge is empowering for all health care practitioners in achieving patient-centered care.

Nurse informaticists work as developers of communication and information technologies, educators, researchers, chief nursing officers, chief information officers, software engineers, implementation consultants, policy developers, and business owners to advance health care.

The American Medical Informatics Association defines the nurse informaticist’s core areas of work as:

- Concept representation and standards to support evidence-based practice, research and education
- Data and communication standards to build an interoperable national data infrastructure
- Research methodologies to disseminate new knowledge into practice
- Information presentation and retrieval approaches to support safe patient-centered care
- Information and communication technologies to address interprofessional work flow needs across all care venues
- Vision and management for the development, design and implementation of communication and information technology
- Definition of health care policy to advance the public's health

Working Conditions
Nurse informaticists work in a variety of areas including health systems, business and industry and academia. As leaders in the field of health informatics, nurse informaticists work as chief nursing informatics officers, clinical analysts, informatics nurse specialists and nurse data scientists.

Their scope of practice may include participation in the planning, design, implementation and evaluation of electronic health records in health system organizations. They play a vital role in the application of information systems in analyzing and researching clinical and administrative performance analytics. They assist in the integration of information technology into the workflow of nurses.

Salary Range and Outlook
The average salary for a nurse informaticist was $100,717 in 2014, according to a survey done by the Healthcare Information and Management Systems Society (HIMSS).

Academic Requirements
Most nurse informaticists begin their careers as registered nurses. It is important for nurse informaticists to understand the nursing process, so they can design systems that will solve problems with patient care.
After completing a bachelor’s degree in nursing, many nurse informaticists obtain a master’s degree in nursing or a field related to computer science or information science. This career involves extensive project management, critical thinking and creativity.

Nurse informaticists must be able to work effectively with many different kinds of people. They must be skilled in resolving conflicting demands to develop systems that meet everyone’s needs.

The American Nurses Association Credentialing Center provides advanced training and certification in nursing informatics. You can also become a Certified Professional in Healthcare Information Management Systems (CPHIMS) or a Certified Professional in Health Information Technology (CPHIT).

**Other Related Fields**

**Health Care Informatics**

Health informatics programs (also called Health Information Systems) focus on the information technology used to organize and analyze health records to improve healthcare outcomes. Health Informatics deals with the resources, devices and methods to utilize acquisition, storage, retrieval, and use of information in health and medicine.

**Health Informatics**

Health informatics (also called health care informatics, healthcare informatics, medical informatics, nursing informatics, clinical informatics, or biomedical informatics) is a program that focuses on information engineering applied to the field of health care, essentially the management and use of patient healthcare information.

**Nursing**

A registered nurse (RN) is a nurse who holds a nursing diploma or Associate Degree in Nursing (ADN), has passed the NCLEX-RN exam administered by the National Council of State Boards of Nursing (NCSBN) and has met all the other licensing requirements mandated by their state’s board of nursing. RNs are generalists and are not required to choose a specialization. To gain recognition as a specialized nurse professional, RNs typically need to undergo further experience, clinical practice, and education in their specialized field. In fact, employers may require RNs to prove their specialized competency by becoming certified in their specialty area through a nationally recognized certifying body.

**Programs in Oregon**

**Health Care Informatics**

*Rogue Community College - AAS*

**Health Informatics**

*Oregon Institute of Technology - BS*

*Rogue Community College - AAS*

**Registered Nurse (RN) (BSN) (MSN) (PhD)**

*Blue Mountain Community College - AAS*

*Central Oregon Community College - AAS*

*Chemeteka Community College - AAS*

*Clackamas Community College - AAS*

*Clatsop Community College - AAS*

*Columbia Gorge Community College - AAS*

*Concordia University - BSN*

*Eastern Oregon University - BSN*

*George Fox University - BSN*
Klamath Community College - AAS
Lane Community College - AAS
Linfield College - BS
Mount Hood Community College - AAS
Northwest Christian University - BSN, MSN
Oregon Health Science University - BSN, MSN, PhD
Oregon Institute of Technology - BSN
Oregon Coast Community College - AAS
Portland Community College - AAS
Rogue Community College - AAS
Southern Oregon University - BSN, MSN, PhD
Southwest Oregon Community College - AAS
Tillamook Bay Community College - AAS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Portland - BSN, MSN, PhD
Warner Pacific University - BS

Resources
American Association of Colleges of Nursing
American Medical Informatics Association
American Nurses Association
American Nursing Informatics Association
Health Information and Management Systems Society
Medical Informatics

Average Salary    Years Higher Education    Very Good
$48k - 125k       4 - 6                      Excellent

Medical informatics is the intersection of information science, computer science, and health care. This field deals with the resources, devices, and methods required to optimize the acquisition, storage, retrieval, and use of information in health and biomedicine.

This program covers the multidisciplinary field of informatics, decision support systems, telemedicine, ethics, consumer health informatics, international healthcare systems, global health informatics, translational research informatics, and home care. Students design and implement innovative applications and promote new technologies to improve health care. Programs are designed to focus on:

- complex medical decisions
- evidence-based medicine
- disease management
- population health management

Established regulations, such as the Health Insurance Portability and Accountability Act (HIPAA), include specific security and compliance provisions for the healthcare sector. The advancement of technology in the medical field, accompanied by the requirements to keep sensitive data confidential, creates the need for a graduate program that offers medical informatics education and provides course work and study in the critical area of data security.

A program in Medical Informatics is designed to:

- deepen understanding and knowledge of medical informatics and computer/information security
- provide research opportunities within the field of medical informatics
- provide a flexible curriculum to allow for both traditional and nontraditional graduate students

Working Conditions

Medical Informatics is an extensive field, and those in this profession work in a variety of environments. For instance, many work in hospitals, clinics, group practices or skilled nursing facilities. In most of these settings, direct patient care is delivered. Yet the type of patient care can vary greatly, ranging from preventative care to treatment of illnesses or end-of-life care.

Professionals in this occupation work among medical staff including doctors, nurses and other care providers. Typically, health informatics professionals do not work in conditions where they must provide direct patient care. Instead, they work with managers to establish policies and procedures that are formulated to improve the quality of patient care, such as meaningful use.

They may also work with IT professionals to develop, test and improve computer databases, and often train other staff members on information management policies and computer systems. Since many healthcare facilities are open 24 hours every day, healthcare informatics workers will have to work some weekends, nights and holidays. Group practices, outpatient facilities and similar work settings offer a more standard work schedule, with regular working hours Monday through Friday.
Salary Range and Outlook
The fields of healthcare informatics and healthcare information technology are growing very quickly. The U.S. Bureau of Labor Statistics (BLS) predicts that the employment of computer systems analysts in general will be 21% between 2014 and 2024, with additional growth expected in the healthcare fields. In contrast, database administrators working at general medical and surgical hospitals will see job growth of about 7% during the same decade, per the BLS. Depending upon type of job and educational background people in the medical informatics field tend to earn anywhere from $48,000 to $125,000.

Academic Requirements
To work in the health informatics field, you need a minimum of an associate's degree for a technician job. Earning a degree in healthcare informatics or healthcare information technology is often a good way to enter the field. The type of degree you'll need in order to work in healthcare informatics systems can vary widely. Some positions that fall under the general heading of healthcare informatics, such as healthcare information technician, require only an associate's degree, whereas others, especially those in management, require advanced degrees. Different job titles and responsibilities can require a bachelor's degree or even a master's degree if you want to go into an upper-level management position. The pay scale increases with more education.

Other Related Fields
Applied Information Management
Applied information management programs focus on how well one communicates with clients, how secure data is, and whether your organization meets its goals. This field tends to focus on the areas of information management, information design, business management, and applied research.

Biomedical Informatics
Biomedical informatics programs focus on informatics at the cellular and molecular level. The term bioinformatics refers to a focus on genomics and related areas, while the computation biology term indicates a strong emphases on computation methods. As the work of bioinformatics and computational biomedicine begins to impact people and healthcare, its focus adds to the area of translational bioinformatics that applies BCB techniques to problems of human health and disease.

Computer and Network Administration
Computer and network administration programs serve to create system administrators. Network and computer systems administrators are responsible for the day-to-day operation of these networks. They organize, install, and support an organization's computer systems, including local area networks (LANs), wide area networks (WANs), network segments, intranets, and other data communication systems.

Computer Systems and Information Technology
Computer systems and information technology programs prepare students for employment at the entry level as Computer Technicians, Network Technicians, and Network Administrators.

Cybersecurity and Information Assurance
Cybersecurity is a relatively new field. Cybersecurity is the protection of internet-connected systems, including hardware, software and data, from cyberattacks. In a computing context, security comprises cybersecurity and physical security -- both are used by enterprises to protect against unauthorized access to data centers and other computerized systems. Information
assurance is a more established discipline with a broader focus to include the protection of
digital and non-digital information assets, such as hard copy records.

**Electronic Health Records**
Electronic health records programs are usually certificate programs designed to provide the
technical skills and basic knowledge for students interested in a professional setting for
electronic health record career. Students learn to understand software application and
equipment operations, engage in insurance and billing process, complete patient charting,
understand and comply with healthcare regulations and quality improvement measures and
reporting. This certificate is for individuals seeking skills needed to work in physicians’ offices,
hospitals, veterinary offices, behavioral offices, etc.

**Health Care Informatics**
Health informatics programs (also called Health Information Systems) focus on the information
technology used to organize and analyze health records to improve healthcare outcomes.
Health Informatics deals with the resources, devices and methods to utilize acquisition, storage,
retrieval, and use of information in health and medicine.

**Health Informatics**
Health informatics (also called health care informatics, healthcare informatics, medical
informatics, nursing informatics, clinical informatics, or biomedical informatics) is a program that
focuses on information engineering applied to the field of health care, essentially the
management and use of patient healthcare information.

**Information Systems**
Information Systems is an academic study of systems with a specific reference to information
and the complementary networks of hardware and software that people and organizations use
to collect, filter, process, create and also distribute data.

**Information Technology**
Information technology programs study the use of systems (especially computers and
telecommunications) for storing, retrieving, and sending information.

**Management and Information Systems**
Management Information Systems programs (MIS) usually focus the study of people,
technology, organizations, and the relationships among them. MIS professionals help firms
realize maximum benefit from investment in personnel, equipment, and business processes.
MIS is a people-oriented field with an emphasis on service through technology.

**Programs in Oregon**
**Applied Information Management**
*University of Oregon - MS*

**Biomedical Informatics**
*Oregon Health and Science University - MS, PhD*

**Computer and Network Administration**
*Clackamas Community College - Certificate*
*Linn-Benton Community College - AAS*
*Portland Community College - AAS*

**Computer Systems and Information Technology**
*Chemeketa Community College - AAS*
*Linfield College - BS*
Cybersecurity and Information Assurance  
Linfield College - Certificate  
Mount Hood Community College - AAS  
Portland Community College - AAS  
Umpqua Community College - AAS  
Electronic Health Records  
Klamath Community College - Certificate  
Health Care Informatics  
Rogue Community College - AAS  
Health Informatics  
Oregon Institute of Technology - BS  
Rogue Community College - AAS  
Information Systems  
George Fox University - BS  
Information Technology  
Mount Hood Community College - BS (in conjunction with Multnomah University)  
Multnomah University - BS  
Oregon Institute of Technology - BS  
Rogue Community College - AAS  
Management and Information Systems  
Western Oregon University - MS  

Resources  
American Health Information Management Association(AHIMA)  
American Society for Information Science and Technology  
AMIA (American Medical Informatics Association)  
Healthcare Information and Management Systems Society (HIMSS)  
International Medical Informatics Association
Modern medicine generally refers to clinical practice: the diagnosis, treatment and prevention of disease by a physician. That physician may be an allopathic physician (M.D.) or an osteopathic physician (D.O.).

The scope of medicine is wider, however, than its clinical practice. It also includes, for example, health care science: the application of science and technology to improve the delivery of care. For example, physician scientists conduct basic science and perform translational or clinical research, and biogerontologists are physicians who study what happens to our bodies as we age.

Surgery is another branch of medicine that focuses on diagnosing and treating disease, deformity and injury by incision or manipulation, especially with instruments.

Other careers in medicine include:

- Clinical Ethicist
- Disaster Medical Specialist
- Emergency Medicine
- Family Medicine
- Palliative Care Physician
- Pathologist

Additionally, as there is greater need for clinical practitioners, those who practice medicine have expanded beyond physicians to include physician assistants and nurse practitioners. While nurse practitioners are considered part of the nursing field rather than medicine, their jobs are similar to physician assistants. Both work with physicians as part of an integrated medical team. Like physicians, nurse practitioners diagnose and treat illness and disease and prescribe medication for patients.
Along with nurses, physicians are on the front line of medicine. As practitioners, they work in solo or group practices examining patients and obtaining medical histories, ordering, performing and interpreting diagnostic tests; and prescribing and administering treatment for patients suffering from injury or disease. They also counsel patients about illnesses, injuries, health conditions and preventive healthcare (diet/fitness, smoking cessation, etc.).

In hospitals, they provide emergency care, perform surgery and care for patients with injuries or life-threatening illnesses like cancer or serious conditions like asthma. In laboratories across the country, physician researchers look for the cause of illnesses and for new and better ways to treat all kinds of diseases and injuries. They run medical centers and teach future generations of physicians and other health care practitioners.

It’s an exciting and rewarding career and it’s also a broad one, which is why physicians choose a specialty during their training. The Accreditation Council for Graduate Medical Education accredits training programs in 133 specialties and subspecialties, and the American Board of Medical Specialties represents 24 board-certified specialties (with many sub-specialties within each of these major specialties).

These are a few examples of the types of specialties:

- Anesthesiology
- Cardiovascular medicine
- Dermatology
- Emergency medicine
- Family medicine
- Internal medicine
- Neurology
- Oncology
- Orthopedics
- Pediatrics
- Psychiatry
- Radiation oncology
- Sports medicine
- Surgery

If you are interested in becoming a physician, you can choose from two paths—getting your doctor of medicine (M.D.) degree or getting a doctor of osteopathic medicine (D.O.) degree. While the end result is the same—a career as a physician—the training and education are different.

**Working Conditions**

Physicians work in a variety of health care settings. Many work in private practice, either alone or as part of a medical practice. Others work in hospitals, medical centers, universities or government agencies.

Physicians may work long hours, including in the evening, overnight and on weekends. The duties, training, salaries and workforce information vary according to the specialty field you decide to pursue.
Academic Requirements
While the minimum educational requirement to apply for medical school is three years of college, most applicants have at least a bachelor’s degree and many have advanced degrees.

As you prepare to apply to medical school, it’s a good idea to do some research into the medical schools you think are a good fit and to find out as much about medical school as you can. To apply to medical school, you will have to submit a copy of college and/or graduate school transcript(s), letters of recommendation and scores from the Medical College Admission Test (MCAT).

As a medical school student, you will spend four years studying basic science and doing clinical “rotations” — hands-on learning in real health care settings. Traditionally, the first two years of medical school are spent in the classroom before students are allowed to do rotations. However, an increasing number of medical schools are giving students clinical experience early on and throughout the four-year program.

In terms of the curriculum itself, some medical schools take a “systems-based” approach, focusing on one physiological system at a time (the respiratory system, reproductive system, etc.), while others use a “case-based” approach — teaching about the human body and disease by having students follow individual patient cases from start to finish. A number of medical schools employ a combination of approaches.

After four years of medical school, you will receive your medical degree, or M.D. More and more schools are offering combined degree programs that offer an M.D. degree along with degrees in public health, law or business, for example, or the option to continue your education to obtain a Ph.D.

After medical school, it’s time to choose a specialty and do your residency. Residency programs, which are offered in conjunction with intensive clinical training programs, may last anywhere from three to eight years, depending upon the specialty.

For more information on going to medical school, see:

- American Medical Student Association
- Aspiring Docs
- Careers in Medicine
- Medical School Admission Requirements (may require a paid subscription)
- Student National Medical Association
- Student Doctor Network

Programs in Oregon
Allopathic Physician
Oregon Health Science University - MD

Pre-Medicine
Central Oregon Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Multnomah University - BS
Oregon Institute of Technology - BS
Oregon State University-Cascades - BS
Pacific University - BS
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Warner Pacific University - BS
Western Oregon University - BS

Resources
Association of American Medical Colleges
American Medical Association
An osteopathic physician, or D.O., is a board-certified physician who is fully licensed to practice in every state and in more than 65 countries worldwide. As licensed physicians, they diagnose, treat, prescribe medications and perform surgery.

D.O.s are trained to focus on the whole person, working in partnership with patients to help them achieve a high level of wellness by focusing on health promotion and disease prevention. They practice the full scope of medicine in all medical specialties, from pediatrics to geriatrics, sports medicine to trauma surgery. They may decide to work in a hospital as a surgeon, in the emergency department or in another unit, caring for patients with injuries or life-threatening illnesses like heart failure or serious conditions like diabetes. In laboratories across the country, physician researchers look for the cause of illnesses and for new and better ways to treat all kinds of diseases and injuries. They run medical centers and teach future generations of physicians and other healthcare practitioners.

Many D.O.s decide on a solo or group practice in which they:

- Examine patients and take medical histories
- Order, perform and interpret diagnostic tests
- Prescribe and administer treatment for patients suffering from injury or disease
- Counsel patients about their health, providing advice about staying in good health, alleviating symptoms of chronic conditions, improving eating habits, and learning to break bad habits like smoking

The majority of D.O.s practice general or family medicine, general internal medicine or general pediatrics with a special focus on providing care in rural and urban underserved areas. In addition to using all of the tools and technology available to modern medicine, D.O.s have a strongly holistic philosophy and practice osteopathic manipulative medicine, a distinctive system of hands-on diagnosis and treatment that focuses specifically on the musculoskeletal system.

Approximately 74,000 licensed osteopathic physicians are in active practice in the United States, and more than 20% of all U.S. medical students are studying at a college of osteopathic medicine.

**Working Conditions**
Many osteopathic physicians are primary care providers. D.O.s have a strong history of serving rural and underserved populations.

D.O.s often choose to work in small private offices or clinics, often assisted by a small staff of nurses and other administrative personnel. Increasingly, physicians practice in groups or healthcare organizations that provide back-up coverage and allow for more time off. These physicians often work as part of a team, coordinating care for a population of patients; they are less independent than solo practitioners of the past.

**Academic Requirements**
The minimum educational requirement for entry into osteopathic medical school is three years of college, although most applicants have at least a bachelor’s degree, and many have advanced degrees.
Admission to osteopathic medical schools is competitive so students should keep their GPA (overall, science, math, etc.) as high as possible. Take as many science and math courses in high school and college as possible. Consult with an academic advisor or check the prerequisites for schools of interest for courses they require for admission. In addition, it’s important to participate in extracurricular activities to build leadership, teamwork and communication skills.

Take advantage of winter and summer breaks as well as the school year to gain clinical experience. Shadowing an osteopathic physician is a good way to learn about the profession and the experience can be placed on your application. Volunteering in a health organization is another way to learn more about being a healthcare provider and the healthcare system. The American Association of Colleges of Osteopathic Medicine (AACOM) created a timeline for undergraduates who are planning to apply to osteopathic medical school that is useful for college career preparation.

Personal qualities and soft skills are also important components of admission. Osteopathic medical schools are looking for students who:

- Are well-rounded
- Have good communication and interpersonal skills
- Have a record of community service
- Have a record of leadership
- Come from diverse backgrounds
- Are motivated to pursue a career in osteopathic medicine

The Osteopathic Medical College Information Book is a valuable resource for anyone considering or applying to osteopathic medical colleges. This publication includes descriptions of all of the osteopathic medical colleges, admissions criteria, minimum entrance requirements, supplementary application materials required, class size or enrollment, application deadlines, and tuition.

Applicants will need to take the Medical College Admission Test (MCAT). To apply, use the AACOMAS online application service to submit one application to all of the schools of interest. Currently, there are 33 colleges of osteopathic medicine. Find out more about how to apply to osteopathic medical school through AACOMAS.

Osteopathic medical students complete four years of medical school, plus three to nine years of additional medical training through internships and residencies in their chosen specialties. After earning their degree, D.O.’s also must pass state licensing exams and national boards.

**Programs in Oregon**

**Osteopathic Physician (D.O.)**

*College of Osteopathic Medicine of the Pacific, Northwest - DO*

**Resources**

American Association of Colleges of Osteopathic Medicine
American Osteopathic Association
## Physician Assistant

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<thead>
<tr>
<th>Average Salary</th>
<th>Years Higher Education</th>
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<tr>
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<td>6 - 7</td>
<td>Excellent</td>
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In its 2019 ranking of best health care jobs, U.S. News and World Report ranked physician assistant (PA) 3rd in best health care jobs. Sometimes referred to mistakenly as physician's assistants, physician assistants are medical providers who are licensed to diagnose and treat illness and disease and to prescribe medication for patients. They work in physician offices, hospitals and clinics in collaboration with a licensed physician.

The physician-PA relationship is fundamental to the profession and enhances the delivery of high-quality health care. Because of their advanced education in general medicine, modeled after physician education, physician assistants can treat patients with significant autonomy.

In a primary care setting, physician assistants can provide nearly all of the clinical services a physician does, including:

- Take medical histories
- Perform physical exams
- Order and interpret laboratory tests
- Diagnose and treat illnesses
- Counsel patients
- Assist in surgery
- Set fractures

Every day, thousands of people have access to quality health care because there are physician assistants in their communities. Physician assistants are critical to increasing access to care for rural and other underserved patients as they are often the only health providers in these areas. Nearly 300 million patient visits were made to physician assistants, and approximately 332 million medications were prescribed or recommended by physician assistants in 2008. Physician assistants also work in specialties outside of primary care, including medical and surgical specialties and sub-specialties.

In 2014, physician assistants held 94,400 jobs, with physician's offices employing 57% of physician assistants and hospitals employing 22%. Seven percent were employed in outpatient care centers, 3% by government entities and 3% in educational services (state, local and private).

### Working Conditions

Physician assistants usually work in a comfortable, well-lighted environment. Those in surgery often stand for long periods, and others may do considerable walking.

Schedules will vary according to practice setting or may depend on the hours of the collaborating physician. The workweek of physician assistants may include weekends, nights and early morning hospital rounds to visit patients. They may also be on call at certain times, including nights and weekends.

### Salary Range and Outlook

The Bureau of Labor Statistics (BLS) projects a 30% job growth rate for the profession through 2024.
In addition to demand, the job is attractive because:

- The average length of a physician assistant graduate program is only 27 months.
- The median salary is $98,180, according to the BLS.
- It offers the flexibility to move into different areas of medicine without additional education and training.

**Academic Requirements**
To practice as a physician assistant, you must graduate from an accredited PA program, pass the national certification exam and obtain a license in the state in which you wish to practice. You cannot bypass any of those steps and must complete them in order.

It is important to carefully review the prerequisite course requirements of all programs because they may vary, in some cases greatly. In general, requirements may include a completed bachelor’s degree, science and non-science prerequisites courses, minimum GPAs, health care experience and standardized exams.

Science courses may include but are not limited to:

- Anatomy
- Biochemistry
- Biology
- Chemistry
- Genetics
- Microbiology or bacteriology
- Organic chemistry
- Physics
- Physiology

Non-science courses may include but are not limited to:

- Calculus
- College-level algebra
- English composition
- Humanities
- Literature
- Medical terminology
- Psychology
- Sociology
- Speech
- Statistics
- Technical writing

The number of accredited PA programs has increased from 196 in 2015 to 210 in 2016 and over 90% of programs offer a master’s degree. The remainder of PA programs offer either a bachelor’s degree, associate’s degree or certificate of completion, all of which are acceptable to qualify for the certification exam, licensing and eventual practice. Starting in 2020, all PA programs will be required to offer a master’s degree upon completion of and graduation from a PA program.

The Physician Assistant Education Association provides a list of PA programs. The list is updated in May each year and can be used to search for programs and to compare admissions criteria.
The Central Application Service for Physician Assistants (CASPA) makes it easy to apply to multiple PA programs using a single application, one set of transcripts, one set of letters of recommendation and one personal statement. The CASPA Facebook page provides additional information about the application cycle and the process of applying.

**Programs in Oregon**
Physician Assistant
*Oregon Health Science University - MS*
*Pacific University - MS*

**Resources**
Accreditation Review Commission on Education for Physician Assistants
American Academy of Physician Assistants
Central Application Service for Physician Assistants
National Commission on Certification of Physician Assistants
Physician Assistant Education Association
Mental Health

Mental health is a broad field with a wide range of career choices. The World Health Organization (WHO) defines mental health as “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community.”

Recent studies suggest that positive mental health is directly associated with better physical health. Working with individuals and/or groups of all ages, health professionals in this field help children, adolescents and adults deal with a variety of life stresses and problems, including addiction/substance abuse; problems with self-esteem; aging-related mental health issues; family, parenting or marital problems; grief, anger or depression; and other emotional or behavioral issues.

Some mental health practitioners, specifically, professional counselors, psychologists, psychiatrists, clinical social workers and psychiatric nurses, hold advanced degrees with special training in brain function and human behavior. These professionals help patients with clinically diagnosed mental illnesses and emotional problems, and their approach to care may be purely medical, psycho-therapeutic, psycho-social or a combination of therapies.

The mental health field encompasses a variety of professions, each of which has a number of different career avenues:

• Professional counselors: provide mental health and substance abuse care to millions of Americans nationwide. These professionals, who have master’s degrees, work in partnership with individuals, families and groups to treat a wide assortment of mental, behavioral and emotional problems and disorders. The counseling profession as a whole utilizes mental health, psychological and human development principles to address issues of wellness, personal growth and career development, in addition to pathology. Although professional counselors are employed by a variety of organizations across a wide range of work environments, they make up an especially large percentage of the workforce in community health centers and agencies. They are both employed in and covered by managed care organizations and health plans. In addition, many professional counselors operate private practices. Counselors’ titles vary according to the states they practice in. The most common title is licensed professional counselor (LPC). The American Counseling Association has more information about choosing a career in counseling.

• Psychiatric nurses: treat patients diagnosed with mental illnesses. They are trained in behavioral therapy so they can also provide patients and families with methods to use to cope with the challenges mental illness can present. Learn more about what psychiatric nurses do at the American Psychiatric Nurses Association website.

• Psychiatrists: are physicians who diagnose and treat mental health and emotional problems. They also help patients prevent mental health and emotional issues. Because they are trained as physicians in addition to education in mental health treatment, the psychiatrist understands the relationship between emotional illness and other medical illness. The American Psychiatric Association has more information about the profession.

• Psychologists: hold a Ph.D. and may choose to be counseling psychologists, who help people cope with everyday life issues, or clinical psychologists, who work in more clinical settings, hospitals, criminal justice, etc. Psychologists, who hold doctoral degrees in psychology, help
people learn to cope more effectively with life issues and mental health problems. Psychologists help people by using a variety of techniques based on the best available research and considering each person’s needs, values, goals and circumstances. Find out more about the profession of psychology from the American Psychologists Association.

• Social workers: assist individuals, groups or communities to restore or enhance their capacity for social functioning. In addition to working with individuals, they work to create societal conditions that support communities in need. Social workers help people overcome challenges ranging from poverty, discrimination, abuse and addiction to physical illness, unemployment, divorce, loss, disability and mental illness. You can learn more about a career in social work from the National Association of Social Workers.
Psychiatrists are physicians who specialize in the diagnosis and treatment of mental illnesses. While many people associate psychiatry with psychoanalysis, most psychiatrists today provide a wide range of biological, psychotherapeutic and psychosocial treatments tailored to the specific needs of the patient. Psychiatrists also serve as the medical experts for the mind/brain/body interface.

Like other medical conditions, mental illnesses can range from relatively mild and self-limiting conditions to severe and life-threatening disorders. The National Institute of Mental Health notes that there were an estimated 43.7 million adults aged 18 or older (18.6%) in the United States with a diagnosable mental illness in 2012.

One of the oldest medical specialties, psychiatry is also constantly evolving as researchers make new discoveries about the brain. Recent advances in the neurosciences have led to significant new technologies in the diagnosis and treatment of many mental illnesses. Among other innovations, brain imaging and new pharmaceuticals have led to mental illness treatments that are just as effective as treatments in other medical specialties.

Working Conditions
The average psychiatrist spends more than 48 hours each week at work. Professional activities include administration, teaching, consultation and research. Most psychiatrists spend over 60% of their time with patients. Two-thirds of these patients are seen as outpatients, with the rest being seen in a hospital setting or, increasingly, in partial hospital or day programs and community residential programs. Psychiatric hospitalization is now more intense, more focused, and much shorter in duration than in previous years.

Psychiatrists work in group or private practices much the way other physicians do. They also practice in the public sector in Veterans Administration and state hospitals and community mental health centers that are unique to psychiatry. Other settings for psychiatric practice include medical schools, HMOs and general hospitals, as well as specialized psychiatric hospitals.

Salary Range and Outlook
The prospects for finding a good job in this field are excellent for the foreseeable future. There is still a great need for psychiatrists in the public and private care sectors. The Council on Graduate Medical Education designated psychiatry as a shortage specialty and a priority specialty in a recent report. Subspecialists such as child psychiatrists and geriatric psychiatrists are in even greater demand.

Academic Requirements
To become a psychiatrist, you first must earn medical degree, after which you can enter a residency program in psychiatry.

Post-graduate education in psychiatry consists of four years of residency training, of which at least three are in psychiatry. During the first year, the resident spends at least four months in general medical care, including internal medicine, family medicine or pediatrics, and at least two months in neurology.
General psychiatry residents spend the next three years rotating through in-patient services, ER or crisis clinic coverage and outpatient services. These experiences are complemented by lectures, seminars and supervision sessions with faculty.

Introductory experiences in public health/community psychiatry, child psychiatry, geriatric psychiatry, substance abuse, forensic psychiatry and consultation/liaison programs are included throughout residency.

Following residency, psychiatrists may select a sub-specialty. Most sub-specialties require a one-year fellowship, although some (such as child/adolescent psychiatry) require two years.

Those who complete the fellowships earn certificates of added qualification in one of the following fields:

- Child and adolescent psychiatry
- Geriatric psychiatry
- Addiction psychiatry
- Forensic psychiatry
- Psychosomatic medicine

Advanced training is also available for a number of informal subspecialties, including, among others:

- Community psychiatry
- Emergency psychiatry
- Research psychiatry

Physicians who have completed the residency training requirements are eligible to take the American Board of Psychiatry and Neurology (ABPN) certification examination. The ABPN also issues certificates on psychiatry subspecialties in addition to the general certification.

Psychiatry has developed a number of combined programs with other medical specialties, including internal medicine, neurology and pediatrics. These programs allow for complete training in two specialties in a shorter time period than would be the case otherwise.

**Other Related Fields**

**Allopathic Medicine**

Allopathic medical programs train physicians, who are on the front line of medicine. As practitioners, they work in solo or group practices examining patients and obtaining medical histories; ordering, performing and interpreting diagnostic tests; and prescribing and administering treatment for patients suffering from injury or disease. They also counsel patients about illness, injuries, health conditions and preventive healthcare (diet/fitness, smoking cessation, etc.).

**Osteopathic Medicine**

An osteopathic physician, or D.O., is a board-certified physician who is fully licensed to practice in every state and in more than 65 countries worldwide. As licensed physicians, they diagnose, treat, prescribe medications and perform surgery.

D.O.s are trained to focus on the whole person, working in partnership with patients to help them achieve a high level of wellness by focusing on health promotion and disease prevention.
Programs in Oregon
Allopathic Medicine
Oregon Health Science University - MD
Osteopathic Medicine
College of Osteopathic Medicine of the Pacific-Northwest - DO

Resources
American Psychiatric Association
National Institute of Mental Health
Psychology is the study of the mind and behavior. The discipline embraces all aspects of the human experience — from the functions of the brain to the actions of nations, from child development to care for the aged. In every conceivable setting from scientific research centers to mental health care services, “the understanding of behavior” is the enterprise of psychologists.

Psychologists traditionally treat patients with mental and emotional problems, but they also serve as scientists researching the phenomenon of human (and non-human) behavior.

In their research, psychologists follow scientific methods, using careful observation, experimentation and analysis. They develop theories of human behavior and test them through their research. As this research yields new information, psychologists’ findings become part of the body of knowledge that practitioners call upon in their work with clients and patients.

There are many different careers within this profession. For example, psychologists work with business executives, performers and athletes to reduce stress and improve performance. They advise lawyers on jury selection and collaborate with educators on school reform. Immediately following a disaster, such as a plane crash or bombing, psychologists help victims and bystanders recover from the trauma, or shock, of the event. They team with law enforcement and public health officials to analyze the causes of such events and prevent their occurrence.

Working Conditions
Many psychologists work independently. They also team up with other professionals—for example, other scientists, physicians, lawyers, school personnel, computer experts, engineers, policymakers and managers—to contribute to every area of society. That’s why you will find psychologists in laboratories, hospitals, courtrooms, schools and universities, community health centers, prisons and corporate offices.

Most psychologists say they love their work. They cite the variety of daily tasks and the flexibility of their schedules. They are thrilled by the exciting changes taking place in the field, from adapting technology to humans to working as part of primary health care teams. They are working hard to provide answers to research questions in diverse areas such as prevention, perception and learning. Educators strive to train the next generations using new technology and knowledge.

Academic Requirements
To be a psychologist, you must earn a doctoral degree in psychology. The American Psychological Association provides a listing of accredited doctoral programs in the following areas:

- Clinical psychology
- Combined professional-scientific psychology
- Counseling psychology
- School psychology
In terms of curriculum, psychology students in traditional programs can expect to study both normal and abnormal functioning, focusing on the intersection of two critical relationships: between brain function and behavior and between the environment and behavior.

**Other Related Fields**

**Applied Behavioral Analysis**
A program in applied behavior analysis (ABA) covers a scientific discipline concerned with applying techniques based upon the principles of learning to change behavior of social significance. It is the applied form of behavior analysis; the other two forms are radical behaviorism (or the philosophy of the science) and the experimental analysis of behavior (or basic experimental research).

**Applied Psychology**
A program in applied psychology covers the use of psychological methods and findings of scientific psychology to solve practical problems of human and animal behavior and experience.

**Cognitive Science**
A program in cognitive science covers the interdisciplinary, scientific study of the mind and its processes.[2] It examines the nature, the tasks, and the functions of cognition (in a broad sense).

**Disability Studies**
Programs in disability studies cover the academic discipline that examines the meaning, nature, and consequences of disability.

**Eating Disorders**
Programs in eating disorders cover this mental health area. Students study and learn how to address patients with issues defined by abnormal eating habits that negatively affect a person's physical or mental health.

**Programs in Oregon**

**Applied Behavioral Analysis**
Oregon Institute of Technology - Graduate Certificate

**Applied Psychology**
Multnomah University - BS
Pacific University - BS
Portland State University - PhD

**Cognitive Science**
George Fox University - BS

**Disability Studies**
Pacific University - BS

**Eating Disorders**
Lewis & Clark College - Graduate Certificate

**Psychology**
Chemeketa Community College - AAS
Clatsop Community College - AAS
Concordia University - BS, MS
Corban University - BS
George Fox University - BS, MS, PhD
Lewis & Clark University - BS
Linfield College - BS
Linn-Benton Community College - AAS
Multnomah University - BS
Mount Hood Community College - AAS
Northwest Christian University - BS
Oregon Institute of Technology - BS
Oregon State University - BS, MS, PhD
Pacific University - BS
Portland State University - BS, MS
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS
University of Portland - BS
Warner Pacific University - BS
Western Oregon University - BS
Willamette University - BS

Resources
American Psychological Association
Psychometrist

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<thead>
<tr>
<th>Average Salary</th>
<th>Years Higher Education</th>
<th>Job Outlook</th>
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<tbody>
<tr>
<td>$25k - $60k</td>
<td>6 - 8</td>
<td>Excellent</td>
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Psychometrists administer and score neuropsychological, psychological, personality and academic tests for patients with mild to severe traumatic brain injury, neurological diseases, psychological health issues or learning disabilities, or for psychological or neuropsychological research.

The psychometrist may only perform duties under the general supervision of licensed neuropsychologists and psychologists. The supervising neuropsychologist/psychologist provides technical and clinical guidance and uses the assessments and reports that the psychometrist performs and prepares to assist in diagnosing and preparing treatment plans for patients or to recommend treatment to patients' referring doctors. Psychometrists' assessments and records are also used to further the advancement of the psychological or neuropsychological field by using the test data for research. The psychometrist must remain current on advances in the field to prepare the reports and to remain skilled in administering tests.

The psychometrist works closely for extended periods of time with patients for the purpose of testing issues of a behavioral, psychological and/or neurocognitive nature and may at times work with patients' family members as well. A senior or lead psychometrist may also function as a mentor, manager and evaluator of other psychometrists assigned to the facility.

**Working Conditions**
Psychometrists typically work a standard 37-to-40 hour work week, although overtime and weekend work may be required, depending on the location. For example, in a hospital, one can expect the typical week (with overtime during hectic periods), but in a private practice, weekends may be required. Psychometrists rarely have to take work home. Work is completed in the office, unless the psychometrist is taking home test booklets to read about and learn new tests.

The work is fast paced and can be stressful, shuffling different tests and testing sessions between patients with different problems or situations or even multiple conditions. Typically, a psychometrist will test one patient for at least two hours, but testing may take up to four to six hours. If there are several patients to test, time for breaks can be hard to find. Other days, patients will cancel or only one patient is scheduled to be tested. That's a good time to work on reports on tested patients, which must be turned around quickly.

Psychometrists work for local, state and federal government agencies; schools, hospitals, private practices and nonprofit organizations.

**Salary Range and Outlook**
Salaries for psychometrists vary according to the type of practice and job requirements. The U.S. Bureau of Labor Statistics reports salary ranges for psychometrists between $25,000 and $58,000 annually. The length of time in a position and experience are key determinants of salary.
Academic Requirements
To work as a psychometrist, you must have one of the following:

• A bachelor’s degree in psychology or another health science field along with specialized training and experience in the areas of psychometrics and assessment procedures
• A master’s degree in psychology or another health science field
• A bachelor’s degree and certification as a psychometrist

At minimum, a psychometrist must have a bachelor’s degree. According to the U.S. Bureau of Labor Statistics, many psychometrists earn a bachelor’s degree in psychology, mathematics, statistics or a related field. These majors provide instruction in the psychological, measurement, analysis and mathematical skills needed to work in the field.

When you go on to get your master’s degree, you can choose to get a Master of Arts (M.A.) in psychometrics, a Master of Science (M.S.) in psychology with a concentration in psychometrics or a Master of Science in psychometrics:

• An M.A. in psychometrics will require about 80 credit hours of study. Classes may include psychometric theory, analysis of variance, factor analysis and regression analysis. Some courses in these programs may also require working in a lab.
• An M.S. in psychology may include classes in the theories of learning, psychopathology, intelligence testing and research methods. These programs may require students to write a thesis prior to graduation.
• An M.S. in psychometrics may include classes in topics such as measurement and research, applied statistics and psychological foundations.
• These programs may also allow students to complete an internship or require them to write a thesis to graduate.

In order to be certified, you must have a bachelor’s degree from a regionally accredited college or university and a minimum of 3,000 hours of testing, scoring and associated administrative experience earned under the supervision of licensed psychologist or neuropsychologist or the equivalent.

Those with a master’s or doctoral degree from a regionally accredited college or university with documented course work in a related field are required to have a minimum of 2,000 hours of testing, scoring and associated administrative experience earned under the supervision of licensed psychologist or neuropsychologist or the equivalent. The Board of Certified Psychometrists provides more information about certification.

Other Related Programs
Psychology
Psychology the study of the mind and behavior. The discipline embraces all aspects of the human experience — from the functions of the brain to the actions of nations, from child development to care for the aged. In every conceivable setting from scientific research centers to mental health care services, “the understanding of behavior” is the enterprise of psychologists.

Programs in Oregon
Psychology
Chemeketa Community College - AAS
Clatsop Community College - AAS
Concordia University - BS, MS
Corban University - BS
George Fox University - BS, MS, PhD
Lewis & Clark University - BS
Linfield College - BS
Linn-Benton Community College - AAS
Multnomah University - BS
Mount Hood Community College - AAS
Northwest Christian University - BS
Oregon Institute of Technology - BS
Oregon State University - BS, MS, PhD
Pacific University - BS
Portland State University - BS, MS
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS
University of Portland - BS
Warner Pacific University - BS
Western Oregon University - BS
Willamette University - BS

Psychometry
University of Kansas - MS (no program in Oregon)

Resources
Board of Certified Psychometrists
National Association of Psychometrists
Rehabilitation Counselor

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Rehabilitation counselors help people with disabilities to achieve their personal, social, psychological and vocational goals. They counsel people with physical, sensory, developmental and cognitive disabilities and those with mental health or other health conditions that are acquired at birth or resulting from illness, disease, accident, military service and/or ongoing stress. Using interventions and other counseling techniques, they help their clients overcome environmental and attitudinal barriers, obtain needed services and use technology that can assist them.

In addition to working directly with their clients and families, rehabilitation counselors evaluate school and medical reports and confer and plan with physicians, psychologists, occupational therapists, and employers to determine the capabilities and skills of the individual. Conferring with the client, they develop a rehabilitation or treatment plan designed to assist the individual in achieving goals, which may include training to help the person develop job skills or activities to assist the client with living independently.

Rehabilitation counselors work with a variety of clients and in a number of different settings. For example, they may:

- Work in the school system providing or arranging for school-to-work transition services
- Help workers injured on the job
- Assist veterans in achieving employment and independent living goals
- Provide services for elderly people who develop health problems and/or need accommodations as they age
- Assist people with substance use disorders or other addictions

Rehabilitation counselors may specialize in areas ranging from employee assistance programming and job development/placement to mental health counseling and life care planning, among others.

**Working Conditions**
Rehabilitation counselors usually work a standard 40-hour week. Self-employed counselors and those working in mental health and community agencies, such as substance use and behavioral disorder counselors, often work evenings to counsel clients who work during the day.

Rehabilitation counselors may have a range of titles, including counselor, rehabilitation counselor or consultant, independent living specialist, job placement specialist or case manager, among others.

**Academic Requirements**
Rehabilitation counselors typically must have a master’s degree in rehabilitation counseling. Some positions require Certified Rehabilitation Counselor certification or a license.

If you are interested in a rehabilitation counseling program, you can major in a number of subjects as an undergraduate, including psychology, social work, counseling or psychiatry. You can search for an accredited master’s degree program on the Council on Rehabilitation Education’s website. A master’s program will typically last 24 months. Clinical training is part of the program and includes supervised internship experience and a practicum.
During your master’s program, you will learn about:

- Career counseling
- Case management and rehabilitation planning
- Counseling theory, skills, and techniques
- Environmental assessment
- Individual and group counseling
- Issues and ethics in rehabilitation service delivery
- Job development and placement
- Principles of psychiatric rehabilitation
- Psychosocial and medical aspects of disability, including human growth and development
- Research and program evaluation
- Social and cultural diversity
- Technological adaptation
- Vocational evaluation and work adjustment

In addition, students may enroll in a number of elective courses like marriage and family counseling, substance abuse rehabilitation, psychological testing and stress management, among others.

**Other Related Fields**

**Addiction Counseling**
Addiction counseling programs prepare students to help patients overcome dependence on drugs, alcohol, and destructive behaviors like gambling. Counselors intervene when patients are often at their lowest points in their struggles with addiction. A certified drug and alcohol counselor may also work with the families of addicts to assist the healing process. These professionals may work in outpatient facilities, inpatient rehabilitation centers, halfway houses, or hospitals.

**Addiction Studies**
Addiction studies programs prepare students to work in chemical dependency residential/inpatient treatment for youth and adult, community outpatient treatment agencies, methadone programs, hospitals, therapeutic communities, detoxification centers, health maintenance organizations (HMOs), state government, public and private social services agencies, psychiatric and mental health programs, schools, criminal justice facilities for youth and adult, employee assistance programs (EAP), and the military.

**Addiction Treatment**
Addiction treatment programs train students for employment in the drug-and-alcohol treatment field as entry-level counselors working under supervision in treatment centers. Usually this certificate is designed for individuals currently working in Alcohol/Drug/Tobacco counseling and/or for individuals who wish to pursue training in substance abuse and addiction studies.

**Alcohol & Drug Counseling**
Alcohol and drug counseling programs are designed for individuals who have completed a bachelor’s degree and need further coursework to complete the educational requirements needed to become a Certified Alcohol and Drug Counselor (CADC).

**Counseling**
Programs in counseling enable graduates to deliver professional counseling services in a clinical mental health or school setting.
Disability Studies
Programs in disability studies cover the academic discipline that examines the meaning, nature, and consequences of disability.

Eating Disorders
Programs in eating disorders cover this mental health area. Students study and learn how to address patients with issues defined by abnormal eating habits that negatively affect a person's physical or mental health.

Human Services
Human services programs prepare students to work for organizations that serve people in need. Students learn the theories, principles and practice of providing services. Human services jobs can include drug abuse counselor, youth worker, mental health aide or probation officer, and provide services to schools, prisons, government agencies and nonprofit groups.

Psychology
Psychology the study of the mind and behavior. The discipline embraces all aspects of the human experience — from the functions of the brain to the actions of nations, from child development to care for the aged. In every conceivable setting from scientific research centers to mental health care services, “the understanding of behavior” is the enterprise of psychologists.

Programs in Oregon
Addiction Counseling
Lewis & Clark College - MS
Addiction Studies
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Portland Community College - Certificate, AAS
Treasure Valley Community College - AAS
Umpqua Community College - Certificate
Addiction Treatment
Umpqua Community College - Certificate
Alcohol & Drug Counseling
Clackamas Community College - Certificate
Portland Community College - AAS
Rogue Community College - Certificate
Counseling
Corban University - MS
Lewis & Clark College - MS
Multnomah University - MS
Oregon State University - MS
Oregon State University-Cascades - MS
University of Oregon - MS
Disability Studies
Pacific University - BS
Eating Disorders
Lewis & Clark College - Graduate Certificate
Human Services
Central Oregon Community College - AAS
Lane Community College - AAS
Linn-Benton Community College - AAS
Oregon State University-Cascades - BS
Southern Oregon University - BS
Umpqua Community College - AAS
University of Oregon - MS

Psychology
Chemeketa Community College - AAS
Clatsop Community College - AAS
Concordia University - BS, MS
Corban University - BS
George Fox University - BS, MS, PhD
Lewis & Clark University - BS
Linfield College - BS
Linn-Benton Community College - AAS
Multnomah University - BS
Mount Hood Community College - AAS
Northwest Christian University - BS
Oregon Institute of Technology - BS
Oregon State University - BS, MS, PhD
Pacific University - BS
Portland State University - BS, MS
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS
University of Portland - BS
Warner Pacific University - BS
Western Oregon University - BS
Willamette University - BS

Resources
American Counseling Association
American Rehabilitation Counseling Association
Commission on Rehabilitation Counselor Certification
Council on Rehabilitation Education
International Association of Rehabilitation Professionals
National Council on Rehabilitation Education
National Rehabilitation Association
National Rehabilitation Counseling Association
Naturopathic Medicine

According to the American Association of Naturopathic Physicians (AANP), naturopathic medicine is distinguished as a primary health care profession by its emphasis on prevention, treatment and optimal health in combination with the human body's innate ability to heal. Originally called “naturopathy”—a term first coined in 1892 to describe a rapidly growing system of natural therapeutics—this medical approach, with roots in Hippocrates and global indigenous medicines, became a distinct profession in Germany in the mid-1800s. In 1896, Dr. Benedict Lust (MD) brought naturopathy to America and established the first naturopathic college (the Yungborn Health Institute in New Jersey).

Based on a foundation of six principles, naturopathic medicine brings together modern, scientific and empirical methods to evaluate and treat a variety of acute and chronic health conditions. Naturopathic physicians work to identify the underlying cause of disease or dysfunction, by looking at the whole patient—mind, body and spirit—in addition to the presenting symptoms. This approach helps the naturopathic physician develop individualized care plans that seek to balance the least harmful course of treatment with the body’s ability to return to optimal health.

Foundational Principles of Naturopathic Medicine:

- Healing power of nature: Naturopathic physicians facilitate the body’s innate healing process by removing obstacles to cure, and identifying treatments that promote a return to health.
- Identify and treat the cause: Naturopathic physicians treat the underlying causes of illness—not just the symptoms—which are thought to be the result of an imbalance among the mental, physical and emotional aspects of being.
- First do no harm: A naturopathic medical treatment plan favors non-invasive but effective methods, with the goal of little to no adverse side effects.
- Doctor as teacher: The Latin root of doctor is docere meaning “to teach.” The primary role of the naturopathic physician is to educate, empower and inspire patients to take actions that support good health.
- Treat the whole person: Naturopathic physicians focus on treating the patient first versus the disease or symptom. Treatments are tailored to the individual’s symptom profile taking all aspects of the patient into account.
- Prevention: Preventing disease is more effective—cost- and otherwise—than treating an illness. Naturopathic medicine seeks to uncover patterns or vulnerabilities and work with patients on the lifestyle, nutritional or other changes to stave off disease.

Key to naturopathic practice is the doctor-patient relationship. Naturopathic physicians typically spend 60-90 minutes during the first office visit to help uncover the root cause of health issues. A naturopathic medical practice can include clinical and laboratory diagnostics, nutrition and/or botanical medicine, counseling, minor surgical procedures, hydrotherapy, homeopathy, acupuncture, prescription medication and IV and injection therapy—all of which pay honor to the foundational principles and holistic approach that characterizes naturopathic medicine.
Naturopathic Physician

Average Salary: $90k
Years Higher Education: 8
Job Outlook: Excellent

Naturopathic medicine is a distinct primary health care profession that combines the wisdom of nature with the rigors of modern science. Naturopathic physicians are trained as primary care providers who diagnose, treat and manage patients with acute and chronic conditions, while addressing disease and dysfunction at the level of body, mind and spirit.

They concentrate on whole-patient wellness through health promotion and disease prevention, attempting to find the underlying cause of the patient’s condition. They provide individualized, evidence-informed therapies that balance the least harmful and most effective approaches to help facilitate the body’s inherent ability to restore and maintain optimal health.

Naturopathic physicians care for patients of all ages and genders. Naturopathic physicians tailor their treatment protocols for each patient, placing a strong emphasis upon prevention and self-care.

Naturopathic medicine is based upon six fundamental principles:

- Do no harm: Utilize the most natural, least invasive and least toxic therapies.
- The healing power of nature: Trust in the body’s inherent wisdom to heal itself.
- Identify and treat the causes: Look beyond the symptoms to the underlying cause.
- Physician as teacher: Educate patients in the steps to achieving and maintaining health.
- Treat the whole person: View the body as an integrated whole in all its physical and spiritual dimensions.
- Prevention: Focus on overall health, wellness and disease prevention.

Naturopathic physicians collaborate with all other branches of medical science, referring patients to conventional health care practitioners for diagnosis or treatment when appropriate. You may find this field intriguing, but how can you be sure that naturopathic medicine is the right career for you?

These are some commonalities that naturopathic medical students share.

- Academically successful and grounded in the sciences
- Prefer a holistic approach to patient care
- Recognize the role of nutrition and lifestyle in health care
- Have a background in volunteerism
- Good communicators with a pleasant bedside manner
- Inquisitive, like to get to the root of the problem
- Measure personal success in terms of impact, not status
- Respectful of the environment
- Socially concerned
- Understand the art and the science of medicine

Working Conditions
Some naturopathic physicians establish and operate their own private practices, while others choose to work for an integrative medical clinic. Others become research scientists, natural pharmacists, public health administrators, consultants to industry or insurance companies or advisors to other health care professionals. The work environments and professional options...
are as wide-ranging for naturopathic physicians as they are for any allopathic or osteopathic physician.

Job satisfaction is high among naturopathic physicians. More than 90% of practicing naturopathic physicians enjoy professional and career satisfaction.

**Salary Range and Outlook**
The prospects for making a prosperous living in this field are excellent for the foreseeable future. Naturopathic medicine continues to gain acceptance and recognition throughout the United States and Canada. The income range for naturopathic physicians varies widely. Established naturopathic physicians who run large busy practices or partner with others to run practices make an average estimated net income of $80,000 to $90,000 per year, and may make upwards of $200,000. A beginning naturopathic physician just starting up his or her practice, working part-time or building a staff, generally earns less than these averages for the first years of practice. Early residency positions reflect incomes between $20,000 and $30,000 per year.

**Academic Requirements**
A resurgence of interest in naturopathic healing in North America in the 1970s resulted in the rapid growth and maturation of the naturopathic profession to the point it is today. As of 2014, there are seven accredited naturopathic medical programs at eight campus locations in North America. The Council on Naturopathic Medical Education (CNME) is the accrediting body for these programs.

Graduates of CNME-accredited naturopathic medical institutions are eligible to sit for the Naturopathic Physicians Licensing Examination. Only graduates from naturopathic medical schools accredited by the Council on Naturopathic Medical Education are eligible to sit for the professional board exams in states that require them. Graduates from accredited schools are eligible to practice in any state in which they meet the licensing or state requirements. In some states, graduates are required to pass rigorous professional board exams in order to be licensed as primary care general practice physicians.

Licensed naturopathic physicians attend four-year programs being educated in the same basic sciences as allopathic and osteopathic physicians. The curriculum is comparable to that of any major allopathic or osteopathic medical school. In fact, some naturopathic medical schools require more hours of basic and clinical science than do top allopathic or osteopathic medical schools.

In evaluating candidates for naturopathic medical programs, admissions counselors look for students who want to be challenged academically, yet feel comfortable relying on their own intuition and creativity. They look for high-level critical thinkers who are flexible enough to deal with the challenge of formulating personalized treatment plans. Applicants must demonstrate that they possess the internal qualities essential to becoming naturopathic physicians, including concern for others, integrity, curiosity, motivation and a strong belief in the efficacy of natural medicine.

Prior to admission into a naturopathic medicine program, the typical student has completed three years of pre-medical training and earned a Bachelor of Science degree. While no specific major is required for admission, students are expected to have completed courses in English and the humanities, as well as math, physics and psychology, with a strong emphasis on chemistry and biology. Courses that will help prepare students for the naturopathic course of study include anatomy, physiology, biochemistry, botany and developmental psychology.
In addition to prerequisite course work, prospective students must demonstrate appropriate observational and communication skills, motor function, intellectual-conceptual abilities, integrative and quantitative abilities and behavioral and social maturity.

Programs in Oregon
Naturopathic Medicine
National University of Natural Medicine - ND

Resources
American Association of Naturopathic Physicians
Association of Accredited Naturopathic Medical Colleges
Council on Naturopathic Medical Education
Nursing

Nursing offers a wide range of career opportunities, from entry-level practitioner to doctoral-level researcher. Nurses are hands-on health professionals who provide focused and highly personalized care. They are also in demand, employment of registered nurses is projected to grow 16% from 2014 to 2024, much faster than the average for all occupations, according to the Bureau of Labor Statistics.

Nurses promote health, prevent disease and help patients cope with illness. They have a unique scope of practice and can practice independently, although they also collaborate with all members of the health care team to provide the care needed by each patient as an individual. Nurses advocate for their patients and patients’ families. They develop and manage nursing care plans and instruct patients and their families in proper care. As educators, they help whole communities by teaching individuals and groups how to take steps to improve or maintain their health.

Although an entry-level nurse can find a job with a three-year RN degree, there is a growing national movement to require all nurses to hold a Bachelor of Science in Nursing (BSN) degree. An increasing number of nursing schools are offering accelerated bachelor’s and master’s degree programs. You can also find more options for RN-to-Master of Science in Nursing (MSN) and MSN-to-doctoral programs, designed to meet the increasing demand for more highly skilled nurses in the workforce.

Once you are a professional nurse, you might choose to focus on a particular specialty. There are numerous specialty options, each of which has education/certification requirements and a related professional network or organization.
# Clinical Nurse Specialist

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<thead>
<tr>
<th>Average Salary</th>
<th>Years Higher Education</th>
<th>Job Outlook</th>
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<tr>
<td>$65k - 110k</td>
<td>6 - 10</td>
<td>Excellent</td>
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Clinical nurse specialists are advanced practice registered nurses who hold a master’s or doctoral degree in a specialized area of nursing practice. In addition to conventional nursing responsibilities, which focus upon helping patients to prevent or resolve illness, a clinical nurse specialist’s scope of practice includes diagnosing and treating diseases, injuries and/or disabilities within his/her field of expertise.

Their area of clinical expertise may be in a:

- Population (e.g. pediatrics, geriatrics, women’s health)
- Setting (e.g. critical care, emergency room)
- Disease or medical subspecialty (e.g. diabetes, oncology)
- Type of care (e.g. psychiatric, rehabilitation)
- Type of health problem (e.g. pain, wounds, stress)

Clinical nurse specialists provide direct patient care, serve as expert consultants for nursing staffs and take an active role in improving health care delivery systems. Clinical nurse specialists often work in management positions and may also develop or work with a team to develop policies and procedures.

Clinical nurse specialists may also work with research, translating research findings into patient care, evaluating research proposals, overseeing design of evidence-based practice studies, applying research results to practice, or coming up with new evidence-based standards and protocols.

## Working Conditions

There are approximately 72,000 clinical nurse specialists in the United States, practicing in settings across the span of health care delivery systems, including hospitals, clinics, private practice, schools, nursing homes, corporations and prisons. According to a 2010 survey by the National Association of Clinical Nurse Specialists, most clinical nurse specialists work in inpatient hospital settings.

In addition to providing patient care, clinical nurse specialists may work in supervisory roles and in administrative positions. Some clinical nurse specialists provide consulting services for nurses in their organization while others work to improve health care systems.

## Salary Range and Outlook

Demand for advanced practice nurses, like clinical nurse specialists, is expected to grow 31% between 2012 and 2022. According to a survey done by the U.S. Department of Health and Human Services, clinical nurse specialists are very satisfied with their work, with over 91% being moderately or extremely satisfied.

Salaries for clinical nurse specialists range from $65,000 to over $110,000 depending on specialty and geographic location.
**Academic Requirements**
Clinical nurse specialists must first get a Bachelor of Science degree in nursing and pass the licensing exam to become a registered nurse. Once you do that, it’s a good idea to work for a few years before applying to clinical nurse specialist programs. These graduate programs will take approximately two years to complete. Most programs include clinical courses or practicum training in a setting relevant to the student’s specialty.

You will graduate with a master’s degree in nursing with an emphasis in clinical nursing. After completing a clinical nurse specialist program, you may obtain certification by examination in some specialties, including:

- Adult health
- Adult psychiatric and mental health
- Child/adolescent psych and mental health
- Gerontology
- Home health
- Pediatrics
- Public/community health

In order to practice, you may need to be licensed by your state licensing board.

**Other Related Fields**

**Nursing (RN)**
A registered nurse (RN) is a nurse who holds a nursing diploma or Associate Degree in Nursing (ADN), has passed the NCLEX-RN exam administered by the National Council of State Boards of Nursing (NCSBN) and has met all the other licensing requirements mandated by their state’s board of nursing. RNs are generalists and are not required to choose a specialization. To gain recognition as a specialized nurse professional, RNs typically need to undergo further experience, clinical practice, and education in their specialized field. In fact, employers may require RNs to prove their specialized competency by becoming certified in their specialty area through a nationally recognized certifying body.

**Programs in Oregon**

**Registered Nurse (RN)**
- Blue Mountain Community College - AAS
- Central Oregon Community College - AAS
- Chemeketa Community College - AAS
- Clackamas Community College - AAS
- Clatsop Community College - AAS
- Columbia Gorge Community College - AAS
- Klamath Community College - AAS
- Lane Community College - AAS
- Mount Hood Community College - AAS
- Oregon Coast Community College - AAS
- Portland Community College - AAS
- Rogue Community College - AAS
- Southwest Oregon Community College - AAS
- Tillamook Bay Community College - AAS
- Treasure Valley Community College - AAS
- Umpqua Community College - AAS
Resources
National Association of Clinical Nurse Specialists
Licensed Practical/Vocational Nurse

Average Salary: $32k
Years Higher Education: 1
Job Outlook: Very Good

Licensed practical nurses (LPNs), or licensed vocational nurses (LVNs) as they are called in Texas and California, care for the sick, injured, convalescent and disabled in a variety of health care settings.

Licensed practical nurses provide hands-on care to patients under the supervision of registered nurses (RNs) or physicians. Most LPNs provide basic bedside care. They take vital signs such as temperature, blood pressure, pulse and respiration. They also treat bedsores, prepare and give injections and enemas, apply dressings, give alcohol rubs and massages, apply ice packs and hot water bottles and monitor catheters.

Licensed practical nurses observe patients and report adverse reactions to medications or treatments. They collect samples for testing, perform routine laboratory tests, feed patients and record food and fluid intake and output. They help patients with bathing, dressing and personal hygiene, keep them comfortable and care for their emotional needs. In states where the law allows, they may administer prescribed medicines or start intravenous fluids.

Some licensed practical nurses help deliver, care for and feed infants. Experienced LPNs may supervise nursing assistants and aides.

Working Conditions
Most licensed practical nurses in hospitals and nursing homes work a 40-hour week, but because patients need around-the-clock care, some work nights, weekends and holidays. They often stand for long periods and help patients move in bed, stand or walk.

Salary Range and Outlook
Licensed practical nurses earn a median salary of $43,170 a year, according to the Bureau of Labor Statistics. Salaries will vary according to level of education, experience, geographic location and the type of facility.

According to the Bureau of Labor Statistics, the job outlook for licensed practical and vocational nurses is very good, expected to grow 16% between 2014 and 2024.

Academic Requirements
To become a licensed practical nurse (LPN) or licensed vocational nurse (LVN), you must enroll in a one-year, state-approved practical nursing program at a hospital, vocational-tech school or community college. A high school diploma, or the equivalent, usually is required for entry into a program, although some programs accept candidates without a diploma. Some programs are designed as part of a high school curriculum.

After training, students are eligible for licensure as an LPN or LVN. Once licensed, they are qualified to work at a hospital.

For an overview of the various academic programs available for students hoping to pursue a career in nursing, read this report and visit the Health Professions Education Center on the American Association of Community Colleges website.
These websites are also good resources for information:

- American Assembly for Men in Nursing
- American Association of Colleges of Nursing
- American Nurses Association
- ChooseNursing.com
- DiscoverNursing.com
- MinorityNurse.com
- National League for Nursing
- National Student Nurses' Association
- NursingJobs.com

**Programs in Oregon**

**Licensed Practical Nurse**
- Lane Community College - Certificate
- Oregon Coast Community College - Certificate
- Southwestern Oregon Community College - Certificate
- Umpqua Community College - Certificate

**Pre-Nursing**
- Eastern Oregon University - BS
- Western Oregon University - BS
- Warner Pacific University - BS

**Resources**
- National Association for Practical Nurse Education and Service, Inc.
- National Federation of Licensed Practical Nurses
- American Nurses Association
Certified registered nurse anesthetists are advanced practice nurses who safely provide more than 40 million anesthetics for surgical, obstetrical and trauma care each year in the United States. They administer every type of anesthetic, work in every type of practice setting and provide care for every type of operation or procedure – from open-heart surgery to pain management programs.

Nurse anesthetists provide anesthetics to patients in collaboration with surgeons, anesthesiologists, dentists, podiatrists and other qualified health care professionals. As advanced practice registered nurses, they are given a high degree of autonomy and professional respect.

A nurse anesthetist takes care of a patient’s anesthesia needs before, during and after surgery or the delivery of a baby by:

- Performing a physical assessment
- Participating in preoperative teaching
- Preparing for anesthetic management
- Administering anesthesia to keep the patient pain free
- Maintaining anesthesia intraoperatively
- Overseeing recovery from anesthesia
- Following the patient’s postoperative course from recovery room to patient care unit

Currently, more than 50,000 nurse anesthetists practice in the United States – approximately 40% of whom are men (as compared with 10% in the nursing profession as a whole). Nurse anesthetists are the sole providers of anesthesia in approximately two thirds of all rural hospitals in the United States, enabling these health care facilities to offer obstetrical, surgical and trauma stabilization services.

Nurse anesthetists have been providing anesthesia in the United States for over 150 years, beginning with their care of wounded soldiers during the Civil War.

**Working Conditions**
Nurse anesthetists practice in every setting in which anesthesia is delivered: traditional hospital surgical suites and obstetrical delivery rooms, critical access hospitals; ambulatory surgical centers, the offices of dentists, podiatrists, ophthalmologists, plastic surgeons and pain management specialists, and military, Veterans Affairs’ and Public Health Service health care facilities.

**Salary Range and Outlook**
Nurse anesthetists carry a heavy load of responsibility and are compensated accordingly. The average annual salary in 2015 was approximately $160,250, according to the Bureau of Labor Statistics (BLS).

The job outlook for advanced practice registered nurses is good. The BLS notes that jobs are expected to grow 31% between 2014 and 2024, much faster than the average.
Academic Requirements
To become a nurse anesthetist, you must first become a registered nurse (RN) with a Bachelor of Science degree and at least one year of experience in an acute care setting.

Graduate programs range in length from two to three years. The classroom curriculum emphasizes anatomy, physiology, pathophysiology, biochemistry, chemistry, physics and pharmacology. All programs include clinical training in university-based or large community hospitals. The average student nurse anesthetist completes almost 2,500 clinical hours and administers about 850 anesthetics.

Once you graduate, you will take a national certification exam, which you must pass to begin practice. As a certified registered nurse anesthetist, you will be required to continue your education by obtaining a minimum of 40 hours of approved continuing education every two years, documenting your practice and maintaining your state licensure.

Other Related Fields
Nursing (RN)
A registered nurse (RN) is a nurse who holds a nursing diploma or Associate Degree in Nursing (ADN), has passed the NCLEX-RN exam administered by the National Council of State Boards of Nursing (NCSBN) and has met all the other licensing requirements mandated by their state’s board of nursing. RNs are generalists and are not required to choose a specialization. To gain recognition as a specialized nurse professional, RNs typically need to undergo further experience, clinical practice, and education in their specialized field. In fact, employers may require RNs to prove their specialized competency by becoming certified in their specialty area through a nationally recognized certifying body.

Programs in Oregon
Nurse Anesthetist
Oregon Health Science University - MS

Registered Nurse (RN) (BSN) (MSN) (PhD)
Blue Mountain Community College - AAS
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clackamas Community College - AAS
Clatsop Community College - AAS
Columbia Gorge Community College - AAS
Concordia University - BSN
Eastern Oregon University - BSN
George Fox University - BSN
Klamath Community College - AAS
Lane Community College - AAS
Linfield College - BS
Mount Hood Community College - AAS
Northwest Christian University - BSN, MSN
Oregon Health Science University - BSN, MSN, PhD
Oregon Institute of Technology - BSN
Oregon Coast Community College - AAS
Portland Community College - AAS
Rogue Community College - AAS
Southern Oregon University - BSN, MSN, PhD
Southwest Oregon Community College - AAS
Tillamook Bay Community College - AAS

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Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Portland - BSN, MSN, PhD
Warner Pacific University - BS

Resources
American Association of Nurse Anesthetists
Nurse Educator

Average Salary: $76k
Years in Higher Education: 6 - 10
Job Outlook: Excellent

Nurse educators are registered nurses with advanced education who are also teachers. Most work for several, if not many, years before deciding to turn to a career teaching future nurses. Most nurse educators have extensive clinical experience, and many continue caring for patients after becoming educators.

Nurse educators serve as faculty members in nursing schools and teaching hospitals, sharing their knowledge and skills to prepare the next generation of nurses for effective practice they:

- Develop lesson plans
- Teach courses
- Evaluate educational programs
- Oversee students’ clinical practice
- Serve as role models

They may teach general courses or focus on areas of specialization, such as geriatric nursing, pediatric nursing or nursing informatics. Nurse educators must stay current with new nursing methods and technologies, which keeps them on the leading edge of clinical practice.

With experience, nurse educators may advance to administrative roles, such as managing nurse education programs, writing or reviewing textbooks and developing continuing education programs for working nurses.

Working Conditions
Nurse educators typically work in academic settings at nursing schools, community colleges and technical schools. Some also work in health care settings as staff development officers or clinical supervisors. They may work a nine-month academic year with summers off to do something else or all year long. Nurse educators typically do not have to work 12-hour shifts or overnight hours, as clinical nurses often do.

Much of a nurse educator’s day is spent in an office or a classroom, preparing for classes, giving lectures, advising students, grading papers, attending faculty meetings, handling administrative work and keeping up with current nursing knowledge. Educators who oversee students in clinical settings may divide their time between campus and a nearby hospital or other health care facility. Many faculty members are also actively engaged in research efforts, which add to the scientific base for nursing practice.

Academic life is demanding and can be filled with unexpected pressures, including multiple, competing demands on the educator’s time. There are often research and publishing requirements to be met. Nurse educators are often expected to participate in professional organizations and attend or speak at conferences. They may serve on peer review and other academic committees or be asked to write grant proposals to bring new funding to the school. Still, most nurse educators are highly satisfied with their work. They find interaction with students rewarding, and they take pride in the role they play in preparing nurses to care for patients.
Salary Range and Outlook
The average salary for a nurse educator is $75,176, but compensation depends greatly on the amount of clinical and teaching experience a nurse educator has and the location of the job. In addition, educators who work only during the academic year are paid their annual salary over those nine months. Summer teaching is often compensated separately.

Salaries rise for nurse educators who complete a doctorate and for those who assume administrative or leadership responsibilities in the school. Many nurse educators also earn extra pay by caring for patients.

In many areas, an experienced nurse can make more money caring for patients than teaching, but nursing schools are moving to offer more competitive salaries to attract nurses into education. The hours and working conditions are also an important factor in choosing this career. This career is in extremely high demand, because the United States is experiencing a serious nursing shortage. One of the key reasons for that shortage is the lack of nurse educators to train future nurses.

The U.S. Department of Labor reports that 1 million new and replacement nurses will be needed by 2020. But, according to the American Association of Colleges of Nursing, almost 65,000 qualified applicants were turned away from nursing schools last year. Why? Because nursing schools don’t have enough nurse educators to educate all the students who want to become nurses.

Many government agencies, professional groups and nonprofit organizations have launched campaigns to encourage young people to choose a career in nurse education.

Academic Requirements
Before you can teach nursing, you must become, at minimum, a registered nurse (RN) with a valid license and several years of work experience. Most nurse educators complete a master’s degree in nursing, although a doctorate is required to teach at most universities. You may also want to get a post-master’s certificate or degree in education as well as certification for your area of specialty.

In addition to knowledge and clinical experience, nurse educators must be good teachers. That means you need exceptional communication skills, no fear of public speaking, an easy rapport with people and the ability to clearly explain complex concepts to students.

Other Related Fields
Nursing (RN)
A registered nurse (RN) is a nurse who holds a nursing diploma or Associate Degree in Nursing (ADN), has passed the NCLEX-RN exam administered by the National Council of State Boards of Nursing (NCSBN) and has met all the other licensing requirements mandated by their state’s board of nursing. RNs are generalists and are not required to choose a specialization. To gain recognition as a specialized nurse professional, RNs typically need to undergo further experience, clinical practice, and education in their specialized field. In fact, employers may require RNs to prove their specialized competency by becoming certified in their specialty area through a nationally recognized certifying body.
Programs in Oregon
Registered Nurse (RN) (BSN) (MSN) (PhD)
Blue Mountain Community College - AAS
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clackamas Community College - AAS
Clatsop Community College - AAS
Columbia Gorge Community College - AAS
Concordia University - BSN
Eastern Oregon University - BSN
George Fox University - BSN
Klamath Community College - AAS
Lane Community College - AAS
Linfield College - BS
Mount Hood Community College - AAS
Northwest Christian University - BSN, MSN
Oregon Health Science University - BSN, MSN, PhD
Oregon Institute of Technology - BSN
Oregon Coast Community College - AAS
Portland Community College - AAS
Rogue Community College - AAS
Southern Oregon University - BSN, MSN, PhD
Southwest Oregon Community College - AAS
Tillamook Bay Community College - AAS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Portland - BSN, MSN, PhD
Warner Pacific University - BS

Resources
American Association of Colleges of Nursing
Association for Nursing Professional Development
National League for Nursing
Nurse Midwife

Average Salary: $94K
Years Higher Education: 6 - 10
Job Outlook: Good

You likely know one part of what midwives do: assisting with births. Midwife-attended births accounted for 12.1% of all spontaneous vaginal births in the United States and 8.3% of all U.S. births in total in 2014. Of these deliveries, 94.2% occurred in hospitals, 3% in freestanding birth centers and 2.7% at home.

But did you know that the care and counseling midwives do extends from pre-conception through the post-partum period? In fact, midwives also provide gynecological services, whether it’s routine care, reproductive health care or peri-/post-menopausal care. They write prescriptions and provide patient education and counseling.

Certified nurse-midwives/certified midwives are skilled health professionals who practice in a wide variety of clinical settings, diagnosing and treating patients as well as referring them to a specialist, if required. They are a vital part of the health care team and collaborate closely with physicians. While many work in the United States, others provide care in other countries. Many midwives who work in the United States provide care for women in underserved communities. In terms of the clinical services they provide, there is virtually no difference between a certified nurse-midwife and a certified midwife.

Working Conditions
Certified nurse-midwives/certified midwives practice in public, private, university and military hospitals. They work in Health Maintenance Organizations (HMOs), private practices and birth centers. Many midwives work in public health clinics, while others choose to provide in-home birth services.

There are many different career options for certified nurse-midwives/certified midwives, from clinical practice, education, administration and research to domestic and global health policy and legislative affairs.

Salary Range and Outlook
According to the Bureau of Labor Statistics (BLS), the average salary for a nurse midwife is $93,610. However, individual salaries may vary widely, depending upon practice setting, geographic region, location (urban or rural), benefits packages, hours worked per week and type of care provided (full-scope of women’s health services, prenatal care, gynecologic care, etc.).

The job outlook for advanced practice nurses, like certified nurse-midwives, is good. The BLS notes that jobs are expected to grow 31% between 2014 and 2024, much faster than the average.

Academic Requirements
To earn a certified nurse-midwife/certified midwife degree, you must complete a nationally accredited program and then pass the national certification exam. A graduate degree is required for entry into midwifery practice.
Depending on the education you already have, there are a number of options for obtaining your degree. Almost all programs require applicants to hold a bachelor’s degree. Many programs but not all require that you be a registered nurse (RN). If your degree is not in nursing (BA/BS), you will become a certified midwife. If your degree is in nursing (BSN), you will become a certified nurse-midwife. In most cases, RNs who don’t have a bachelor’s degree are required to complete a bachelor’s degree before attending a certified nurse-midwife program.

Midwifery programs have a limited number of spaces to admit new students each year so do not be disappointed if you don’t get in on your first try.

Certified nurse-midwives are licensed in all 50 states and the District of Columbia.

Other Related Fields
Naturopathic Obstetrics and Midwifery
Naturopathic obstetrics and midwifery is a synthesis of the philosophies of naturopathic medicine and traditional midwifery. It provides prenatal and postnatal care using modern diagnostic techniques in combination with midwifery knowledge and wisdom. The naturopathic approach strengthens healthy body functions to assist in a more enjoyable pregnancy and birth experience. With dual training as naturopathic doctors and midwives, naturopathic midwives are uniquely qualified to provide comprehensive health care for the woman and her family throughout their lives.

Nursing (RN)
A registered nurse (RN) is a nurse who holds a nursing diploma or Associate Degree in Nursing (ADN), has passed the NCLEX-RN exam administered by the National Council of State Boards of Nursing (NCSBN) and has met all the other licensing requirements mandated by their state’s board of nursing. RNs are generalists and are not required to choose a specialization. To gain recognition as a specialized nurse professional, RNs typically need to undergo further experience, clinical practice, and education in their specialized field. In fact, employers may require RNs to prove their specialized competency by becoming certified in their specialty area through a nationally recognized certifying body.

Programs in Oregon
Naturopathic Obstetrics and Midwifery
National University of Natural Medicine - Certificate
Nurse Midwife
Oregon Health Science University - MN, DNP
Registered Nurse (RN) (BSN) (MSN) (PhD)
Blue Mountain Community College - AAS
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clackamas Community College - AAS
Clatsop Community College - AAS
Columbia Gorge Community College - AAS
Concordia University - BSN
Eastern Oregon University - BSN
George Fox University - BSN
Klamath Community College - AAS
Lane Community College - AAS
Linfield College - BS
Mount Hood Community College - AAS
Northwest Christian University - BSN, MSN
Oregon Health Science University - BSN, MSN, PhD
Oregon Institute of Technology - BSN
Oregon Coast Community College - AAS
Portland Community College - AAS
Rogue Community College - AAS
Southern Oregon University - BSN, MSN, PhD
Southwest Oregon Community College - AAS
Tillamook Bay Community College - AAS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Portland - BSN, MSN, PhD
Warner Pacific University - BS

Resources
American College of Nurse-Midwives
Nurse Researcher

Average Salary: $95k  
Years Higher Education: 8 - 11  
Job Outlook: Excellent

Nurse researchers are scientists who study various aspects of health, illness and health care. By designing and implementing scientific studies, they look for ways to improve health, health care services and health care outcomes.

The U.S. Bureau of Labor Statistics projects a 19% growth rate for nurse researchers between the year 2012 and 2022, a faster than average rate compared many other careers.

Nurse researchers identify research questions, design and conduct scientific studies, collect and analyze data and report their findings. They often rely on grants to fund their work, which requires writing grant proposals and meeting certain reporting requirements. Many teach in academic or clinical settings and often write articles and research reports for nursing, medical and other professional journals and publications. Nurse researchers often partner with scientists in other fields, such as pharmacy, nutrition, medicine and engineering, to better address complex questions and problems.

Nurse researchers may begin their research careers in positions such as research assistant, clinical data coordinator and clinical research monitor.

Studies conducted by these dedicated researchers are uncovering such things as new and better ways to:

- Deliver health care services more effectively and efficiently
- Improve quality of life for patients suffering from chronic illnesses
- Encourage patients to make healthy choices about nutrition, fitness and lifestyle
- Assure patient safety and prevent injury and illness
- Provide care and comfort to patients at the end of life

The results of nursing research help build the knowledge base and provide the evidence to guide interventions by nurses and other health care workers. For example, nursing research is improving prenatal care, patient recovery after heart transplant and pain management for cancer and other patients.

**Working Conditions**

Nurse researchers work in a number of different places, from health care facilities and universities to research organizations and laboratories. Private companies and nonprofit organizations focused on health care issues also hire nurse researchers.

Because research studies are often individually funded projects, nurse researchers may move from project to project, working for a specific time period until the grant money ends. The nurse researcher must then seek other funded studies or employment opportunities.

The work of conducting research studies, especially collecting and tabulating data, can involve a lot of repetitive activity and rote data entry. But it can be exciting and rewarding to contribute to research that results in new ways to improve health care delivery.
Nurse researchers write competitive grant applications, report study results and prepare journal articles so good writing skills are essential. They also may present at conferences and meetings, describing their research, its findings and methodology.

**Salary Range and Outlook**
The average salary for a nurse researcher is $95,000. In addition to research activities, nurse researchers with advanced degrees can supplement their income by writing books, teaching, consulting and speaking at conferences and other events.

**Academic Requirements**
Nurse scientists arrive at their research careers in a number of ways, although all of them have doctoral (Ph.D.) degrees. Traditionally, registered nurses would work for a few years before going back to school to get advanced degrees and begin work as a nurse researcher. However, that meant that their research careers started much later in life, often when they were in their mid-fifties. Today, nurses enter Ph.D. programs soon after getting their degree and becoming registered nurses.

**Programs in Oregon**

**Registered Nurse (RN) (BSN) (MSN) (PhD)**
- Blue Mountain Community College - AAS
- Central Oregon Community College - AAS
- Chemeketa Community College - AAS
- Clackamas Community College - AAS
- Clatsop Community College - AAS
- Columbia Gorge Community College - AAS
- Concordia University - BSN
- Eastern Oregon University - BSN
- George Fox University - BSN
- Klamath Community College - AAS
- Lane Community College - AAS
- Linfield College - BS
- Mount Hood Community College - AAS
- Northwest Christian University - BSN, MSN
- Oregon Health Science University - BSN, MSN, PhD
- Oregon Institute of Technology - BSN
- Oregon Coast Community College - AAS
- Portland Community College - AAS
- Rogue Community College - AAS
- Southern Oregon University - BSN, MSN, PhD
- Southwest Oregon Community College - AAS
- Tillamook Bay Community College - AAS
- Treasure Valley Community College - AAS
- Umpqua Community College - AAS
- University of Portland - BSN, MSN, PhD
- Warner Pacific University - BS

**Resources**
- American Association of Colleges of Nursing
- American Nurses Association
- National Institute of Nursing Research
- National Student Nurses Association
The American Association of Occupational Health Nurses describes an occupational health nurse as someone who “provides for and delivers health and safety programs and services to workers, worker populations and community groups. The practice focuses on promotion and restoration of health, prevention of illness and injury, and protection from work-related and environmental hazards. Occupational and environmental health nurses have a combined knowledge of health and business that they blend with health care expertise to balance the requirement for a safe and healthful work environment with a ‘healthy’ bottom line.” Occupational health nurses work with employers and employees to identify health and safety needs in the workplace.

To meet those needs, occupational health nurses:

- Coordinate and deliver services and programs
- Promote an interdisciplinary approach to health care and advocate for the employee’s right to prevention-oriented, cost-effective health and safety programs
- Encourage workers to take responsibility for their own health through health education and disease management programs, such as smoking cessation, exercise/fitness, nutrition and weight control, stress management, control of chronic illnesses and effective use of medical services
- Monitor the health status of workers, worker populations and community groups
- Conduct research on the effects of workplace exposures, gathering health and hazard data

### Working Conditions

Occupational health nurses work in manufacturing and production facilities, hospitals and medical centers as well as in other employment sectors, including government. Workplace activities might include health and wellness, case management, ergonomics, workplace safety, infection control, disaster preparedness and others such as travel health. Occupational health nurses fill a variety of roles in their jobs, including clinicians, case managers, educators, directors and consultants. The work schedule is typically Monday through Friday, but may vary, depending upon the work environment, position and responsibilities.

### Salary Range and Outlook

According to the 2013 American Association of Occupational Health Nurses Compensation & Benefits Study, the average salary is $82,070.

### Academic Requirements

Occupational health nurses must be licensed to practice in the states in which they are employed. Typically, nurses entering the field have a baccalaureate degree in nursing and experience in community health, ambulatory care, critical care or emergency nursing. Many occupational health nurses have obtained master’s degrees in areas such as public health, advanced practice or business, to name a few examples, to continue to build their professional competencies.
Certification in occupational health nursing is available through The American Board for Occupational Health Nurses, Inc. To become a certified occupational health nurse, you must be a registered nurse (RN) with an appropriate degree in nursing, have worked as an RN within the field of occupational health for at least 3,000 hours within the previous five years (or have participated in an occupational health nurse certificate program or graduate level education in occupational health) and pass a certification examination.

Programs in Oregon
Registered Nurse (RN) (BSN) (MSN) (PhD)
Blue Mountain Community College - AAS
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clackamas Community College - AAS
Clatsop Community College - AAS
Columbia Gorge Community College - AAS
Concordia University - BSN
Eastern Oregon University - BSN
George Fox University - BSN
Klamath Community College - AAS
Lane Community College - AAS
Linfield College - BS
Mount Hood Community College - AAS
Northwest Christian University - BSN, MSN
Oregon Health Science University - BSN, MSN, PhD
Oregon Institute of Technology - BSN
Oregon Coast Community College - AAS
Portland Community College - AAS
Rogue Community College - AAS
Southern Oregon University - BSN, MSN, PhD
Southwest Oregon Community College - AAS
Tillamook Bay Community College - AAS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Portland - BSN, MSN, PhD
Warner Pacific University - BS

Resources
American Association of Occupational Health Nurses
American Board for Occupational Health Nurses, Inc.
Pediatric Nurse

Average Salary: $52k - 88k
Years Higher Education: 4 - 6
Job Outlook: Excellent

Nurses who specialize in pediatrics devote their knowledge and skills to caring for children from infancy through the late teen years and their families. These specialized nurses usually complete advanced training in pediatrics and collaborate closely with physicians and other health care providers who share their dedication to children’s health.

Like other nurses, pediatric nurses can perform physical examinations, measure vital statistics, take blood and urine samples and order diagnostic tests. Nurses with advanced training can interpret test results to form diagnoses and develop treatment plans.

Parents often prefer to have their children treated by pediatric specialists, because children have special health care needs. Their bodies are growing and changing, and they often react differently to injury, illness and even common medications.

In addition, children get scared and can’t always clearly communicate “what hurts.” Pediatric nurses know how to talk to children and how to dispel their fears. They also know how to ask children questions about their health, so they can gather complete and accurate information to aid in diagnosis and treatment.

In addition to caring for patients with injuries and illnesses, pediatric nurses spend a significant amount of time educating parents and other caregivers about how to care for their children and protect children’s health. For families of children with chronic conditions, such as juvenile diabetes or paralysis, they design home care plans to help the families meet their child’s special needs.

Prevention and health education is a big part of pediatric nursing. Pediatric nurses often staff community health fairs and visit schools to perform physical exams, immunize children and provide routine developmental health screenings.

Pediatric nursing is a very special vocation, because it provides the opportunity to play a key role in a child’s life when that child needs you most.

Working Conditions

Pediatric nurses work in doctor’s offices, clinics, hospitals, surgical centers and other health care settings. Their skills bring particular comfort to children being treated in acute care departments, such as the neonatal unit, pediatric critical care unit and pediatric oncology ward and to their parents.

Pediatric nurses also work in schools, in private practice and for community groups and other organizations that provide outpatient and preventive health care services for children, including children who have limited access to health care.

In most cases, the pediatric nurse works closely with a physician who also specializes in pediatric or family medicine. Pediatric nursing duties are similar to nursing duties in other departments, although there is typically more interaction with the patient’s family.

Working with children who are sick is emotionally draining so it’s important to take good care of yourself if you choose to work in this profession. Burnout is common among pediatric nurses.
Salary Range and Outlook
Pediatric nurses earn $52,000 to $88,850 a year, although compensation depends on the level of education, experience, geographic location and the type of facility where they work. Experienced pediatric nurses can earn $100,000 a year or more.

Academic Requirements
To become a pediatric nurse, you must first achieve certification as a registered nurse (RN). To do that, the first step is to earn a Bachelor of Science in Nursing (BSN) degree. While you may also choose to earn a nursing diploma or associate degree, which takes three years, a BSN will make it easier for you to find a job. Currently, 55% of the nursing workforce holds a baccalaureate degree or higher. Recent research indicates that patients are safer and have better outcomes when they’re under the care of nurses with at least a baccalaureate-level education in nursing.

While you’re in college, make sure to take classes in early childhood development. You can also try to find a job or volunteer at a pediatrician’s office, in a day care center or school or another job that involves caring for children.

Once you graduate, you will have to take and pass the NCLEX-RN, a national licensing exam, to practice as a registered nurse. Then you can find a job as an RN in the office of a pediatrician or family doctor or in the pediatric department of a hospital.

Take advantage of in-service training and other opportunities to learn more about the unique health and developmental needs of children and adolescents. If you want to work with newborns (neonatal care), children who have cancer, children with emotional or developmental disabilities or children who are critically ill, you may need additional training in those nursing skills, as well. Once you have gained some experience, you can pursue specialized training toward a certificate in pediatric nursing. Or you may choose to earn a master’s degree in nursing to become a pediatric nurse practitioner or a clinical nurse specialist in pediatrics. Pediatric nurse practitioners are allowed to make diagnoses, prescribe medication and manage care. To become a pediatric nurse practitioner or clinical nurse specialist, you have to take an exam and meet state certification and continuing education requirements. (Find more information on the certification exam for pediatric nurse practitioner and clinical nurse specialist.)

In addition to nursing knowledge and practical skills, pediatric nurses must have the ability to form rapid connections with their juvenile patients. Children are often afraid to go to the doctor, so the pediatric nurse must be able to dispel that fear and quickly earn the child’s trust. These skills can be learned, but many pediatric nurses are people who are naturally good with kids. It also helps to be a quick thinker who can stay calm under pressure. Children know when an adult seems worried, so pediatric nurses must be able to smile through even the most distressing situations.

Programs in Oregon
Registered Nurse (RN) (BSN) (MSN) (PhD)
Blue Mountain Community College - AAS
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clackamas Community College - AAS
Clatsop Community College - AAS
Columbia Gorge Community College - AAS
Concordia University - BSN
Eastern Oregon University - BSN
George Fox University - BSN
Klamath Community College - AAS
Lane Community College - AAS
Linfield College - BS
Mount Hood Community College - AAS
Northwest Christian University - BSN, MSN
Oregon Health Science University - BSN, MSN, PhD
Oregon Institute of Technology - BSN
Oregon Coast Community College - AAS
Portland Community College - AAS
Rogue Community College - AAS
Southern Oregon University - BSN, MSN, PhD
Southwest Oregon Community College - AAS
Tillamook Bay Community College - AAS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Portland - BSN, MSN, PhD
Warner Pacific University - BS

Resources
American Academy of Pediatrics
Association of Women’s Health, Obstetric, and Neonatal Nurses
National Association of Neonatal Nurses
National Association of Pediatric Nurse Practitioners
Society of Pediatric Nurses
Public Health Nurse

**Average Salary** $52k - 55k  
**Years Higher Education** 4 - 6  
**Job Outlook** Excellent

While most nurses care for one patient at a time, public health nurses care for entire populations. By working with whole communities, public health nurses are able to educate people about health issues, improve community health and safety and increase access to care. Public health nurses believe a person’s health is affected by many factors, including genetic makeup, lifestyle and environment. Instead of waiting for patients to come to the hospital with an illness, they go into communities to try and help people improve their health and prevent disease.

For people who don’t have access to care, public health nurses may also provide direct health care services, including preventive care, screening services and health education.

Public health nurses also:

- Monitor health trends and identify health risk factors unique to specific communities
- Set local priorities for health-related interventions to provide the greatest benefit to the most people
- Advocate with local, state and federal authorities to improve access to health services for underserved communities
- Design and implement health education campaigns and disease prevention activities, such as immunizations and screenings
- Tell people about locally available health care programs and services to improve access to care
- Educate and provide direct health care services to vulnerable and at-risk populations

Health education is a primary focus of public health nurses. Drawing on their training as registered nurses, public health nurses give people reliable, useful information about how to protect their health.

In presentations at schools, community groups, senior centers and other local groups, public health nurses explain proper nutrition, demonstrate effective safety practices, promote early detection of common diseases, tell people how to care for disabled or ill family members and inform people about other important health issues. Their goal is to make health information easy to understand, so people can take greater control over their well being.

In low-income and rural communities, public health nurses also provide critical health care services. They immunize schoolchildren, provide pre-natal and well-baby care and teach the elderly how to stay safe and healthy at home. They also must be able to recognize and respond to potential health crises.

**Working Conditions**

Public health nurses often work for government agencies, nonprofit groups, community health centers and other organizations that aim to improve health at the community level. They may work alone or on multidisciplinary teams, and they often supervise other health care and lay personnel. In addition to working with communities, they work behind the scenes planning activities, managing budgets and evaluating the effectiveness of public health programs. They may travel locally or across significant distances to meet with community groups and bring health care services into underserved communities.
Public health nurses are highly dedicated individuals who work very hard to improve community health and access to care. They must be able to work well with large groups, listen attentively and be sensitive to cultural differences. They have to manage often scarce resources creatively and focus their efforts where they will do the most good. Public health nurses also need to understand their own limits so they do not become burnt out.

**Salary Range and Outlook**
As in all areas of nursing, there is increasing demand for public health nurses, particularly in medically underserved and low-income communities. Many government agencies are also recognizing the benefits of preventive and health education services provided by public health nurses to reduce overall health care costs.

The profession encourages diversity in its ranks because public health nurses often work with diverse populations. Bilingual nurses, particularly those fluent in both Spanish and English, are desperately needed.

The average salary for a public health nurse is $51,000. There are better paying nursing jobs, but most public health nurses find their reward in the work rather than the pay. Salaries also vary greatly depending on job location and requirements.

**Academic Requirements**
If you think you might be interested in public health nursing, get practice by working with a local neighborhood association or volunteering with a community group, home health provider or hospice. Working with health advocacy groups is another way to learn about public health issues.

To become a public health nurse, you must first train as a registered nurse (RN). You’ll likely need to earn a bachelor’s degree in nursing at an accredited four-year college, although some communities will employ public health nurses with associate’s degrees.

While in college, look for opportunities to work in community settings and to assist with public health activities. Seek additional training in public health, public policy, health administration and related subjects.

After graduation, you must pass a national licensing exam called the NCLEX-RN before you can practice as a nurse. Graduate education may be required for certain public health nursing jobs, particularly in supervisory roles.

**Programs in Oregon**
*Registered Nurse (RN) (BSN) (MSN) (PhD)*

- Blue Mountain Community College - AAS
- Central Oregon Community College - AAS
- Chemeketa Community College - AAS
- Clackamas Community College - AAS
- Clatsop Community College - AAS
- Columbia Gorge Community College - AAS
- Concordia University - BSN
- Eastern Oregon University - BSN
- George Fox University - BSN
- Klamath Community College - AAS
- Lane Community College - AAS
- Linfield College - BS
Mount Hood Community College - AAS
Northwest Christian University - BSN, MSN
Oregon Health Science University - BSN, MSN, PhD
Oregon Institute of Technology - BSN
Oregon Coast Community College - AAS
Portland Community College - AAS
Rogue Community College - AAS
Southern Oregon University - BSN, MSN, PhD
Southwest Oregon Community College - AAS
Tillamook Bay Community College - AAS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Portland - BSN, MSN, PhD
Warner Pacific University - BS

Resources
American Public Health Association, Public Health Nursing Section
MinorityNurse.com
Registered Nurse (RN)

Average Salary       Years Higher Education       Job Outlook
$68k                  4 - 6                              Excellent

Nurses today are highly respected and valued members of the health care team who bring their own body of knowledge to the process of health care.

They have a unique scope of practice and can practice independently, although they also collaborate with all members of the health care team to provide the care needed by each patient as an individual. Registered nurses (RNs) work in collaboration with physicians and members of other health care disciplines.

Nursing is also a job that is in demand. According to the Bureau of Labor Statistics, registered nursing is among the top 10 occupations for job growth between 2014 and 2024, expected to grow at 16%.

When providing direct patient care, nurses observe, assess and record symptoms, reactions and progress, which provides the basis for care planning and intervention. RNs also develop and manage nursing care plans, instruct patients and their families in proper care and help individuals and groups take steps to improve or maintain their health. Registered nursing requires a large base of knowledge in order to assess, plan and intervene to promote health, prevent disease and help patients cope with illness. While state laws govern the scope of nursing practice, it is usually patient needs that determine a nurse’s daily job activities.

RN roles range from direct patient care and case management to establishing nursing practice standards, developing quality assurance procedures, directing complex nursing care systems, conducting clinical research and teaching in nursing programs, as well as practicing in many other invigorating settings.

Some nurses choose to focus on a particular specialty. There are numerous specialty options — each of which has education/certification requirements and a related professional network or organization.

In addition, nursing has four advanced practice clinical professions, each of which requires a graduate degree and separate certification:

- Clinical nurse specialist
- Nurse anesthetist
- Nurse midwife
- Nurse practitioner

**Working Conditions**

Most nurses work in health care facilities, although home health and public health nurses travel to their patients’ homes, schools, community centers and other sites.

RNs may spend considerable time walking and standing. They also need to be able to cope well with stress, since nursing involves direct involvement with human suffering, emergencies and other pressures.
Salary Range and Outlook

Registered nurses earn a median salary of $67,490 a year, according to the Bureau of Labor Statistics. Salaries will vary according to level of education, experience, geographic location and the type of facility. Experienced registered nurses with advanced education can earn more than $100,000 a year or more.

Academic Requirements

To become a nurse, you must first achieve certification as a registered nurse (RN). To do that, the first step is to earn a Bachelor of Science in Nursing (BSN) degree. While you may also choose to earn a nursing diploma or associate degree, which takes three years, a BSN will make it easier for you to find a job. Currently, 55% of the nursing workforce holds a baccalaureate degree or higher. Recent research indicates that patients are safer and have better outcomes when they’re under the care of nurses with at least a baccalaureate-level education in nursing.

Your career prospects also will be better if you hold a BSN: Many employers recognize that nurses with bachelor’s degrees are better prepared for a wide range of practice settings and tend to have strong skills in critical thinking, case management and health promotion. Conventional BSN programs take four years, but more and more schools are offering accelerated nursing programs for students who already hold a bachelor’s in another field; such programs take between 11 and 18 months to complete. Similar programs exist for an accelerated master’s degree (MSN), which can be earned in approximately three years. In addition, there are a growing number of RN-to-MSN and BSN-to-PhD programs, designed to meet the increasing demand for more highly educated nurses in the workforce. Most nursing programs will require the ATI TEAS test as an admission requirement. You should check with your local institution before applying.

There also are an increasing number of four-year institutions offering “articulation agreements” with community and junior colleges, to enable nurses with associate or bachelor’s degrees to seamlessly transition into BSN and MSN programs.

Once you graduate, you will have to take and pass the NCLEX-RN, a national licensing exam, to practice as a registered nurse.

The American Association of Colleges of Nursing (AACN) has information about the various RN educational programs on its website.

Programs in Oregon

Registered Nurse (RN) (BSN) (MSN) (PhD)

Blue Mountain Community College - AAS
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clackamas Community College - AAS
Clatsop Community College - AAS
Columbia Gorge Community College - AAS
Concordia University - BSN
Eastern Oregon University - BSN
George Fox University - BSN
Klamath Community College - AAS
Lane Community College - AAS
Linfield College - BS
Mount Hood Community College - AAS
Northwest Christian University - BSN, MSN
Oregon Health Science University - BSN, MSN, PhD
Oregon Institute of Technology - BSN
Oregon Coast Community College - AAS
Portland Community College - AAS
Rogue Community College - AAS
Southern Oregon University - BSN, MSN, PhD
Southwest Oregon Community College - AAS
Tillamook Bay Community College - AAS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Portland - BSN, MSN, PhD
Warner Pacific University - BS

Resources
American Nurses Association
American Association of Colleges of Nursing
The food we eat has a significant impact on our health, according to a number of scientific studies. Changes in diet can help prevent or control many health problems, including obesity, diabetes and certain risk factors for cancer and heart disease.

Dietetics is the science of how food and nutrition affects human health. The field of dietetics has a strong emphasis on public health and a commitment to educating all Americans about the importance of making proper dietary choices.

Dietitian nutritionists use nutrition and food science to help people improve their health. Nutrition and dietetic technicians work with dietitian nutritionists to provide care and consultation to patients. Both dietitian nutritionists and nutrition and dietetic technicians may also provide general nutrition education. Both are nationally credentialed and are an integral part of health care and foodservice management teams.

Professionals in the field of dietetics often focus their efforts on specific populations, facilities or initiatives, including:

- Designing individual nutritional therapies to address specific health issues, such as unhealthy weight, diabetes or hypertension
- Developing facility-wide nutrition programs for health care, educational, correctional and other institutions
- Increasing public awareness of proper nutritional standards and habits
- Improving the accuracy and comprehension of food labels
- Ensuring the safety of our food supply
- Researching how changes in diet (such as reducing salt intake) affect health (by reducing blood pressure)

Working with food manufacturers to improve the nutritional quality of prepared foods

The Bureau of Labor Statistics projects that employment for dietitian nutritionists will grow 16% from 2014 to 2024, much faster than the average for all occupations. It notes that the role of food in good health is well known, leading to a larger role for dietitian nutritionists and nutrition and dietetic technicians in patient care and to advise people who want to improve their health.
Nutrition is a key element of good health. Registered dietitian nutritionists are the experts on good nutrition and the food choices that can make us healthy, whether it's a proper diet or eating to manage the symptoms of a disease or chronic condition. Registered dietitian nutritionists design nutrition programs to protect health, prevent allergic reactions and alleviate the symptoms of many types of disease.

Clinical dietitians provide medical nutrition therapy for patients in institutions such as hospitals and nursing care facilities. They assess patients' nutritional needs, develop and implement nutrition programs and evaluate and report the results. They confer with doctors and other health care professionals in order to coordinate medical and dietary needs. Some clinical dietitians specialize in the management of overweight and critically ill patients, such as those with renal (kidney) disease and diabetes. In addition, clinical dietitians in nursing care facilities, small hospitals, or correctional facilities may manage the food service department.

Community dietitians develop nutrition programs designed to prevent disease and promote health, targeting particular groups of people. Dietitians in this practice area may work in settings such as public health clinics, fitness centers, corporate wellness programs or home health agencies.

Corporate dietitians work in food manufacturing, advertising and marketing. In these areas, dietitians analyze foods, prepare literature for distribution, or report on issues such as the nutritional content of recipes, dietary fiber or vitamin supplements.

Management dietitians oversee large-scale meal planning and preparation in health care facilities, company cafeterias, prisons and schools. They hire, train and direct other dietitians and food service workers; budget for and purchase food, equipment, and supplies; enforce sanitary and safety regulations; and prepare records and reports.

Consultant dietitians work under contract with health care facilities or in their own private practice. They perform nutrition assessments for their clients and advise them about diet-related concerns, such as weight loss or cholesterol reduction. Some work for wellness programs, sports teams, supermarkets and other nutrition-related businesses. They consult with food service managers, providing expertise in sanitation, safety procedures, menu development, budgeting and planning.

**Working Conditions**
Registered dietitian nutritionists work in a variety of settings, overseeing food planning and preparation. While some may spend time in a commercial or facility kitchen, most work in an office setting, managing nutrition programs, seeing clients and/or working on policy issues related to nutrition. Most work a typical 40-hour week.

**Salary Range and Outlook**
The average salary for a registered dietitian nutritionist, as of 2015, is $63,700, according to the Academy of Nutrition and Dietetics. Salaries may be higher or lower depending on a registered dietitian nutritionist's experience, the job location and the position's responsibilities.
The Bureau of Labor Statistics projects that employment will grow 16% from 2014 to 2024, much faster than the average for all occupations. It notes that the role of food in good health is well known, leading to a larger role for dietitians in patient care and to advise people who want to improve their health.

**Academic Requirements**
There are two pathways to becoming a dietitian nutritionist:

- Enroll in a coordinated program in dietetics. These accredited programs provide classroom as well as supervised practical experience and lead to a bachelor’s or graduate degree. Once you graduate, you can take the registration examination for dietitians to become credentialed as a registered dietitian nutritionist.
- Enroll in a didactic program in dietetics that culminates in a bachelor’s or graduate degree. When you have completed the accredited program, you then apply for an internship/supervised practical experience, which lasts eight to 24 months. Once you graduate, you can take the registration examination for dietitians to become credentialed as a registered dietitian nutritionist.

**Other Related Fields**

**Human Nutrition and Functional Medicine**
Functional medicine is a science-based, patient-centered approach to achieving and maintaining excellent health through natural methods, with diet and nutrition at the forefront. Founded on a holistic view of health, our functional medicine program delves deeply into the biochemical and genetic individuality of each patient so that practitioners can treat the whole person, not just the symptoms.

**Nutrition**
Nutrition is the study of nutrients in food, how the body uses nutrients, and the relationship between diet, health, and disease. Major food manufacturers employ nutritionists and food scientists. Nutritionists may also work in journalism, education, and research.

**Programs in Oregon**

**Human Nutrition and Functional Medicine**
- Oregon Health Science University - Certificate, MS
- University of Western States - MS

**Nutrition**
- Chemeketa Community College - AAS
- Linn-Benton Community College - AAS
- National University of Natural Science - BS, MS
- Oregon State University - BS, MS, PhD

**Resources**
Academy of Nutrition and Dietetics
Nutrition and Dietetic Technician

Average Salary  Years Higher Education  Job Outlook
$30k - 63k  3 - 4  Excellent

Changes in diet can help reduce the risk of obesity, diabetes, heart disease and other health problems. Nutrition and dietetic technicians help people take control of their health by helping them understand how to make better choices about the food they eat. Nutrition and dietetic technicians, registered (NDTRs) are nationally credentialed food and nutrition technical practitioners who have met educational and credentialing criteria to earn and maintain the NDTR credential.

Nutrition and dietetic technicians work alongside registered dietitian nutritionists to plan menus and prepare food for people with special nutritional needs. They often work in hospitals, nursing homes, and long-term care facilities. Schools, day care centers, weight management clinics, government agencies and prisons also employ nutrition and dietetic technicians. Some nutrition and dietetic technicians work in private practice, helping to develop healthy menus for individual patients as part of an overall treatment plan. Some focus on education, such as teaching children, new mothers and other people the importance of proper nutrition. Others work in the food service industry, helping suppliers create healthier prepared foods and ensuring that food labels are complete and accurate.

If you are interested in becoming a nutrition and dietetic technician, you will want to nurture your creativity and your senses of smell and taste. Because you may be working directly with patients and/or clients, you will also need good communication skills and the ability to cope with people who are sick. Teamwork is also essential, because nutrition and dietetic technicians almost always collaborate with other health care providers.

Working Conditions
The work environment depends on the nature of the nutrition and dietetic technician’s job. Many work in large institutional kitchens, which can get hot and steamy. They spend a great deal of time on their feet, and frequently suffer minor cooking-related injuries, such as knife cuts, burns and eye irritations. They may work at all kinds of hours, particularly early in the morning and on weekends and holidays. To avoid contamination and injury, nutrition and dietetic technicians must adhere to rigorous standards of safety and cleanliness.

Other nutrition and dietetic technicians work in offices, administrative complexes or government agencies, which is a cleaner and less stressful environment than a commercial kitchen. That kind of work is more likely to be a desk job with regular Monday to Friday hours. Many nutrition and dietetic technicians work part-time.

Salary Range and Outlook
According to the 2015 Compensation & Benefits Survey of the Dietetics Profession, the median annual income of nutrition and dietetic technicians, registered in the United States who have been working in the field for four years or less was $42,000.
**Academic Requirements**
There are two pathways to becoming a nutrition and dietetic technician, registered:

- Complete a nutrition and dietetic technician registered program. The program includes 450 hours of supervised practice experience in various community programs, health care and foodservice facilities. You must have at least an associate’s degree to enroll in the program.
- Complete coursework in a didactic program or coordinated program in dietetics and pass a national examination after completion of the program. You must have at least a bachelor’s degree to enroll in one of these programs.

The course work for nutrition and dietetic technicians includes a variety of classes in food and nutrition sciences, foodservice systems management and a range of general science courses.

**Other Related Fields**

**Human Nutrition and Functional Medicine**
Functional medicine is a science-based, patient-centered approach to achieving and maintaining excellent health through natural methods, with diet and nutrition at the forefront. Founded on a holistic view of health, our functional medicine program delves deeply into the biochemical and genetic individuality of each patient so that practitioners can treat the whole person, not just the symptoms.

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**Programs in Oregon**

**Human Nutrition and Functional Medicine**
- Oregon Health Science University - Certificate, MS
- University of Western States - MS

**Nutrition**
- Chemeketa Community College - AAS
- Linn-Benton Community College - AAS
- National University of Natural Science - BS, MS
- Oregon State University - BS, MS, PhD

**Resources**
- Academy of Nutrition and Dietetics
Occupational Therapy

Occupational therapy is a science-driven, evidence-based profession that helps people of all ages to recover from injury, disability or illness and participate in activities of daily living. For example, they might help young children with disabilities participate fully in school or support older adults coping with physical or cognitive decline.

Occupational therapy services typically include:

- Customized treatment programs to improve the ability to perform daily activities
- Comprehensive home and job site evaluations with adaptation recommendations
- Performance skills assessments, treatment and evaluation
- Adaptive equipment recommendations and usage training
- Task and activity modification training
- Guidance for family members and caregivers

Occupational therapy practitioners practice from a holistic perspective, and actively integrate the client and their family in the therapy treatment plan. They emphasize adapting the environment to the specific needs of the client.

Currently, a master’s degree is required to practice as an occupational therapist. Occupational therapy assistants must have an associate’s degree and are supervised by a licensed occupational therapist.
Occupational Therapy Aide

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<th>Average Salary</th>
<th>Years Higher Education</th>
<th>Job Outlook</th>
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<tr>
<td>$30k</td>
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Occupational therapy aides typically prepare materials and assemble equipment used during treatment and are responsible for a range of clerical tasks. Duties can include scheduling appointments, answering the telephone, restocking or ordering depleted supplies and filling out insurance forms or other paperwork. Aides are not licensed, so by law they are not allowed to perform as wide a range of tasks as occupational therapy assistants.

Working Conditions
Occupational therapy aides have variable work schedules that may include evening and weekend hours, depending on the facility and whether they are full or part-time employees. Many outpatient therapy offices and health care facilities have evening and weekend hours, to help coincide with patients’ personal schedules.

Salary Range and Outlook
The employment outlook for occupational therapy aides is good, projected to grow 41% from 2012 to 2022, much faster than the average for other occupations.

Academic Requirements
Occupational therapy aides typically have a high school degree. They usually receive most of their training on the job working with more experienced assistants or aides. Having previous health care experience and CPR and Basic Life Support certifications may be helpful for getting a position as an occupational therapy aide.

Other Related Fields
Occupational Therapy Assistant
Occupational therapy assistants and aides help patients develop, recover, improve, as well as maintain the skills needed for daily living and working. Occupational therapy assistants are directly involved in providing therapy to patients; occupational therapy aides typically perform support activities.

Pre-Occupational Therapy
Pre-Occupational Therapy programs are usually for undergraduates who are interested in a career as an occupational therapist. Many programs may allow students to choose to complete a pre-OT track along with their bachelor’s degree in preparation for graduate school.

Programs in Oregon
Occupational Therapy Assistant
Blue Mountain Community College - AAS
Linn-Benton Community College - AAS
Tillamook Bay Community College - AAS
Pre-Occupational Therapy
Concordia University - BS
Pacific University - BS
Southern Oregon University - BS
Western Oregon University - BS
Occupational Therapist

Average Salary: $80k
Years Higher Education: 6 - 8
Job Outlook: Excellent

Occupational therapists help people of all ages to fully engage in their daily lives, from their work and recreation to activities of daily living like getting dressed, cooking, eating and driving. If you choose this field, there are many kinds of practice available for you to specialize in. You may decide to work with premature babies at a pediatric hospital or children with cerebral palsy or Down syndrome. Many practitioners choose to help children thrive in the “occupations” of childhood, which include learning, playing and growing.

Therapists also work in schools with students who have learning disabilities or behavioral problems. Or you may be interested in working with older people in their homes or nursing homes, helping them to recover from strokes or deal with Alzheimer’s disease. Some practitioners choose to help accident victims to regain needed skills or offer assistance to people with mental illness.

There are new specialties too, like training workers to use the correct ergonomics, helping people with low vision maintain their independence, making buildings and homes more accessible, evaluating and training older drivers and promoting health and wellness.

Occupational therapy services typically include:

- An individualized evaluation, during which the client/family and occupational therapist determine the person’s goals
- Customized intervention to improve the person’s ability to perform daily activities and reach the goals
- An outcomes evaluation to ensure that the goals are being met and/or make changes to the intervention plan

Occupational therapy services may include comprehensive evaluations of the client’s home and other environments (e.g., workplace, school), recommendations for adaptive equipment and training in its use, and guidance and education for family members and caregivers. Occupational therapy practitioners have a holistic perspective, in which the focus is on adapting the environment to fit the person, and the person is an integral part of the therapy team.

**Working Conditions**

Most occupational therapists work in hospitals or occupational therapy practices while others work in schools, physicians’ offices, home health services and nursing homes. Occupational therapists in hospitals and other health care and community settings usually work a 40-hour week. They spend a great many of those hours on their feet while working with patients. Occupational therapists who work in schools may need to stay after school for meetings or other activities.

More than 30% of all occupational therapists work part-time.
Salary Range and Outlook
Occupational therapists represent a much-needed career and the employment outlook is bright. Between 2012 and 2022, employment of occupational therapists is projected to grow 29%, much faster than the average for all occupations.

Academic Requirements
To become an occupational therapist, you will first need to get a bachelor’s degree and then go on to a master’s degree program in occupational therapy. As an undergraduate, you can major in anything that interests you so long as you make sure to take the necessary prerequisites for the occupational therapy programs you apply to. Most will require courses in biology and physiology, and some programs will also expect you to have volunteered or worked in an occupational therapy setting.

Master’s programs generally take two to three years to complete. You may decide to apply to a program that offers a bachelor’s and master’s degree in a total of five years. Some students go on to get a doctorate in occupational therapy. Doctoral programs usually require three years of study. Both master’s and doctoral programs require at least 24 weeks of supervised fieldwork, in which prospective occupational therapists gain clinical work experience. You can find accredited programs through the American Occupational Therapy Association.

Licensure and Specialization:
Most states require occupational therapists to pass the national examination administered by the National Board for Certification in Occupational Therapy. To take the exam, you must have earned a degree from an accredited educational program and completed all fieldwork requirements. Once you pass the exam, you will need to take continuing education classes to maintain your certification.

The American Occupational Therapy Association also offers a number of certifications for therapists who want to demonstrate their advanced level of knowledge in a specialty area, such as pediatrics, gerontology, driving and community mobility or low vision.

Other Related Fields
Pre-Occupational Therapy
Pre-Occupational Therapy programs are usually for undergraduates who are interested in a career as an occupational therapist. Many programs may allow students to choose to complete a pre-OT track along with their bachelor’s degree in preparation for graduate school.

Programs in Oregon
Occupational Therapy
Pacific University - PhD
Pre-Occupational Therapy
Concordia University - BS
Pacific University - BS
Southern Oregon University - BS
Western Oregon University - BS

Resources
American Occupational Therapy Association
Occupational Therapy Assistant

Average Salary: $58k
Years Higher Education: 2
Job Outlook: Excellent

Occupational therapy assistants work with occupational therapists to help their clients develop and recover activities of daily living, like getting dressed and driving, and working. Occupational therapy assistants can choose from a number of opportunities. Some choose to work with children, helping them with typical childhood activities, including learning, playing, and growing. Others work with students who have learning disabilities, behavioral problems, cerebral palsy, Down syndrome or other disabilities.

Occupational therapy assistants also work with adults in their homes, rehabilitation centers, nursing homes, community centers and other facilities. They help people deal with and recover from traumatic injuries, stroke, Alzheimer’s disease or mental health problems, helping them relearn activities of daily living or learning occupations.

Occupational therapy assistants carry out activities and exercises with clients based on a treatment plan developed in collaboration with an occupational therapist. Occupational therapy assistants monitor an individual’s activities to make sure they are performed correctly and to provide encouragement. They also record their client’s progress for use by the occupational therapist. If the treatment is not having the intended effect, or the client is not improving as expected, the occupational therapist may alter the treatment program in hopes of obtaining better results. Occupational therapy assistants also document billing of the client’s health insurance provider.

Working Conditions
Occupational therapy assistants work primarily in occupational therapists’ offices, hospitals and nursing care facilities. Occupational therapy assistants spend much of their time on their feet setting up equipment and working with patients.

Occupational therapy assistants have variable work schedules that may include evening and weekend hours, depending on the facility and whether they are full or part-time employees. Many outpatient therapy offices and health care facilities have evening and weekend hours, to help coincide with patients’ personal schedules.

Salary Range and Outlook
The employment outlook for this career is good, projected to grow 41% from 2012 to 2022, much faster than the average for other occupations.

Academic Requirements
You must complete an associate’s degree from an accredited college or technical school to qualify for occupational therapy assistant jobs. In most states, you will also be required to take and pass a licensing exam.
Programs in Oregon
Occupational Therapy Assistant
Blue Mountain Community College - AAS
Linn-Benton Community College - AAS
Tillamook Bay Community College - AAS

Resources
American Occupational Therapy Association
Optometry

Optometry is the field involving virtually everything that has to do with eyes and vision, including examination, diagnosis and treatment of the eyes and surrounding structures, and the treatment of vision problems.

Doctors of Optometry (ODs), commonly known as optometrists, are independent primary health care professionals for the eyes. They are trained to evaluate a patient's visual condition and determine the best treatment for that condition.

They should not be confused with ophthalmologists or dispensing opticians. Ophthalmologists are physicians who perform eye surgery, in addition to diagnosing and treating eye conditions. Dispensing opticians fit eyeglasses and contact lenses, following prescriptions written by ophthalmologists or optometrists.
Doctors of Optometry (ODs), commonly known as optometrists, are the independent primary health care professionals for the eye. U.S. News & World Report listed optometry as a rewarding job, because it's “a profession with a high cure rate, regular hours, good pay and realistic potential for being successfully self-employed.”

New technologies have helped the profession to expand both the scope and the efficiency of practice. Optometrists and their patients are benefiting from the many advances in eye care and medical technology.

For example, the type of contact lenses and lens treatments have expanded and improved in recent years. Additionally, new procedures like the use of lasers to correct vision and diseases, such as glaucoma, have provided better options for patients who need them. Optometrists are often the health care providers who consult with patients about new technologies and treatments like these.

Optometrists:

- Examine, diagnose, treat and manage diseases, injuries and disorders of the visual system, the eye and associated structures
- Counsel patients regarding surgical and non-surgical options to meet their visual needs
- Identify related systemic conditions affecting the eye, like diabetes or high blood pressure
- Prescribe medications
- Perform certain surgical procedures
- Provide vision therapy and low vision rehabilitation
- Assist patients with eyeglasses and contact lenses

An optometrist's day is filled with a challenging and varied array of care, from prescribing glasses and contact lenses, to treating diseases such as glaucoma and retinopathy, to performing minor surgical procedures and providing pre- and post-operative care to patients undergoing ophthalmologic surgery.

Optometrists should not be confused with ophthalmologists or dispensing opticians.

Ophthalmologists are physicians who perform eye surgery, in addition to diagnosing and treating eye conditions. Dispensing opticians fit eyeglasses and contact lenses, following prescriptions written by ophthalmologists or optometrists.

**Working Conditions**

Optometrists practice in many different kinds of situations and with different types of employers, including hospitals, retail optical settings and the military. Many optometrists set up a private or group practice with one or more other optometrists or with ophthalmologists. Some optometrists decide to go into research at an academic institution or with a corporation. After gaining experience, optometrists may also decide to become consultants to the ophthalmic industry, education, school and/or professional sports and government.
Optometrists most often work in an office setting. While many work 40 hours a week, they may work more hours or need to work evenings and weekends, depending on where they work and patient need.

**Salary Range and Outlook**
The Bureau of Labor Statistics projects that employment for optometrists will grow by 27% between 2014 and 2024, much faster than the average for all occupations. Optometry offers an average net income of $122,667 across the profession.

**Academic Requirements**
To become Doctor of Optometry (OD), you must first complete at least three years of undergraduate study at an accredited college or university. Most optometry students hold a baccalaureate or higher degree. While you are in college or at some point before you plan to attend an OD program, you have to take the Optometry Admission Test (OAT). Then you must apply to and be accepted at an accredited optometry school.

While OD programs vary, they share some common features. In your first and second years you will take courses in the basic health sciences (anatomy, physiology, pathology, biochemistry, pharmacology and public health), optics and vision science. You will also begin gaining clinical experience in a simulation lab with fellow classmates serving as patients. You also get experience with actual patients, taking case histories, performing examinations, learning diagnostic techniques and discussing treatment services.

In the third year, you spend part of your time in the classroom and part of your time in the clinic examining patients.

Fourth-year students continue clinical training, which may include clinical externship rotations. The lengths of the external rotations vary from eight to 16 weeks.

Once you have your OD in hand, you have to pass the licensure exam, which consists of both clinical and written portions. In most states, however, the written portion has been replaced with the exams given during the student's academic career by the National Board of Examiners in Optometry (NBEO).

**Other Related Programs**

**Applied Vision Science**
Applied Vision Science engages students in the study of the visual system, with an emphasis on behavioral optometry. The belief is that vision and eye health are foundational to people’s success and enjoyment of life – throughout their lives. This degree is designed to prepare a student for opportunities in clinical, corporate, and other professional settings.

Vision science is a broad and growing field. It encompasses numerous disciplines such as anatomy, physiology, psychophysics, optics, neuroanatomy, pathology, eye movements, perception, and color vision among others.

**Programs in Oregon**

**Applied Vision Science**
*Pacific University - BS*

**Optometry**
*Pacific University - OD*
Resources
American Optometric Association
Association of Schools and Colleges of Optometry
National Board of Examiners in Optometry
Orthotics and Prosthetics

Orthotics and Prosthetics (O&P) professionals combine skills coming from art, science and technology to evaluate, fabricate and fit orthopedic braces (orthoses) and artificial limbs (prostheses). A critical part of health care teams, O&P professionals work not only with patients but as part of an interdisciplinary team involving physicians, occupational and physical therapists and other care providers.

Advances in technology—particularly robotics, materials science and computer-aided design—have paved the way for ongoing innovation in this health care field, whether you pursue a career as a technician, assistant or full-scale practitioner.

O&P patients may require short- or long-term care depending on the prognosis for their individual health condition. Orthotic patients receive external support for parts of the body that are impaired due to disease or injury, while prosthetic patients’ needs result from congenital limb absence, trauma or disease requiring amputation.

Many people who work in the O&P field were drawn to it because someone close to them benefited from an orthosis or prosthesis or they were exposed to it through work in related health care disciplines. Other traits O&P team members have in common are a strong desire to improve the quality of life for their patients, well-developed motor skills, keen problem-solving abilities, compassion and, not surprisingly, an aptitude for science and math.
Orthotist and Prosthetist

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<th>Average Salary</th>
<th>Years Higher Education</th>
<th>Job Outlook</th>
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<tr>
<td>$33k - 95k</td>
<td>4 - 6</td>
<td>Excellent</td>
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People lose limbs or suffer orthopedic impairment for many reasons, including accidents, combat injuries, birth defects and disease. Health care workers who specialize in orthotics and prosthetics (O&P) help these patients regain their mobility by fitting them with artificial limbs (prostheses) and orthopedic braces (orthoses).

At the highest level, O&P practitioners perform a detailed assessment to determine the patient's O&P needs and assess the patient's functional status, including muscle development, gait, sensory function, range of motion, joint stability and skin integrity.

O&P Practitioners also:

- Develop a plan that addresses the patient's needs and goals, including pain reduction, comfort, stability and mobility, as well as aesthetics
- Select the appropriate design, materials and components for optimum strength, durability and function
- Discuss the treatment plan, including benefits, risks and time involved.
- Prepare the patient for the device, with the use of splints or compression garments, as needed
- Take measurements, make impressions and develop templates as needed to accurately fit the device
- Fabricate/assemble the device and assess and properly align it for maximum function and comfort
- Explain how to use and maintain the device.
- Provide ongoing care, including evaluation and modification of the device for optimal fit and function

This fascinating field encompasses a variety of specialized careers, each of which contributes to designing, making, fitting, modifying, repairing and maintaining O&P devices that make an immeasurable impact on an individual's quality of life:

- Pedorthists make and/or modify footwear—including shoes, foot orthoses and other pedorthic devices to help people maintain or regain mobility
- Certified fitters are trained and qualified to participate in the fit/delivery of prefabricated orthotic devices/soft goods (orthotic fitter); breast prostheses and mastectomy products/services (mastectomy fitter); or non-custom therapeutic shoes and diabetic multi-density inserts (therapeutic shoe fitter)
- Certified technicians work with O&P practitioners to fabricate, repair and maintain O&P devices using highly specialized materials and equipment to provide maximum fit, function and aesthetics. They do not provide direct patient care
- Certified assistants help O&P practitioners with patient management as well as with the fabrication, fit and maintenance of O&P devices

Many people enter this field because they or someone they know has benefited from a prosthetic or orthotic device. It is extremely rewarding to watch someone with a severe impairment regain lost abilities and enjoy new independence. Advances in technology, such as microprocessors, myoelectric joints and computer imaging, make this a particularly exciting time to be involved in O&P.
**Working Conditions**

O&P professionals work in private practice, hospitals, rehabilitation centers, specialty clinics and laboratories devoted to the fabrication, modification and repair of O&P devices.

This profession offers a variety of exciting employment opportunities available including O&P practitioners, pedorthists, assistants, fitters, and technicians.

Pedorthists make and/or modify footwear—including shoes, foot orthoses and other pedorthic devices to help people maintain or regain mobility.

Certified fitters are trained and qualified to participate in the fit/delivery of:

- prefabricated orthotic devices/soft goods (orthotic fitter)
- breast prostheses and mastectomy products/services (mastectomy fitter)
- non-custom therapeutic shoes
- diabetic multidensity inserts (therapeutic shoe fitter).

Registered assistants help O&P practitioners with patient management as well as with the fabrication, fit and maintenance of O&P devices.

**Salary Range and Outlook**

The U.S. Department of Education lists O&P training as a “national priority with a practitioner deficit.” The need for O&P services is rising rapidly, due in part to increasing obesity, diabetes and an aging population. The ability to provide the most cost-effective and clinically appropriate O&P care will be dependent on having a large enough pool of well-educated certified orthotists and prosthetists.

According to the 2013 American Orthotic and Prosthetic Association (AOPA) Benefits & Compensation Report, average compensation (base salary, bonus and commission) for the following job titles is:

- $95,332 for a certified orthotist/prosthetist with an average of 18 years' experience
- $50,916 for a certified pedorthist with an average of 15 years’ experience
- $49,047 for a certified technician with an average of 15 years’ experience
- $49,564 for a certified assistant with an average of six years’ experience
- $38,677 for a certified fitter with an average of seven years’ experience
- $33,908 for a National Commission on Orthotic and Prosthetic Education (NCOPE) resident with an average of one year of experience

Compensation varies based on many factors, like geographical location, years of experience and inclusion or exclusion of fringe benefits.

**Academic Requirements**

Training requirements vary depending on the type of orthotics and prosthetics (O&P) career you choose:

- Assistants
- Fitters
- O&P practitioners
- Pedorthists
- Technicians
Aspiring orthotists and prosthetists must complete an O&P masters program. O&P masters students come from a wide variety of undergraduate majors, but keep in mind that all O&P masters programs will have prerequisite courses. These may vary from program to program, but will likely include biology with lab, chemistry with lab, physics with lab, psychology, statistics, and human anatomy and physiology.

To become certified, candidates must sit for their certification exam after they complete a program accredited by the Commission on Accreditation for Allied Health Education (CAAHEP) and a one-year residency per discipline.

**Programs in Oregon**
*University of Washington - MPO (no program in Oregon)*

**Resources**
- American Academy of Orthotists and Prosthetists
- American Board for Certification in Orthotics, Prosthetics & Pedorthics (ABC)
- American Orthotic & Prosthetic Association (AOPA)
- National Association for the Advancement of Orthotics and Prosthetics
- National Commission on Orthotic and Prosthetic Education (NCOPE)
Pharmacology

Often confused with pharmacy, pharmacology is a separate discipline in the health sciences. Pharmacology is the study of how a drug affects a biological system and how the body responds to the drug. The discipline encompasses the sources, chemical properties, biological effects and therapeutic uses of drugs. These effects can be therapeutic or toxic, depending on many factors. Pharmacologists are often interested in therapeutics, which focuses on the effects of drugs and other chemical agents that minimize disease, or toxicology, which involves the study of adverse, or toxic, effects of drugs and other chemical agents. Toxicology can refer to both drugs used in the treatment of disease and with chemicals that may be present in household, environmental, or industrial hazards.

Pharmacology has two major branches:

- Pharmacokinetics, which refers to the absorption, distribution, metabolism, and excretion of drugs
- Pharmacodynamics, which refers to the molecular, biochemical, and physiological effects of drugs, including drug mechanism of action

In simple terms, pharmacodynamics is what the drug does to the body, and pharmacokinetics is what the body does to the drug.

A major contribution of pharmacology has been the advancement of knowledge about the cellular receptors with which drugs interact. The development of new drugs has focused on steps in this process that are sensitive to modulation. Understanding how drugs interact with cellular targets allows pharmacologists to develop more selective drugs with fewer undesirable side effects.

The field of pharmacology is at the forefront of some of the most exciting developments in modern medicine, including:

- Personalized precision medicine and gene therapy through genomic and proteomic approaches
- Regenerative pharmacology to optimize development of bioengineered tissues
- Computational and modelling approaches as drug discovery tools
- Nanotechnology-based approaches to fighting disease

Pharmacology integrates the knowledge of many disciplines, including medicine, pharmacy, nursing, dentistry, and veterinary medicine. The integrative nature of the field yields a diverse array of career opportunities in academic research, industry, government and regulatory affairs, tech transfer, patent law, science policy, and more.
Pharmaceutical Scientist

Average Salary: $104k - 210k
Years Higher Education: 4 - 6
Job Outlook: Very Good

Have you ever wondered how a plant or a sponge from the ocean becomes a medication that a doctor prescribes to treat disease?

While pharmacists are highly trained to evaluate medication use, communicate with other health care providers, prepare and dispense medications, and educate patients about those medications, pharmaceutical scientists are expertly trained to discover, develop, test and manufacture new medications.

Typical pharmaceutical scientists spend most of their time in a laboratory discovering and learning how different compounds interact with disease-causing cells and organisms. In addition, they investigate how these compounds interact with the human body to ultimately determine if they can become new drugs.

Developing new drugs takes a very long time and costs a great deal of money. There are three stages to this process:

- Discovery: Identifying new compounds that help treat disease
- Development: Administering the new drug to animals and humans to make sure it is safe and effective
- Manufacturing: Producing the new drug in large quantities for distribution

Creating new medicines requires a large team of scientists with training in many different scientific disciplines including various areas of chemistry, biology, engineering, informatics and medicine.

During the discovery phase, pharmaceutical scientists may examine thousands of molecular compounds before they find one that effectively fights disease without harming the patient. Alternatively, hundreds of molecular pathways are evaluated to determine if a protein can alter the signaling in a beneficial way. If a pharmaceutical scientist identifies a promising new compound or target today, it may take up to 20 years before the medicine is available in your drug store.

Pharmaceutical scientists usually specialize in one aspect of the drug development process. They may:

- Design new drug therapies using natural or synthetic (man-made) ingredients
- Uncover new ways to use existing drugs to treat different types of disease
- Study how disease affects the body and what causes some people to develop certain types of disease
- Study how the human body responds to medications, so scientists can develop better, safer drugs
- Test drugs on animals and humans to ensure safety and efficacy
- Determine the most effective formulation and dosage for a specific drug
- Work on improving the drug manufacturing process
- Ensure the consistent quality of prescription medications
- Advise corporations or government agencies, including the Food and Drug Administration, on issues related to pharmaceutical development
Regardless of where they choose to specialize in the drug development process, pharmaceutical scientists have the satisfaction of spending their time looking for ways to help people fight disease and stay healthy.

**Working Conditions**
Pharmaceutical scientists are employed by any number of institutions, from large drug manufacturing, biotech companies and contract research organizations (CROs) to academic institutions and governmental agencies. Many work in laboratories as part of a large team of scientists and technicians developing new drug therapies. Others teach and work in offices near universities or hospitals, supervising clinical drug trials or in manufacturing centers, overseeing the large-scale production of medications.

Pharmaceutical scientists use sophisticated computers and equipment, work with microscopic compounds and conduct scientific experiments. They must be extremely detailed and precise. They also need to be patient, because it can take a team of pharmaceutical scientists many years to bring a new drug to market.

**Salary Range and Outlook**
Pharmaceutical scientists just starting their careers earn an average salary of $85,000. With experience and increasing responsibility, their compensation can grow significantly. They also can receive bonuses throughout the development of a new drug.

**Academic Requirements**
To become a pharmaceutical scientist, you must have a strong interest in mathematics, biology, chemistry and the scientific process. You may want to decide early on which aspect of the drug development cycle you want to focus on – discovery, development or manufacturing. In college, you can major in the pharmaceutical sciences, pharmacy, biology, chemistry, medicine, engineering or a related field.

Good communications skills are important, because you’ll be working as part of a scientific team made up of people with diverse backgrounds. You’ll need to be able to stay motivated and keep your team energized throughout the long development process. You also must be able to handle failure and disappointment: Most promising new drugs are rejected before they ever reach the market, because they are dangerous, don’t work consistently or have unacceptable side effects. During college, get involved with the student chapter of the American Association of Pharmaceutical Scientists. Explore internships and/or co-ops and look for opportunities to meet and “shadow” working pharmaceutical scientists.

Many pharmaceutical scientists begin working in the field after college and then go on to complete advanced degrees in more specialized subjects. Pharmaceutical companies often pay for talented workers to complete graduate and post-graduate degrees, such as Master of Science (M.S.), Master of Public Health (MPH), Doctor of Medicine (M.D.), Doctor of Pharmacy (Pharm.D.) or Doctor of Philosophy (Ph.D.), to help them qualify for advancement.

**Other Related Fields**
**Pharmacology**
This type of program is the branch of biology concerned with the study of drug action, where a drug can be broadly defined as any man-made, natural, or endogenous (from within the body) molecule which exerts a biochemical or physiological effect on the cell, tissue, organ, or organism. Programs in this area usually involve the study of the interactions that occur between a living organism and chemicals that affect normal or abnormal biochemical function.
Pre-Pharmacy
Pre-Pharmacy programs usually consist of a 2-year undergraduate course that Pharmacy students must first complete before moving onward to a 4-year Pharm.D program within the United States. Programs are offered in a few different ways across the country. Within some colleges, the Pre-Pharmacy coursework is combined with the Pharm.D course for a 5 or 6-year program. Five year programs connect 2 years of Pre Pharmacy to an accelerated year round program. Colleges that do not offer this merged program may allow an undergraduate student to major (or minor) in Pre-Pharmacy.

Programs in Oregon
Pharmaceutical Scientist
Oregon State University - PhD
Pacific University - BS, PhD
Pharmacology
Oregon Health Science University - PhD
Pre-Pharmacy
Clatsop Community College - AAS
Concordia University - BS
Corbin University - BS
Eastern Oregon University - BS
Multnomah University - BS
Oregon Institute of Technology - BS
Oregon State University - BS
Oregon State University-Cascades - BS
Pacific University - BS
Southern Oregon University - BS
Warner Pacific University - BS
Western Oregon University - BS

Resources
American Association of Pharmaceutical Scientists
The Medical Science Liaison (MSL) is a specialized role within the pharmaceutical, biotechnology, medical device, and related health-care fields. They concentrate on a specific therapeutic area or disease state (e.g., oncology, cardiology, gastroenterology, infectious diseases, rheumatology). MSLs establish and maintain relationships with leading physicians, researchers, and clinicians, referred to as key opinion leaders (KOLs) at academic institutions, hospitals, pharma companies, and others. They help ensure that products are used effectively, serve as scientific resources and experts, advise on upcoming advances in treatments, and provide input about relevant scientific and clinical data.

It is important to note that MSLs are not in a sales or commercial role, although they frequently liaise with those on marketing teams to ensure consistent and accurate messaging. They must keep abreast of the latest research and new developments in their area of expertise. Because they consult with many different groups of professionals as part of their job, MSLs must be expert communicators who can tailor their message for a given audience while presenting complex material in a clear and consistent manner. They must have a clear understanding of the clinical research process, including product development, clinical trials, and approval. MSLs may have different job titles depending on the company, including Medical Liaisons, Medical Managers, Regional Scientific Managers, Clinical Liaisons, and Scientific Affairs Managers among others.

Some typical tasks that an MSL may undertake include:

- Responding to requests for information
- Providing training to sales and marketing teams
- Analyzing clinical trends and practices
- Hosting advisory boards
- Consulting with product developers and medical professionals
- Monitoring the scientific literature for new developments

No matter what their specialty, MSLs frequently interact with leaders in their area of expertise. As a field representative for their company, they are vital to its success by establishing relationships, encouraging collaboration, and facilitating dialogue.

**Working Conditions**

Due to the nature of the work, extensive travel is common for a Medical Science Liaison (60-80%). They may be responsible for a geographic area or region. They are usually employed by pharmaceutical, biotechnology, medical device, and managed care companies. Due to the quantity of travel required to liaise and consult with other professionals, they may or may not be based at a company’s physical office. They frequently spend time in meetings where they need to deliver complex information in a clear and concise manner. They must have excellent organizational, analytical, interpersonal, and communication skills. Most MSL positions are full time. Since they need to keep up to date on their area of expertise, attendance at professional conferences is common.
Salary Outlook
The average salary for a Medical Science Liaison is $170,000.

Academic Requirements
MSLs have advanced scientific training and academic credentials that typically include a doctorate or comparable terminal degree (e.g., PhD, PharmD, MD) in the life sciences. Some also enter the field with a background in nursing that includes expertise in a particular therapeutic area. Those going into the field need a strong scientific background complemented by excellent communication, listening skills, and emotional intelligence. Many MSLs develop expertise in a particular therapeutic area by conducting bench research as part of a PhD, or working on the clinical side as a medical professional. Common undergraduate degrees include biochemistry, biological sciences, chemistry, pharmacy, pharmacology, medicine, and engineering.

Other Related Fields
Biochemistry
Biochemistry is a field of science that deals with the chemistry of life processes in plants and animals. A typical program in biochemistry focuses on the scientific study of the chemistry of living systems, their fundamental chemical substances and reactions, and their chemical pathways and information transfer systems, with particular reference to carbohydrates, proteins, lipids, and nucleic acids.

Biology
Biology is the study of life. Programs typically focus on molecular, cellular, and ecological discoveries which form the basis of biology and are applied to the associations that exist among living organisms, including human evolution. Careers in the health care and pre-professional studies in dentistry, medicine, optometry, medical technology, podiatry, veterinary medicine, ecology, marine biology, and genetics are all possibilities for biology students.

Chemistry
Chemistry is the study of matter and the changes it can undergo. Programs typically provide training for students planning careers in the chemical and biological sciences and also for those in biology, health related disciplines, earth sciences, secondary education, business, journalism and law.

Medicine (Allopathic Physician)
Medicine is the science and practice of establishing the diagnosis, prognosis, treatment, and prevention of disease. Medicine encompasses a variety of health care practices evolved to maintain and restore health by the prevention and treatment of illness. Contemporary medicine applies biomedical sciences, biomedical research, genetics, and medical technology to diagnose, treat, and prevent injury and disease, typically through pharmaceuticals or surgery, but also through therapies as diverse as psychotherapy, external splints and traction, medical devices, biologics, and ionizing radiation, amongst others.

Microbiology
Microbiology is the study of all living organisms that are too small to be visible with the naked eye. This includes bacteria, archaea, viruses, fungi, prions, protozoa and algae, collectively known as ‘microbes’.
Pharmacology
This type of program is the branch of biology concerned with the study of drug action, where a drug can be broadly defined as any man-made, natural, or endogenous (from within the body) molecule which exerts a biochemical or physiological effect on the cell, tissue, organ, or organism. Programs in this area usually involve the study of the interactions that occur between a living organism and chemicals that affect normal or abnormal biochemical function.

Pre-Medicine
Pre-medical (often referred to as pre-med) is an educational track that undergraduate students pursue prior to becoming medical students. It involves activities that prepare a student for medical school, such as pre-med coursework, volunteer activities, clinical experience, research, and the application process. Some pre-med programs providing broad preparation are referred to as “pre-professional” and may simultaneously prepare students for entry into a variety of first professional degree or graduate school programs that require similar prerequisites (such as medical, veterinary, or pharmacy schools).

Pre-Pharmacy
Pre-Pharmacy programs usually consist of a 2-year undergraduate course that Pharmacy students must first complete before moving onward to a 4-year Pharm.D program within the United States. Programs are offered in a few different ways across the country. Within some colleges, the Pre-Pharmacy coursework is combined with the Pharm.D course for a 5 or 6-year program. Five year programs connect 2 years of Pre Pharmacy to an accelerated year round program. Colleges that do not offer this merged program may allow an undergraduate student to major (or minor) in Pre-Pharmacy.

Programs in Oregon
Allopathic Physician
Oregon Health Science University - MD

Biochemistry
Eastern Oregon University - BS
Linfield College - BS
Mount Hood Community College - AAS
Oregon Health Sciences University - MS, PhD
Oregon State University - BS, MS, PhD
Portland State University - BS
Southern Oregon University - BS
University of Oregon - BS, MS, PhD

Biology
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clackamas Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Lewis & Clark College - BS
Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Multnomah University - BS
Northwest Christian University - BS
Oregon Institute of Technology - BS
Oregon State University - BS
Oregon State University Cascades - BS
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS
University of Portland - BS
University of Western States - BS
Warner Pacific University - BS
Western Oregon University - BS
Willamette University - BS

Chemistry
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Lewis & Clark College - BS
Linfield College - BS
Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Oregon State University - BS, MS, PhD
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS, MS, PhD
University of Portland - BS
Western Oregon University - BS
Willamette University - BS

Microbiology
Oregon State University - BS, MS, PhD

Pharmacology
Oregon Health Science University - PhD

Pre-Medicine
Central Oregon Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Multnomah University - BS
Oregon Institute of Technology - BS
Oregon State University-Cascades - BS
Pacific University - BS
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Warner Pacific University - BS
Western Oregon University - BS

**Pre-Pharmacy**

Clatsop Community College - AAS
Concordia University - BS
Corbin University - BS
Eastern Oregon University - BS
Multnomah University - BS
Oregon Institute of Technology - BS
Oregon State University - BS
Oregon State University-Cascades - BS
Pacific University - BS
Southern Oregon University - BS
Warner Pacific University - BS
Western Oregon University - BS

**Resources**

Medical Science Liaison Society
Regulatory Affairs Specialist

Average Salary: $68K
Years Higher Education: 4 - 6
Job Outlook: Very Good

Regulatory Affairs Specialists assist in obtaining and maintaining government approval for drugs, medical devices, nutritional products, and related materials. They are often employed by pharmaceutical, biotechnology, and medical device companies. They may also work in government or law. The duties and responsibilities of Regulatory Affairs Specialists have expanded in recent years as a result of company acquisitions and restructuring, worldwide globalization of markets, and constantly evolving regulations. Typically, individuals in these positions work within an office of regulatory affairs where they work on document preparation, information management, file maintenance, and coordination of tasks across multiple departments. Part of the strategic directive is to achieve a balance between regulatory concerns, technology, marketing objectives, compliance, time to market, and costs. The office of regulatory affairs is a dynamic work environment where communication with employees at all levels within the organization is extremely important.

Regulatory Affairs Specialists must understand all aspects of product development, including research, clinical trials, manufacturing practices, regulations, and approval processes. They help review product promotional materials, labeling, batch records, specification sheets, or test methods for compliance with applicable regulations and policies. They often advise project teams on subjects such as pre-market regulatory requirements, export and labeling requirements, or clinical study compliance issues. In addition, they determine the types of regulatory submissions or internal documentation that are required in situations such as proposed device changes or labeling changes.

A variety of job titles may be used in this profession, including Clinical Quality Assurance Associate or Specialist, Drug Regulatory Affairs Specialist, Product Safety Specialist, Quality Assurance Documentation Coordinator or Specialist, Quality Assurance/Regulatory Affairs Specialist (QA/RA Specialist), Regulatory Affairs Analyst, and Regulatory Affairs Associate.

Some typical job tasks include:

- Explain regulations, policies, or procedures
- Maintain data in information systems or databases
- Ensure compliance with regulations
- Advise others on regulatory and compliance matters
- Evaluate applicable laws and regulations to determine impact on company activities
- Provide technical review of data or reports
- Coordinate regulatory documentation activities
- Identify and interpret relevant regulatory guidelines

Regulatory affairs positions have increasing levels of responsibility and more senior individuals typically assume titles of manager or director. Jobs in this field are likely to increase due to expanding government regulation within the health and pharma industries.

**Working Conditions**

Regulatory Affairs Specialists must be able to work in a demanding environment where strict timelines and protocols must be met. They frequently work on managing and documenting information, and must be adept at working with databases and other information management tools. Attention to detail is extremely important, as is the ability to adapt quickly to changing
regulations. They must have excellent organizational, analytical, project management, and communication skills. They work frequently with other employees and team members to coordinate complex activities, often with competing priorities. Most regulatory affairs positions are full time. Some may work in contractor or consultant roles associated with a specific product. Others may be longer-term roles covering a wider array of products. Since they need to keep up to date on their area of expertise, attendance at professional conferences or relevant training events is common.

Salary Range and Outlook
A Regulatory Affairs Specialist can expect to earn an average of $68,000 per year.

Academic Requirements
Entry-level regulatory affairs professionals have a bachelor’s degree. Typical majors include biochemistry, biological sciences, chemistry, pharmacy, pharmacology, toxicology, medicine, and engineering. Coursework in law, marketing, business, and statistics is also useful. Those who advance in the profession often have a masters (e.g., in business administration, clinical research studies, engineering, or a life science) or a terminal degree (e.g., PhD, MD, or PharmD). Advancement may require credentialing, for example via a Regulatory Affairs Certification (RAC).

Other Related Fields
Biochemistry
Biochemistry is a field of science that deals with the chemistry of life processes in plants and animals. A typical program in biochemistry focuses on the scientific study of the chemistry of living systems, their fundamental chemical substances and reactions, and their chemical pathways and information transfer systems, with particular reference to carbohydrates, proteins, lipids, and nucleic acids.

Biology
Biology is the study of life. Programs typically focus on molecular, cellular, and ecological discoveries which form the basis of biology and are applied to the associations that exist among living organisms, including human evolution. Careers in the health care and pre-professional studies in dentistry, medicine, optometry, medical technology, podiatry, veterinary medicine, ecology, marine biology, and genetics are all possibilities for biology students.

Chemistry
Chemistry is the study of matter and the changes it can undergo. Programs typically provide training for students planning careers in the chemical and biological sciences and also for those in biology, health related disciplines, earth sciences, secondary education, business, journalism and law.

Pharmaceutical Sciences
Pharmaceutical sciences students learn to work in a laboratory discovering and learning how different compounds interact with disease-causing cells and organisms. In addition, they investigate how these compounds interact with the human body to ultimately determine if they can become new drugs.
Pharmacology
This type of program is the branch of biology concerned with the study of drug action, where a drug can be broadly defined as any man-made, natural, or endogenous (from within the body) molecule which exerts a biochemical or physiological effect on the cell, tissue, organ, or organism. Programs in this area usually involve the study of the interactions that occur between a living organism and chemicals that affect normal or abnormal biochemical function.

Pre-Medicine
Pre-medical (often referred to as pre-med) is an educational track that undergraduate students pursue prior to becoming medical students. It involves activities that prepare a student for medical school, such as pre-med coursework, volunteer activities, clinical experience, research, and the application process. Some pre-med programs providing broad preparation are referred to as “pre-professional” and may simultaneously prepare students for entry into a variety of first professional degree or graduate school programs that require similar prerequisites (such as medical, veterinary, or pharmacy schools).

Pre-Pharmacy
Pre-Pharmacy programs usually consist of a 2-year undergraduate course that Pharmacy students must first complete before moving onward to a 4-year Pharm.D program within the United States. Programs are offered in a few different ways across the country. Within some colleges, the Pre-Pharmacy coursework is combined with the Pharm.D course for a 5 or 6-year program. Five year programs connect 2 years of Pre Pharmacy to an accelerated year round program. Colleges that do not offer this merged program may allow an undergraduate student to major (or minor) in Pre-Pharmacy.

Programs in Oregon
Allopathic Physician
Oregon Health Science University - MD

Biochemistry
Eastern Oregon University - BS
Linfield College - BS
Mount Hood Community College - AAS
Oregon Health Sciences University - MS, PhD
Oregon State University - BS, MS, PhD
Portland State University - BS
Southern Oregon University - BS
University of Oregon - BS, MS, PhD

Biology
Central Oregon Community College - AAS
Cheneketa Community College - AAS
Clackamas Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Lewis & Clark College - BS
Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Multnomah University - BS
Northwest Christian University - BS
Oregon Institute of Technology - BS
Oregon State University - BS
Oregon State University Cascades - BS
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS
University of Portland - BS
University of Western States - BS
Warner Pacific University - BS
Western Oregon University - BS
Willamette University - BS

Chemistry
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Lewis & Clark College - BS
Linfield College - BS
Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Oregon State University - BS, MS, PhD
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Umpqua Community College - AAS
University of Oregon - BS, MS, PhD
University of Portland - BS
Western Oregon University - BS
Willamette University - BS

Microbiology
Oregon State University - BS, MS, PhD

Pharmaceutical Scientist
Oregon State University - PhD
Pacific University - BS, PhD

Pharmacology
Oregon Health Science University - PhD

Pre-Medicine
Central Oregon Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Multnomah University - BS
Oregon Institute of Technology - BS
Oregon State University-Cascades - BS
Pacific University - BS
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Warner Pacific University - BS
Western Oregon University - BS

Pre-Pharmacy
Clatsop Community College - AAS
Concordia University - BS
Corbin University - BS
Eastern Oregon University - BS
Multnomah University - BS
Oregon Institute of Technology - BS
Oregon State University - BS
Oregon State University-Cascades - BS
Pacific University - BS
Southern Oregon University - BS
Warner Pacific University - BS
Western Oregon University - BS

Resources
Regulatory Affairs Professionals Society
Pharmacy

Pharmacy is a doctoral health profession in which licensed professionals provide information about medications to patients and health care professionals. As “medication experts,” pharmacists are concerned with safeguarding the public’s health in matters relating to medication distribution and use and disease state management. In short, pharmacists help people live healthier, better lives.
In recent years, pharmacist has been consistently ranked as among the best jobs in the United States. Pharmacists play an important role in helping people get the best results from their medications. The pharmacist is an accessible liaison whom patients can talk to face-to-face, without an appointment. He or she is someone who can answer health-related questions, what foods, drinks, activities, or other drugs could have an effect on medication or what to do about a missed dose. Essentially, pharmacists help people with almost anything related to the use of medicines, which means they help people to stay as healthy as possible. If this sounds interesting to you, then perhaps becoming a pharmacist, a trusted, caring, and knowledgeable health care professional, might very well be you.

Working Conditions
Pharmacists work in pharmacies, including those in grocery and drug stores. They also work in hospitals and other healthcare facilities. Some pharmacists work for the government and the military. In most settings, they spend much of the workday on their feet. Most pharmacists work full time, although about 1 in 5 worked part time in 2014. Because many pharmacies are open at all hours, some pharmacists work nights and weekends.

Salary and Outlook
A Pharmacist can expect to earn an average salary of $122,000.

Academic Requirements
In 2016, 139 colleges and schools of pharmacy were recognized by the Accreditation Council for Pharmacy Education. Pharmacy programs grant Doctor of Pharmacy (Pharm.D.) degrees, which require at least six years of post-secondary study and passing a state board of pharmacy licensure examination.

The Doctor of Pharmacy (Pharm.D.) degree program requires at least 2-years of specific preprofessional (undergraduate) coursework followed by 4-academic years (or 3-calendar years) of professional study. Pharmacy colleges and schools may accept students directly from high school for both the pre-pharmacy and pharmacy curriculum, or after completion of the college course prerequisites. The majority of students enter a pharmacy program with 3 or more years of college experience. College graduates who enroll in a pharmacy program must complete the full 4-academic years (or 3-calendar) years of professional study to earn the Pharm.D. degree.

The Pharmacy College Application Service (PharmCAS) makes it easy to apply to multiple schools using a single application.

Students interested in laboratory or research experience can continue their education by completing a Master of Science or Ph.D. degree. Graduates usually go on to careers in research for a drug company or teaching at a university. In the 2016-17 academic year, 78 colleges of pharmacy offered Master of Science and/or Ph.D. programs.

Other options for Pharm.D. graduates who are interested in further training include one- or two-year residency programs or fellowships. Pharmacy residencies are post-graduate training programs in pharmacy practice. Pharmacy fellowships are highly individualized programs
designed to prepare participants to work in research laboratories. Some pharmacists who run their own pharmacies obtain a master's degree in business administration (MBA).

Other Related Fields
Pharmacology
This type of program is the branch of biology concerned with the study of drug action, where a drug can be broadly defined as any man-made, natural, or endogenous (from within the body) molecule which exerts a biochemical or physiological effect on the cell, tissue, organ, or organism. Programs in this area usually involve the study of the interactions that occur between a living organism and chemicals that affect normal or abnormal biochemical function.

Pre-Pharmacy
Pre-Pharmacy programs usually consist of a 2-year undergraduate course that Pharmacy students must first complete before moving onward to a 4-year Pharm.D program within the United States. Programs are offered in a few different ways across the country. Within some colleges, the Pre-Pharmacy coursework is combined with the Pharm.D course for a 5 or 6-year program. Five year programs connect 2 years of Pre Pharmacy to an accelerated year round program. Colleges that do not offer this merged program may allow an undergraduate student to major (or minor) in Pre-Pharmacy.

Programs in Oregon
Pharmaceutical Scientist
Oregon State University - PhD
Pacific University - BS, PhD
Pharmacology
Oregon Health Science University - PhD
Pre-Pharmacy
Clatsop Community College - AAS
Concordia University - BS
Corbin University - BS
Eastern Oregon University - BS
Multnomah University - BS
Oregon Institute of Technology - BS
Oregon State University - BS
Oregon State University-Cascades - BS
Pacific University - BS
Southern Oregon University - BS
Warner Pacific University - BS
Western Oregon University - BS

Resources
American Association of Colleges of Pharmacy
American Society of Health-System Pharmacists
American Pharmacists Association
Pharmacy Technician

Average Salary  Years Higher Education  Job Outlook
$31k            1 - 2           Excellent

Pharmacy technicians work under the direct supervision of a licensed pharmacist and perform many pharmacy-related functions. They refer any questions regarding prescriptions, drug information, or health matters to a pharmacist. Pharmacy techs work in a wide variety of practice settings, including community pharmacies, hospitals, the military, in-home health care settings, long term care facilities, mail service pharmacies, managed health care organizations, and educational programs.

**Working Conditions**
Pharmacy technicians work in clean, organized, well-lighted, and well-ventilated areas. Most of their workday is spent on their feet. They may be required to lift heavy boxes or to use stepladders to retrieve supplies from high shelves. Technicians work the same hours as pharmacists. This may include evenings, nights, weekends, and holidays. Because some hospital and retail pharmacies are open 24 hours a day, technicians may work varying shifts. As their seniority increases, technicians often have increased control over the hours they work. There are many opportunities for part-time work in both retail and hospital settings.

**Salary and Outlook**
A Pharmacy technician can expect to earn an average of $31,000.

**Academic Requirements**
Formal pharmacy-technician education programs require classroom and laboratory work in a variety of areas, including medical and pharmaceutical terminology, pharmaceutical calculations, pharmacy record keeping, pharmaceutical techniques, and pharmacy law and ethics. Technicians also are required to learn medication names, actions, uses, and doses. Many training programs include internships, in which students gain hands-on experience in actual pharmacies. Students receive a diploma, certificate, or an associate degree, depending on the program.

**Other Related Fields**

**Pharmacy Management**
Pharmacy management entails usage of stock management and billing and accounting. Stock management helps the user in effectively dispensing drugs and managing the products (medicines, other supplies).

**Pre-Pharmacy**
Pre-Pharmacy programs usually consist of a 2-year undergraduate course that Pharmacy students must first complete before moving onward to a 4-year Pharm.D program within the United States. Programs are offered in a few different ways across the country. Within some colleges, the Pre-Pharmacy coursework is combined with the Pharm.D course for a 5 or 6-year program. Five year programs connect 2 years of Pre Pharmacy to an accelerated year round program. Colleges that do not offer this merged program may allow an undergraduate student to major (or minor) in Pre-Pharmacy.
**Programs in Oregon**

**Pharmacy Management**
- Chemeketa Community College - AAS

**Pharmacy Technician**
- Blue Mountain Community College - Certificate
- Central Oregon Community College - Certificate
- Chemeketa Community College - Certificate
- Lane Community College - Certificate
- Linn-Benton Community College - Certificate
- Rogue Community College - Certificate
- Southwestern Oregon Community College - Certificate
- Springdale Job Corps Program - Certificate
- Tillamook Bay Community College - Certificate

**Pre-Pharmacy**
- Clatsop Community College - AAS
- Concordia University - BS
- Corbin University - BS
- Eastern Oregon University - BS
- Multnomah University - BS
- Oregon Institute of Technology - BS
- Oregon State University - BS
- Oregon State University-Cascades - BS
- Pacific University - BS
- Southern Oregon University - BS
- Warner Pacific University - BS
- Western Oregon University - BS

**Resources**
- American Society of Health-System Pharmacists
- National Pharmacy Technician Association
- Pharmacy Technician Certification Board
Physical Therapy

Physical therapy is a dynamic and evidence-based profession that helps to improve or restore mobility, relieve pain and reduce the need for surgery and prescription drugs. Physical therapy professionals diagnose and treat individuals of all ages who have medical problems or other health-related conditions that limit their abilities to move and perform functional activities in their daily lives.

Physical therapy also prevents the loss of mobility before it occurs through fitness and wellness-oriented programs that result in healthier and more active lifestyles. Physical therapy is provided in a variety of settings, including hospitals, private practices, outpatient clinics, home health agencies, schools, sports and fitness facilities, work settings, and nursing homes.

Physical therapy treatments may include:

- Therapeutic exercise
- Functional training
- Deep soft tissue massage
- Physical modalities such as electrotherapy and ultrasound

The terms “physical therapy” and “physiotherapy,” and the terms “physical therapist” and “physiotherapist,” are synonymous.
Physical Therapist

Physical therapists are evidence-based, health care professionals who diagnose and treat individuals of all ages who have medical problems or other health-related conditions that limit their abilities to move and perform functional activities in their daily lives. They offer cost-effective treatment that improves mobility and relieves pain, reduces the need for surgery and prescription drugs, and allows patients to participate in a recovery plan designed for their specific needs. In addition, physical therapists work with individuals to prevent the loss of mobility before it occurs by developing fitness and wellness programs for healthier and more active lifestyles.

Physical therapists provide care for people in a variety of settings, including hospitals, private practices, outpatient clinics, home health agencies, schools, sports and fitness facilities, work settings and nursing homes. State licensure is required in each state in which a physical therapist practices.

As essential participants in the health care delivery system, physical therapists assume leadership roles in rehabilitation, prevention, health maintenance and programs that promote health, wellness and fitness. Physical therapists also play important roles both in developing standards for physical therapy practice and in developing health care policy to ensure availability, accessibility and optimal delivery of health care services.

As clinicians, physical therapists engage in an examination process that includes:

- Taking the patient's medical history
- Reviewing the medications, test results and notes from other health care providers
- Conducting a systems review
- Performing tests and measures to identify potential and existing problems

To establish diagnoses, prognoses and plans of care, physical therapists perform evaluations, synthesizing the examination data and determining whether the problems to be addressed are within the physical therapy scope of practice.

Physical therapists typically do the following:

- Diagnose patients' functions and movements by observing them stand, walk or perform activities/tasks; performing various tests and measures; and listening to their concerns
- Design individualized plans of care based on their medical expertise, best available research, the patients’ unique situations and goals and the expected outcomes of the plans
- Use techniques such as exercises, hands-on therapy and equipment to ease patients’ pain, help them increase their mobility, prevent further pain or injury and facilitate health and wellness
- Evaluate a patients’ progress and modify their plans of care, when necessary, to try new treatments
- Educate patients and their families about what to expect and how best to cope with a recovery process
- Develop and implement discharge plans
A few of the health conditions commonly treated by physical therapists are as follows:

- Arthritis
- Back and neck pain
- Brain injury
- Cancer-related complications
- Carpal tunnel syndrome
- Cerebral palsy
- Chronic pain
- Cystic fibrosis
- Diabetes
- Fall risk and balance issues
- Fibromyalgia
- Fractures and multiple trauma
- Incontinence
- Joint injuries, including to knee and ankle
- Lymphedema
- Multiple sclerosis
- Muscle strains
- Obesity
- Osteoporosis
- Parkinson's disease
- Pelvic pain
- Plantar fasciitis
- Post-operative rehabilitation
- Rotator cuff injuries
- Spinal cord injuries and birth defects
- Sports injuries

**Working Conditions**

The practice of physical therapy varies by the type of patient. For example, a patient experiencing loss of mobility due to stroke needs different care from that given to an athlete recovering from an injury. Some physical therapists specialize in one type of care, such as orthopedics or geriatrics. Many physical therapists also help to prevent loss of mobility by developing fitness and wellness programs to encourage healthier and more active lifestyles. Although many physical therapists practice in hospitals, more than 80% practice in other settings, according to the American Physical Therapy Association (APTA). Physical therapists also provide care for people in private practices, outpatient clinics, home health agencies, schools, sports and fitness facilities, work settings and nursing homes.

Physical therapists are on their feet much of the day and spend a great deal of time using their bodies to work with patients or to lift and move them. It's important for physical therapists to learn proper body mechanics and use those principles in their daily work to avoid injuring themselves.

Most physical therapists work a regular Monday through Friday work week. Depending on the work setting, however, some may need to work evenings or weekends.

**Salary Range and Outlook**

U.S. News & World Report ranked physical therapist twentieth in its 2019 list of best health care jobs. It's also a job that is likely to be in demand. The Bureau of Labor Statistics projects that employment of physical therapists will grow by 36% between 2014 to 2024, much faster than the average for all occupations.
Salaries vary based on position, years of experience, degree of education, geographic location and practice setting. The BLS reports that the average salary for the profession is $84,020 per year.

**Academic Requirements**

To practice as a physical therapist in the United States, you must graduate with a Doctor of Physical Therapy (DPT) degree from an accredited program and pass a state licensure exam. Generally, students complete a bachelor's degree in four years followed by three years in the DPT education program.

Some programs offer a 3+3 curricular format in which three years of specific pre-professional (undergraduate/pre-PT) courses must be taken before the student can advance into a three-year professional DPT program. A few programs recruit all or a portion of students directly from high school into a guaranteed freshman admissions program. High school students accepted into these programs can automatically advance into the professional phase of the program pending the completion of specific undergraduate courses and any other stated contingencies (eg, minimum GPA).

As of 2015, professional physical therapist education programs in the United States only offer the DPT degree. The Master of Physical Therapy and Master of Science in Physical Therapy degrees have been discontinued. Check the American Physical Therapy Association's accredited programs directory and the Physical Therapist Centralized Application Service (PTCAS) websites for a list and descriptions of accredited DPT education programs. You can also review the admission requirements for programs on the PTCAS website.

As a physical therapy student, your classes will include:

- Behavioral sciences
- Biology/anatomy
- Biomechanics
- Cardiovascular and pulmonary system
- Cellular histology
- Clinical reasoning
- Communication
- Endocrine and metabolic system
- Ethics/values
- Evidence-based practice
- Exercise physiology
- Finance
- Kinesiology
- Management sciences
- Musculoskeletal system
- Neuroscience
- Pathology
- Pharmacology
- Physiology
- Sociology

You will also have lab study and spend part of your time gaining clinical experience. Physical therapy students spend 27.5 weeks on average in their final clinical experience. Once you earn a DPT degree, you must pass a state licensure exam in order to practice as a physical therapist.
Programs in Oregon

Physical Therapy
George Fox University - PhD
Pacific University - PhD

Pre-Physical Therapy
Central Oregon Community College - AAS
Concordia University - BS
Corban University - BS
Eastern Oregon University - BS
Multnomah University - BS
Oregon Institute of Technology - BS
Oregon State University-Cascades - BS
Pacific University - BS
Southern Oregon University - BS
Warner Pacific University - BS
Western Oregon University - BS

Resources
American Council of Academic Physical Therapy
American Physical Therapy Association (APTA)
APTA Student Assembly
Physical Therapist Assistant

<table>
<thead>
<tr>
<th>Average Salary</th>
<th>Years Higher Education</th>
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<tr>
<td>45k</td>
<td>2</td>
<td>Excellent</td>
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Physical therapist assistants provide physical therapy services under the direction and supervision of a physical therapist. They help patients and clients who have movement difficulties due to injury or disease, by assisting the physical therapist with therapies designed to improve mobility, relieve pain, prevent or limit permanent physical disability and promote overall fitness and wellness.

The terms “physical therapist assistant” and “physical therapy aide or technician” are not synonymous. Physical therapist assistants complete an intensive education culminating in an associate degree. Aides and technicians are trained on the job and not eligible to provide physical therapy by many payers, including Medicare. Physical therapist assistants work with individuals of all ages, from newborns to the very oldest.

Their responsibilities include:

- Implementing selected components of patient/client interventions (treatment)
- Obtaining data related to the interventions provided
- Making modifications to treatments as directed by the physical therapist to help the patient progress or to ensure patient/client safety and comfort

**Working Conditions**

Physical therapist assistants work in a variety of settings including outpatient physical therapy clinics, skilled nursing facilities, hospitals, rehabilitation centers, home health agencies, schools and sports and fitness facilities.

Most physical therapist assistants work Monday through Friday, although work hours may vary, depending on the facility and employment status. For example, most hospitals and skilled nursing facilities provide reduced coverage on weekends and many outpatient physical therapy offices and clinics have evening and weekend hours to accommodate patients’ schedules. This job can be physically demanding because physical therapist assistants often have to walk, stoop, kneel, crouch, lift and stand for long periods of time. In addition, physical therapist assistants may be required to move heavy equipment and lift patients or help them to turn, stand or walk.

**Salary Range and Outlook**

According to the Bureau of Labor Statistics (BLS), physical therapy assistants make a median salary of $42,980.

The BLS projects that employment of physical therapist assistants will grow 40% from 2014 to 2024, much faster than the average for all occupations.

**Academic Requirements**

Entry-level physical therapist assistant education programs typically last two years and culminate in an associate degree. Physical therapy assistants must graduate from an accredited program.
As a physical therapist assistant student, you will take general education courses as well as physical therapy courses such as:

- Anatomy and physiology
- Exercise physiology
- Biomechanics
- Kinesiology
- Neuroscience
- Clinical pathology
- Behavioral sciences
- Communication
- Ethics/values

You will also spend part of your time gaining clinical experience. Approximately 75% of the curriculum comprises classroom and lab study and the remaining 25% is dedicated to clinical education. Once you graduate, you will need to pass a licensure or certification exam in most states in order to work as a physical therapist assistant.

**Programs in Oregon**

**Physical Therapist Assistant**

*Lane Community College - AAS*

**Resources**

American Physical Therapy Association (APTA)

APTA Student Assembly
Podiatric Medicine

Podiatric medicine is a branch of the medical sciences devoted to the prevention, diagnosis and treatment of foot disorders resulting from injury or disease. The human foot has a complex interrelation with the rest of the body, which means that it may be the first area to show signs of serious conditions such as diabetes and cardiovascular disease.

In order to become a Doctor of Podiatric Medicine (D.P.M.), students must first earn a bachelor’s degree and then apply to and be accepted at a college of podiatric medicine. The D.P.M. program is four years, with two years of classroom instruction and laboratory work, followed by clinical science courses and practical experience in college clinics, community clinics and accredited hospitals.

Medical school is followed by residency training, which provides a combination of medical and surgical experiences that are competency-based. Podiatric medical graduates select a 36-month podiatric medicine and surgery residency that includes training in rear foot and ankle surgery.

Many practitioners focus on a particular area of podiatric medicine, including surgery, sports medicine, biomechanics, geriatric care, pediatrics, orthopedics or primary care. Additionally, care of diabetic patients is a rapidly growing podiatric medicine specialization as lower extremity problems often develop.

Since the podiatric physician is often the first to detect symptoms of serious disorders, he or she becomes a vital and sometimes lifesaving member of the health care team. The skills of podiatric physicians are in increasing demand because disorders of the foot and ankle are among the most widespread and neglected health problems.
Podiatric medicine is a branch of the medical sciences devoted to the prevention, diagnosis and treatment of foot disorders resulting from injury or disease. A doctor of podiatric medicine is to the foot what a dentist is to the mouth or an ophthalmologist to the eye—a specialist who has undergone lengthy, thorough study to become qualified to treat a specific part of the body.

A Doctor of Podiatric Medicine (D.P.M.) makes independent judgments and performs or orders all necessary diagnostic tests. They perform surgery, administer medications and prescribe physical therapy regimens. Podiatric physicians are educated in state-of-the-art techniques involving surgery, orthopedics, dermatology, physical medicine and rehabilitation.

The human foot has a complex interrelation with the rest of the body, which means that it may be the first area to show signs of serious conditions such as diabetes and cardiovascular disease. Podiatrists often detect serious health problems that may otherwise go unnoticed, because a number of diseases manifest first through symptoms of the lower extremities (i.e., diabetes, arthritis, heart disease, or kidney disease).

**Working Conditions**
Podiatrists work in private or group practices. They may focus on a specialty such as pediatrics, geriatrics or sports medicine, for example. In addition to private practice, podiatrists may:

- Work in hospitals (including in foot clinics associated with a hospital) and long-term care facilities
- Teach in schools of medicine and nursing
- Serve in the armed forces as commissioned officers
- Serve in the U.S. Public Health Service
- Work in municipal health departments

Because podiatrists in private practice set their own hours, it is a flexible career, making it a good fit for people who want or need a balanced lifestyle. Generally, podiatrists work between 30 and 60 hours a week.

**Salary and Outlook**
A Podiatrist can expect to earn an average of $190,000.

**Academic Requirements**
If you wish to become a podiatrist, you must first get a bachelor’s degree and then apply to an accredited podiatric medical college. Your graduate school course of study will take four years, after which you will receive a degree of Doctor of Podiatric Medicine (D.P.M.).

The first two years concentrate on classroom instruction and laboratory work in the basic medical sciences. The third and fourth years of study focus on the clinical sciences and patient care.
As is the case for all physicians, the coursework includes:

- anatomy
- physiology
- biochemistry
- pharmacology
- microbiology
- pathology
- immunology
- other courses related to medicine.

In addition, podiatric medical students learn the fundamentals of specialized medicine, including biomechanics, lower extremity anatomy, podiatric pathology, infectious diseases, orthopedics and sports medicine.

Clinical exposures begin as early as the second year. Students of podiatric medicine gain practical experience by working in podiatric clinics in any of a variety of settings, including community clinics, hospitals, satellite clinics or professional office settings.

After completing podiatric medical school, you move on to residency training. A residency provides podiatrists with the chance to get specialized training through rotations such as anesthesiology, internal medicine, infectious disease, surgery, ER and pediatrics. Podiatric medical graduates select a 36-month podiatric medicine and surgery residency that includes training in rear foot and ankle surgery.

**Programs in Oregon**

**Podiatric Medicine**

*California School of Pediatric Medicine at Samuel Merritt University (no program in Oregon) - DPM*

**Resources**

*American Association of Colleges of Podiatric Medicine*
*American Podiatric Medical Association*
*American Podiatric Medical Students' Association*
Public Health

Public health is the science and art of creating healthy communities through education, research and promotion of healthy lifestyles. In public health, the focus is on health promotion and disease/injury prevention, in contrast to the medical model of care, which focuses more heavily upon diagnosing and treating illnesses and conditions after they occur. Focusing on prevention and the population public health is a distinct and ever-changing field.

Public health professionals analyze and develop programs that protect the health of individuals, families and communities in the United States and abroad. Because of their “big picture” perspective, public health experts play a key role in emergency preparedness and response. This may be why public health has become such a growing field in recent years. The United States is placing a high priority on building up the nation’s public health workforce.

A career in public health opens the door to diverse opportunities in a variety of sectors such as federal, state and local organizations, private and non-governmental organizations. It means that with a degree in public health, you’ll be in high demand, and on a career path filled with advancement opportunities. A degree in public health will also provide you with opportunity for variety in your career. Depending on your area of study and field, your future career may involve flexible hours, travel, field research, academia, community outreach, or more.

A career in public health opens the door to diverse opportunities in a variety of sectors such as federal, private and non-governmental organizations.

School and program of public health accredited by the Council on Education for Public Health (CEPH), including undergraduate (2015), master’s and doctoral degrees.

The most common are:

- Master of Public Health (MPH)
- Master of Health Administration (MHA)
- Master of Science (MS)
- Master of Science in Public Health (MSPH)
- Doctor of Philosophy (PhD)
- Doctor of Public Health (DrPH)
- Doctor of Science (ScD)

There are over 20 major fields of study. The five core disciplines are:

- Behavioral science/health education
- Biostatistics
- Environmental health
- Epidemiology
- Health services administration

However, your degree may be in one of several other core public health areas.

- Examples are:
- Global health
- Laboratory practice
- Maternal and child health
- Nutrition/dietetics
- Occupational health and safety
The School of Public Health Application Service (SOPHAS) is the centralized application service for students applying to a CEPH-accredited school or program of public health. You can search for accredited schools of public health on the SOPHAS website. A searchable database of accredited programs and schools can also be found on the CEPH and ASPPH websites without starting your SOPHAS Application.
Behavioral Science/Health Education

Average Salary: $33k - 86k  
Years Higher Education: 6 - 9  
Job Outlook: Excellent

With a career in behavioral science/health education, you help to improve public health by encouraging healthy lifestyles through behavior change and educational outreach. In health education, you could work on developing community-wide education initiatives on health topics such as nutrition or community fitness or create curriculum for training community health workers.

Additional examples include:

- Educating young people to recognize and avoid the risky behavior of unprotected sex, alcohol and drug abuse
- Design health promotion programs for smoking cessation initiatives, water and sanitation projects and occupational safety courses
- Develop programs for prescription adherence in the elderly population
- Research self-care practices and behavioral barriers to care to better understand a community’s participation with the health care system

Working Conditions
Those working in behavioral science and health education can work in a variety of work fields. Many tend to work closely with the community or population of public health intervention. Those working in this field may take on a variety of roles or have different engagements with the community depending on the program.

Salary and Outlook
The typical person in Behavioral Science/Health Education can expect to earn an average salary between $33,000 and $86,000.

Academic Requirements
The social and behavioral sciences of anthropology, psychology, political science, sociology and health education are nationally recognized subspecialties in public health research, practice and education. While a background in any of these fields is not required prior to pursuing a graduate degree many behavioral science and health education programs do focus on theory as a base of their academic program. Those practicing in the behavioral science and health education field may work in the areas of maternal and child health, sexual and reproductive health, and/or healthy lifestyle promotion.

If you concentrate on behavioral science/health education, your coursework is likely to include:

- Health education and behavior change
- Health promotion and disease prevention
- Health system strengthening
- Public health practice
- Social research

You can search for schools in this field on the Association of Schools & Programs of Public Health’s (ASPPH) website. The School of Public Health Application Service (SOPHAS) is the centralized online application service for students applying to a school or program of public health.
health accredited by the Council on Education for Public Health (CEPH). A complete list of accredited schools and programs can be found on the CEPH website.

Other Related Fields

Applied Behavior Analysis
Applied behavior analysis (ABA) is a scientific discipline concerned with applying techniques based upon the principles of learning to change behavior of social significance. It is the applied form of behavior analysis; the other two forms are radical behaviorism (or the philosophy of the science) and the experimental analysis of behavior (or basic experimental research).

Basic Health Care
Basic Health Care programs are usually certificate programs that will give the student an opportunity to enter the work force with the basic skills and knowledge they need to be successful in an entry-level health care position.

Basic Health Science
Health science is the discipline of applied science which deals with human and animal health. There are two parts to health science: the study, research, and knowledge of health and the application of that knowledge to improve health, cure diseases, and understanding how humans and animals function.

Behavioral Healthcare Specialist
Specialists in behavioral health provide counseling and direction to people dealing with challenges like addiction, physical limitations and mental illness.

Behavioral Neuroscience
Behavioral neuroscience, also known as biological psychology, biopsychology, or psychobiology, is the application of the principles of biology to the study of physiological, genetic, and developmental mechanisms of behavior in humans and other animals.

Community Health
Community Health programs prepare students to assess a community’s overall health and develop programs that lead to healthier environments and better health for communities and individuals.

Community Health Education
Community health education is a social science driven process that promotes health and prevents disease within a diverse population. The purpose of health education is to positively influence the health behavior of individuals and communities as well as the living and working conditions that influence their health.

Family Studies
Family studies is a multidisciplinary examination of families, their characteristics, their behaviors and their roles in society. Characteristics can include family structure and membership, and patterns of affiliation and inclusion that make families different from each other.

Health/Health Education
Health/Health Education programs work to increase the quality, availability, and effectiveness of educational and community-based programs designed to prevent disease and injury, improve health, and enhance quality of life.
Health Science
Health science is the discipline of applied science which deals with human and animal health. There are two parts to health science: the study, research, and knowledge of health and the application of that knowledge to improve health, cure diseases, and understanding how humans and animals function.

Neuroscience
Neuroscience (or neurobiology) is the scientific study of the nervous system. It is a multidisciplinary branch of biology that combines physiology, anatomy, molecular biology, developmental biology, cytology, mathematical modeling and psychology to understand the fundamental and emergent properties of neurons and neural circuits.

Population Health Management
Population Health Management (PHM) seeks to improve the health outcomes of a group by monitoring and identifying individual patients within that group. Typically, PHM programs use a business intelligence (BI) tool to aggregate data and provide a comprehensive clinical picture of each patient. Using that data, providers can track, and hopefully improve, clinical outcomes while lowering costs.

Programs in Oregon
Applied Behavior Analysis
Oregon Institute of Technology - Graduate Certificate, MS

Basic Health Care
Chemeketa Community College - Certificate
Mount Hood Community College - Certificate
Rogue Community College - Certificate
Southwestern Oregon Community College - Certificate

Basic Health Science
Clackamas Community College - Certificate

Behavioral Healthcare Specialist
Mount Hood Community College - Certificate

Behavioral Neuroscience
Oregon Health Science University - PhD

Community Health
Eastern Oregon University - BS
Oregon Health Science University - PhD
Portland State University - PhD
Western Oregon University - BS

Community Health Education
Portland State University - BS

Family Studies
Oregon State University - BS, MS, PhD
University of Oregon - MS

Health/Health Education
Chemeketa Community College - AAS
Pacific University - PhD
Southern Oregon University - BS

Health Science
Concordia University - BS
Pacific University - BS
Portland State University - BS
Warner Pacific University - BS

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**Neuroscience**  
*Oregon Health Science University - PhD*  
*Reed College - BS*  

**Population Health Management**  
*Oregon Institute of Technology - BS*  

**Pre-Health**  
*Willamette University - BS*  

**Resources**  
American Public Health Association  
Association of Schools & Programs of Public Health  
Association of Schools & Programs of Public Health Fellowships and Internships  
Certified Health Education Specialist  
Council on Education for Public Health  
Delta Omega  
National Commission for Health Education Credentialing, Inc.  
National Board of Public Health Examiners  
Society for Public Health Education
Public health professionals who specialize in biomedical and laboratory practice complete laboratory assessments to identify and diagnose diseases. They can also focus on studying conditions that have a chronic effect on other health factors. This field encompasses a diverse array of specialists, including bacteriologists, microbiologists and biochemists, among others. In this career, you could find yourself working in a local clinic, on research studies, or traveling abroad to complete research and diagnostic assessments in the field. There is also opportunity for advancement in education and academic research.

Salary and Outlook
A typical person in Biomedical and Laboratory Practice can expect to earn an average of between $31,000 and $78,000.

Academic Requirements
Those studying biomedical laboratory practices may have extensive coursework in biology, chemistry, and other sciences. Schools and programs may also have requirements for laboratory time or research exposure as a part of the degree.

Other Related Fields
Applied Science
Applied science is the application of existing scientific knowledge to practical applications, like technology or inventions. Within natural science, disciplines that are basic science, also called pure science, develop basic information to predict and perhaps explain and understand phenomena in the natural world. Applied science is the use of scientific processes and knowledge as the means to achieve a particular practical or useful result. This includes a broad range of applied science related fields from engineering, business, medicine to early childhood education.

Biology
Biology is the study of life. Programs typically focus on molecular, cellular, and ecological discoveries which form the basis of biology and are applied to the associations that exist among living organisms, including human evolution. Careers in the health care and pre-professional studies in dentistry, medicine, optometry, medical technology, podiatry, veterinary medicine, ecology, marine biology, and genetics are all possibilities for biology students.

Chemistry
Chemistry is the study of matter and the changes it can undergo. Programs typically provide training for students planning careers in the chemical and biological sciences and also for those in biology, health related disciplines, earth sciences, secondary education, business, journalism and law.

Clinical Laboratory Assistant
A clinical laboratory assistant plays a supporting role in preparing and testing specimens in a medical lab. Their responsibilities include tasks like examining cells under a microscope; using a centrifuge to separate blood cells and plasma; and running tests for disease detection using automated lab equipment.
Clinical Laboratory Science
A clinical laboratory scientist (CLS), is a healthcare professional who performs chemical, hematological, immunologic, histopathological, cytopathological, microscopic, and bacteriological diagnostic analyses on body fluids such as blood, urine, sputum, stool, cerebrospinal fluid (CSF), peritoneal fluid, pericardial fluid, and synovial fluid, as well as other specimens. Medical laboratory scientists work in clinical laboratories at hospitals, reference labs, biotechnology labs and non-clinical industrial labs.

Clinical Medical Assistant
A clinical medical assistant is a medical support professional that performs a variety of tasks to assist physicians in providing patient care, while ensuring that clinics and hospitals run smoothly and efficiently. While clinical medical assistants working in a smaller practice may be required to perform some administrative tasks, those working in larger medical facilities focus mainly on providing support services directly related to patient care.

Clinical Mental Health Counseling
Clinical mental health counseling is a distinct profession with national standards for education, training, and clinical practice. Clinical mental health counselors operate from a wellness perspective, which emphasizes moving toward optimal human functioning in mind, body, and spirit, and away from distress, dysfunction, and mental illness. Counselors also view wellness and pathology as developmental in nature, and take into consideration all levels of a client’s environment when conducting assessment and treatment.

Clinical Research
Clinical research is a branch of healthcare science that determines the safety and effectiveness (efficacy) of medications, devices, diagnostic products and treatment regimens intended for human use. These may be used for prevention, treatment, diagnosis or for relieving symptoms of a disease. Clinical research is different from clinical practice. In clinical practice established treatments are used, while in clinical research evidence is collected to establish a treatment.

Clinical Sleep Health
Clinical sleep health is relatively new healthcare field where non-physician health care providers play an important role in successful disease management, community support, and the standard of care and education provided to sleep patients and their families. This program provides training and education to aid in the care and management of patients with sleep disorders, primarily sleep apnea.

Polysomnographic Technology
A polysomnographic technologist (formerly called a polysomnographic technician) performs overnight, daytime, or home sleep studies, polysomnograms, on people with suspected sleep disorders.

Pre-Clinical Lab
Pre-Clinical Lab programs provide opportunities for students to earn a degree prior to going into a program in Clinical Laboratory Sciences.

Pre-Clinical/Clinical Psychology
Pre-Clinical/Clinical Psychology programs provide opportunities for student to earn a degree prior to going into program in Clinical Psychology.
Science
A general program in science is usually for students preparing for transfer to a four-year college or university can choose from among a wide variety of offerings to meet their science general education requirements. Those planning to major in the earth, life, or physical sciences will find the necessary courses to complete the first two years of their curriculum among the division's offerings. This includes complete programs for those interested in the medically-oriented professions such as Medicine, Dentistry, Pharmacy, and Veterinary Medicine.

Programs in Oregon
Applied Science
Pacific University - BS

Biology
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clackamas Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Lewis & Clark College - BS
Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Multnomah University - BS
Northwest Christian University - BS
Oregon Institute of Technology - BS
Oregon State University - BS
Oregon State University Cascades - BS
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS
University of Portland - BS
University of Western States - BS
Warner Pacific University - BS
Western Oregon University - BS
Willamette University - BS

Chemistry
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Lewis & Clark College - BS
Linfield College - BS
Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Oregon State University - BS, MS, PhD
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS, MS, PhD
University of Portland - BS
Western Oregon University - BS
Willamette University - BS

Clinical Laboratory Assistant
Clackamas Community College - Certificate
Southwestern Oregon Community College - Certificate

Clinical Laboratory Science
Oregon Health Science University - BS

Clinical Medical Assistant
Tongue Point Job Corps Center - Certificate

Clinical Mental Health Counseling
George Fox University - MS
Southern Oregon University - MS

Clinical Sleep Health
Oregon Institute of Technology - BS

Clinical Research
Oregon Health Science University - MS

Polysomnographic Technology
Linn-Benton Community College - Certificate
Oregon Institute of Technology - Certificate, AAS

Pre-Clinical/Clinical Psychology
Corban University - BS

Pre-Clinical Lab
Western Oregon University - BS

Science
Lane Community College - AAS
Klamath Community College - AAS
Treasure Valley Community College - AAS
Portland State University - BS
University of Western States - BS

Resources
American Public Health Association
Association of Public Health Laboratories
Association of Schools & Programs of Public Health
Council on Education for Public Health
Delta Omega
National Board of Public Health Examiners
Biostatistics is the science that applies statistical theory and mathematical principals to research in medicine, biology, environmental science, public health and related fields. Public health biostatisticians use mathematical and scientific methods to determine the cause of disease and injuries, to identify health trends within communities, and to evaluate programs. For instance, if you go into this career, your research may include estimating the number of deaths from gun violence or analyzing trends in drunk driving injuries. Other examples of using statistical methods in public health could be:

- Analyzing the effectiveness of new drugs in comparison to current treatments
- Determining the relation of specific risk factors to a disease or other health outcomes
- Explaining the probability of biological phenomena and health outcomes
- Evaluating health programs

If you like collecting and studying information, forecasting scenarios and drawing conclusions, this may be the perfect health career for you. This career is in high demand and provides individuals with a wide range of career opportunities. If you are interested in exploring multiple facets of public health in your career you could end up in an academic or clinical setting or as a private consultant with this degree.

Working Conditions
Career opportunities for graduates offer competitive salaries. Positions are available in data management, pharmaceutical and clinical trials, data analysis and academia. In addition, biostatisticians are needed at the federal, state and local levels.

Salary and Outlook
A person in Biostatistics can expect to typically earn between $33,000 and $63,000.

Academic Requirements
Before applying to a biostatistics program, you should have a broad knowledge of biology and a solid understanding of mathematics and statistical methods and measures. However, this is not required of all schools and programs in this area of study. You can search for schools in this field and sample courses on the Association of Schools & Programs of Public Health’s (ASPPH) website. The School of Public Health Application Service (SOPHAS) is the centralized online application service for students applying to a school or program of public health accredited by the Council on Education for Public Health (CEPH). A complete list of accredited schools and programs can be found on the CEPH website.

Other Related Fields
Biology
Biology is the study of life. Programs typically focus on molecular, cellular, and ecological discoveries which form the basis of biology and are applied to the associations that exist among living organisms, including human evolution. Careers in the health care and pre-professional studies in dentistry, medicine, optometry, medical technology, podiatry, veterinary medicine, ecology, marine biology, and genetics are all possibilities for biology students.
Programs in Oregon

Biology
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clackamas Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Lewis & Clark College - BS
Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Multnomah University - BS
Northwest Christian University - BS
Oregon Institute of Technology - BS
Oregon State University - BS
Oregon State University Cascades - BS
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS
University of Portland - BS
University of Western States - BS
Warner Pacific University - BS
Western Oregon University - BS
Willamette University - BS

Biostatistics
Oregon Health Science University - Certificate, MS

Resources
American Public Health Association
Association of Schools & Programs of Public Health
Council on Education for Public Health
Delta Omega
National Board of Public Health Examiners
Environmental Health Sciences

Average Salary: $44k - 143k
Years Higher Education: 6 - 9
Job Outlook: Excellent

The air we breathe, the water we drink, the land we build on and the homes we live in…numerous elements of our natural and man-made environment have the potential to affect our health. Our complex interactions with the environment and physical surroundings influence our genetics and health. The relationships we have with the environment can give rise to a variety of diseases and health conditions, including asthma, cancer, and food poisoning. Environmental health sciences professionals focus on identifying the relationships and risks of the physical environment around us on our health. They actively try to improve the public’s health addressing these environmental risk factors and putting in a concerted effort to mitigate the risks around us.

Environmental Health Sciences is a wide-ranging, complex, and multifaceted profession, spanning chemistry, toxicology and engineering, among many other disciplines. For example, occupation health is a facet of environmental health yet does not always include chemical or toxic assessment, for example, construction workers or factory workers who work with heavy operational machinery every day. Like all public health fields, it also involves collaboration with and reliance upon other professionals, including chemists, geologists, biologists, meteorologists, physicists, physicians, engineers, human resources representatives, and even politicians.

When working in an environmental health science field you will be immersed in a “big picture” perspective of how environment and actions heavily affect our daily health. This is a good field for anyone who is interested.

Salary and Outlook
In the wake of recent man-made and natural disasters, the US is placing a high priority on building up the nation’s public health workforce. Since 2002, Federal funding has increased for public health preparedness, including scholarship and loan repayment programs, workforce development grants, and funding for emergency preparedness. What does this mean for you? It means that with a degree in public health, you’ll be in high demand, and on a career path filled with advancement opportunities. A person in Environmental Health Science can expect to earn on average between $44,000 and $143,000.

Working Conditions
With a degree in environmental health, you can work in a wide range of jobs and work settings. For instance, you may work for an environmental health-related agency of the federal government, such as the Environmental Protection Agency (EPA), the National Center for Environmental Health (NCEH at CDC), the Agency for Toxic Substances and Disease Registry (ATSDR), or the Food and Drug Administration (FDA).

Academic Requirements
Because environmental health is so broad in scope, it is often broken down by the type of risk factors you that may become a focus of your career.
Common courses and environmental risk factors include:
- Air quality
- Food protection
- Radiation protection
- Solid waste management
- Hazardous waste management
- Water quality
- Noise control
- Environmental control of recreational areas
- Housing quality
- Vector control

A background in any of these topic areas is not required for graduate degrees in environmental health however some schools and programs may require specific science or mathematics courses prior to enrollment.

The Schools of Public Health Application Service (SOPHAS) is the centralized, online application service for all applicants applying to an accredited school of public health. To find accredited schools of public health with environmental health science programs, see the Association of Schools & Programs Public Health (ASPPH) website.

Other Related Fields

Applied Science
Applied science is the application of existing scientific knowledge to practical applications, like technology or inventions.
Within natural science, disciplines that are basic science, also called pure science, develop basic information to predict and perhaps explain and understand phenomena in the natural world. Applied science is the use of scientific processes and knowledge as the means to achieve a particular practical or useful result. This includes a broad range of applied science related fields from engineering, business, medicine to early childhood education.

Biology
Biology is the study of life. Programs typically focus on molecular, cellular, and ecological discoveries which form the basis of biology and are applied to the associations that exist among living organisms, including human evolution. Careers in the health care and pre-professional studies in dentistry, medicine, optometry, medical technology, podiatry, veterinary medicine, ecology, marine biology, and genetics are all possibilities for biology students.

Public Health
Public health aims to improve the quality of life through prevention and treatment of disease, including mental health. This is done through the surveillance of cases and health indicators, and through the promotion of healthy behaviors. Common public health initiatives include promotion of handwashing and breastfeeding, delivery of vaccinations, suicide prevention, and distribution of condoms to control the spread of sexually transmitted diseases. Public health is an interdisciplinary field. For example, epidemiology, biostatistics and health services are all relevant. Other important subfields include environmental health, community health, behavioral health, health economics, public policy, mental health, occupational safety, gender issues in health, and sexual and reproductive health.

Science
A general program in science is usually for students preparing for transfer to a four-year college or university can choose from among a wide variety of offerings to meet their science general education requirements. Those planning to major in the earth, life, or physical sciences will find
the necessary courses to complete the first two years of their curriculum among the division’s offerings. This includes complete programs for those interested in the medically-oriented professions such as Medicine, Dentistry, Pharmacy, and Veterinary Medicine.

**Programs in Oregon**

**Applied Science**

*Pacific University - BS*

**Biology**

*Central Oregon Community College - AAS*
*Chemeketa Community College - AAS*
*Clackamas Community College - AAS*
*Clatsop Community College - AAS*
*Concordia University - BS*
*Eastern Oregon University - BS*
*George Fox University - BS*
*Lewis & Clark College - BS*
*Linn-Benton Community College - AAS*
*Mt Hood Community College - AAS*
*Multnomah University - BS*
*Northwest Christian University - BS*
*Oregon Institute of Technology - BS*
*Oregon State University - BS*
*Oregon State University Cascades - BS*
*Pacific University - BS*
*Portland State University - BS, MS, PhD*
*Reed College - BS*
*Rogue Community College - AAS*
*Southern Oregon University - BS*
*Treasure Valley Community College - AAS*
*Umpqua Community College - AAS*
*University of Oregon - BS*
*University of Portland - BS*
*University of Western States - BS*
*Warner Pacific University - BS*
*Western Oregon University - BS*
*Willamette University - BS*

**Public Health**

*Central Oregon Community College - AAS*
*Oregon Health Science University - MS*
*Oregon State University - BS, MS, PhD*
*Pacific University - BS*

**Science**

*Lane Community College - AAS*
*Klamath Community College - AAS*
*Treasure Valley Community College - AAS*
*Portland State University - BS*
*University of Western States - BS*
Resources
American Public Health Association
Council on Education for Public Health
Delta Omega
National Board of Public Health Examiners
National Environmental Health Association
National Environmental Health Science and Protection Accreditation Council
Epidemiology

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<tr>
<th>Average Salary</th>
<th>Years Higher Education</th>
<th>Job Outlook</th>
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<tbody>
<tr>
<td>$38k - 136k</td>
<td>6 - 9</td>
<td>Excellent</td>
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Epidemiology is the study and control of disease or injury patterns in human populations. When food poisoning or an influenza outbreak attacks a community, epidemiologist or “disease detectives”, are asked to investigate the cause of disease and control its spread. Epidemiologists work at all stages of the outbreak with other public health practitioners to identify and stop the outbreak.

Epidemiologists do fieldwork to determine what causes disease or injury, what the risks are associated with health outcomes, what populations are at risk, and how to prevent further incidences of a disease, behavior, or transmission. They consider the demographic and social trends of populations in relation to a disease and injury. Epidemiologists are often credited with the initial discovery and containment of an outbreaks, such as avian flu or mad cow disease. Professionals in this field use statistical analysis through a distinctively different approach and methodology than other biostatisticians, Epidemiologists consider various hereditary, behavioral, environmental and health care factors. They also work extensively with other professionals working in the contributions of biological, clinical and other sciences, this can even include field techniques derived from biochemistry and molecular biology.

Working Conditions
The United States is placing a high priority on building up the nation’s public health workforce. A career in public health opens the door to diverse opportunities in a variety of sectors such as federal, private and non-governmental organizations. What does this mean for you? It means that with a degree in public health, you’ll be in high demand, and on a career path filled with advancement opportunities. The field of epidemiology lends itself to a variety of work settings. Depending on your area of interest, you might work through a variety of work settings transferring your skills on different projects.

Salary and Outlook
A person in Epidemiology can expect to earn an average of between $38,000 and $136,000.

Academic Requirements
Like all fields of public health epidemiology has a strong interdisciplinary focus, students must learn quantitative skills (including biostatistics and computer applications) useful for data analysis, but also a broad array of methods of health education and promotion for fostering health behaviors to reduce the spread of the disease prevention or improve health outcomes. You can search for schools in this field on the Association of Schools & Programs of Public Health’s (ASPPH) website. The School of Public Health Application Service (SOPHAS) is the centralized online application service for students applying to a school or program of public health accredited by the Council on Education for Public Health (CEPH). A complete list of accredited schools and programs can be found on the CEPH website.

Programs in Oregon
Epidemiology
Oregon Health Science University - MS, PhD
Resources
American Public Health Association
Association of Schools & Programs of Public Health
Council on Education for Public Health
Delta Omega
National Board of Public Health Examiners
International/global health addresses the health of people living in low- and middle-income countries (sometimes known as developing countries). Many times, it also includes the health of displaced or traveling populations. Health concerns in these populations include not only infectious and tropical diseases (such as HIV/AIDS, tuberculosis, sexually transmitted diseases and malaria), but also chronic and non-infectious diseases. The field of global health addresses all the same public health issues that are domestic health concerns, like mental illness, trauma, gender-based violence, age-related illnesses and conditions. However, the solutions to these issues must be innovative to address unique challenges with international populations. For example, maternal and child health is a high priority for global health professionals. This is because so much of the avoidable morbidity/mortality in the developing world is attributable to a lack of access to good prenatal and obstetric care and/or to preventable or treatable childhood illnesses, such as diarrhea and respiratory infection.

Organizations working globally also prioritize finance and management in health service systems and the programs they develop. This aids in developing countries establishing and implementing infrastructure that is sustainable, effective, and efficient for improving health outcomes.

**Working Conditions**

While global is in the title not all public health professionals working in global health are working abroad. Some may be working with displaced populations in their home country or as an offsite program manager. Keep in mind that many global health practitioners may not have a degree in global health but may work in the field. In addition to other public health fields global health position vary in job title and organization type.

For example, global health practitioners could work as:

- In-country field consultants
- Disaster relief-support technicians
- Organization development specialist
- Program evaluator
- The following agencies are typical for global work that span domestic and international settings:
  - Research and academic institutions
  - International agencies
  - Immigrant/refugee health organizations
  - Other non-governmental agencies (NGOs)
  - Lending or finance agencies that do work in developing countries
  - Multi-lateral agencies (such as WHO)
  - Governmental agencies (USAID, in-country ministry of health, etc.)
Academic Requirements
Accredited schools of public health may offer a degree, concentration, or certificate in international/ global health. Each institution may their international/ global health program with slight nuances including specialties in an area of interest, such as:

- Health care finance and economics
- Demography and medical anthropology
- Maternal and child health/reproductive health
- Complex humanitarian emergencies
- Public nutrition and food security
- International health policy and management
- Infectious disease epidemiology and control

This list is by no means the extent to which current global health practitioners are working in. Student who attend a program without an area of study specialty have a diverse academic background for working in almost any global setting.

The field of global health is extremely competitive and rewarding. Some schools and programs as well as employers take preference in candidates who have already participated in field experience internationally or with international populations. It is encouraged for individuals interested in global work to volunteer or find internships in a developing country, either before beginning a Master in Public Health (MPH) program or as a field placement while in school. You can search for schools in this field on the Association of Schools & Programs of Public Health’s (ASPPH) website. The School of Public Health Application Service (SOPHAS) is the centralized online application service for students applying to a CEPH-accredited school or program of public health. A complete list of accredited schools and programs can be found on the CEPH website.

Salary and Outlook
A person in Global Health can expect to earn between $31,000 and $86,000.

Other Related Fields
Population Health Management
A Population Health Manager (PHM), focuses mainly on individual patient care. The primary purpose is to improve the health outcomes of a group by monitoring and identifying individual patients within that group; usually based on medical conditions, age, and location.

Public Health
Public health aims to improve the quality of life through prevention and treatment of disease, including mental health. This is done through the surveillance of cases and health indicators, and through the promotion of healthy behaviors. Common public health initiatives include promotion of handwashing and breastfeeding, delivery of vaccinations, suicide prevention, and distribution of condoms to control the spread of sexually transmitted diseases. Public health is an interdisciplinary field. For example, epidemiology, biostatistics and health services are all relevant. Other important subfields include environmental health, community health, behavioral health, health economics, public policy, mental health, occupational safety, gender issues in health, and sexual and reproductive health.

Programs in Oregon
Global Health
University of California-Davis - MS (no program in Oregon)
University of Washington - MS (no program in Oregon)
Population Health Management
Oregon Institute of Technology - BS

Public Health
Central Oregon Community College - AAS
Oregon Health Science University - MS
Oregon State University - BS, MS, PhD
Pacific University - BS

Resources
Association of Schools & Programs of Public Health
American Public Health Association
Council on Education for Public Health
Delta Omega
Global Health Council
National Board of Public Health Examiners
United States Agency for International Development
U.S. Peace Corps
Health Sciences Administration

Average Salary: $37k - 161k
Years Higher Education: 6 - 9
Job Outlook: Excellent

The field of health services administration combines policy, business and science in managing the human and fiscal resources needed to deliver effective public health services. A career in health services management could include, managing the database at a school clinic, developing budgets for a health department, or working to analyze and create better policies for health.

If you go into this profession, you can work in a variety of different settings with exposure to different specializations including:

- Health economics and finance
- Marketing and communications
- Organization structure and development
- Planning
- Policy formation and analysis

Health services administration professionals may be pulled into a variety of fields to consult on non-profit program initiatives or for international development organizations. Skills that are developed in a health services administration degree can be translated outside of a clinical administrative setting.

Working Conditions
Health service administrators play a leadership role in regional, state, national and international agencies and organizations. Many professionals may work in a clinical setting, but there are also opportunities to work in a non-profit or public setting in the domestically or abroad.

Salary and Outlook
In today’s managed care environment, the demand is high for public health professionals who specialize in health services administration. A person in Health Sciences Administration can expect to earn between $37,000 and $161,000.

Academic Requirements
The health services administrative field is constantly changing with advancements in technology and clinical practice. Public health practitioners in this field may take the following courses during their degree or as required continuing education courses:

- Health care accessibility and delivery
- Health care financing and costs
- Quality assurance
- Health care organizational structure and development
- Human resources
- Database management

You can search for schools in this field on the Association of Schools & Programs of Public Health’s (ASPPH) website. The School of Public Health Application Service (SOPHAS) is the centralized online application service for students applying to a school or program of public
health accredited by the Council on Education for Public Health (CEPH). A complete list of accredited schools and programs can be found on the CEPH website.

Other Related Fields
Health Care Administration
health Care administration is the field relating to leadership, management, and administration of public health systems, health care systems, hospitals, and hospital networks.

Health Care MBA
Health Care MBA combines a Masters of Business Administration with Health Care administration relating to business administration and leadership, as well as management, and administration within public health systems, health care systems, hospitals, and hospital networks.

Health Services Administration
Health services administration refers to the process of directing, supervising and planning the delivery of medical treatment to patients.

Health Systems and Policy
Health Systems and Policy provides students with advanced knowledge and skills in understanding health systems, health services, and health policy. Graduates are prepared for positions as health services researchers, teachers and practitioners in settings such as governmental and non-governmental organizations, universities, health insurance, and health systems.

Public Health
Public health aims to improve the quality of life through prevention and treatment of disease, including mental health. This is done through the surveillance of cases and health indicators, and through the promotion of healthy behaviors. Common public health initiatives include promotion of handwashing and breastfeeding, delivery of vaccinations, suicide prevention, and distribution of condoms to control the spread of sexually transmitted diseases. Public health is an interdisciplinary field. For example, epidemiology, biostatistics and health services are all relevant. Other important subfields include environmental health, community health, behavioral health, health economics, public policy, mental health, occupational safety, gender issues in health, and sexual and reproductive health.

Programs in Oregon
Health Care Administration
Concordia University - BS
Linn-Benton Community College - AAS, BS
Pacific University - MS
Southern Oregon University - BS
Umpqua Community College - AAS
Warner Pacific University - BS

Health Care MBA
Portland State University - BS, MS

Health Services Administration
George Fox University - BS
Linn-Benton Community College - Certificate, BS
Portland State University - MS
Health Systems and Policy
Portland State University - PhD

Public Health
Central Oregon Community College - AAS
Oregon Health Science University - MS
Oregon State University - BS, MS, PhD
Pacific University - BS

Public Health Practice/Program Management
Oregon Health Science University - MS
Portland State University - MS

Resources
American Public Health Association
Association of Schools & Programs of Public Health
Association of University Programs in Health Administration
Council on Education for Public Health
Delta Omega
National Board of Public Health Examiners
Maternal and Child Health

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<th>Average Salary</th>
<th>Years Higher Education</th>
<th>Job Outlook</th>
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<tbody>
<tr>
<td>$33k - 63k</td>
<td>6 - 9</td>
<td>Excellent</td>
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Public health professionals analyze and develop programs that protect the health of individuals, families, and communities in the United States and abroad. Using education, development of healthy lifestyles, research, and program implementation, public health professionals are agents for disease prevention and health promotion.

Experts in maternal and child health focus on the complex public health problems affecting women, children, and their families. Maternal and child health professionals provide information and access to sexual reproductive health services and methods of family planning, promote the health of pregnant women and their children, and increase vaccination rates. This interdisciplinary field seeks answers for the complex health considerations relating to women, pregnancy, reproduction, and infant and child well-being. Professionals who concentrate in maternal and child health are interested in the intersection between these populations, and how governments and communities can work together to protect and advance the health of women and children across the world.

Maternal and child health specialists work to improve the health delivery system through advocacy, education, and research. They accomplish this by discovering and testing solutions through applied research and by developing, implementing, and/or evaluating health programs at the local, state, national, and international levels.

**Salary and Outlook**
A person in maternal and child health can expect to earn between $33,000 and $63,000.

**Academic Requirements**
Those studying maternal and child health will take courses on reproductive health, healthcare access, and policy regarding sexual and reproductive health. Students may be able to specialize in one aspect of maternal and child health like women’s empowerment, nutrition, or reproductive rights.

**Other Related Fields**

**Family Studies**
Family studies is a multidisciplinary examination of families, their characteristics, their behaviors, and their roles in society. Characteristics can include family structure and membership, and patterns of affiliation and inclusion that make families different from each other.

**Human Development**
Human development programs study the enlargement of people's freedoms and opportunities and improvement of their well-being. Human development is about the real freedom ordinary people have to decide who to be, what to do, and how to live.

**Public Health**
Public health aims to improve the quality of life through prevention and treatment of disease, including mental health. This is done through the surveillance of cases and health indicators, and through the promotion of healthy behaviors. Common public health initiatives include promotion of handwashing and breastfeeding, delivery of vaccinations, suicide prevention, and distribution of condoms to control the spread of sexually transmitted diseases.
Public health is an interdisciplinary field. For example, epidemiology, biostatistics and health services are all relevant. Other important subfields include environmental health, community health, behavioral health, health economics, public policy, mental health, occupational safety, gender issues in health, and sexual and reproductive health.

**School Health**
School health is a comprehensive study of an organized set of policies, procedures, and activities designed to protect and promote the health and well-being of students and staff which has traditionally included health services, healthful school environment, and health education.

**Programs in Oregon**

**Family Studies**
*Oregon State University - BS, MS, PhD*
*University of Oregon - MS*

**Human Development**
*Linn-Benton Community College - AAS*
*Oregon State University - BS, MS, PhD*
*Oregon State University-Cascades - BS*
*Warner Pacific University - BS*

**Public Health**
*Central Oregon Community College - AAS*
*Oregon Health Science University - MS*
*Oregon State University - BS, MS, PhD*
*Pacific University - BS*

**School Health**
*Portland State University - BS*

**Resources**
*Association of Schools & Programs of Public Health*
*Association of Maternal and Child Health Programs*
*American Public Health Association*
*Council on Education for Public Health*
*Delta Omega*
*National Board of Public Health Examiners*
Public Health Practice and Program Management

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<th>Average Salary</th>
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<tbody>
<tr>
<td>$33k - 63k</td>
<td>6 - 9</td>
<td>Excellent</td>
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Public health practice and program management is designed to prepare experienced clinicians (i.e., in medicine, dentistry, nursing, social work, etc.) and public health practitioners with the knowledge and skillset to assume leadership roles apart of multidisciplinary health care teams. A degree in this specialty incorporates features of several other public health disciplines and specialties including maternal and child health, substance abuse, mental health and environmental health, among others.

In this field a student will be prepared to develop, implement and evaluate effective public health initiatives. You also will be able to create and analyze programs in the context of the communities they serve, taking into account cultural, social, economic, ethical and legal factors.

**Working Conditions**
A career in public health practice and program management will provide you with a variety of skills that can be translated to clinical, public, federal, national or even international work. In any of these work settings you could be working for a public or private entity. Most professionals in this field will become experts of the best practices for their field of interest. This provide public health practitioners with the ability to lend their expertise to a variety of organizations and programs.

**Salary and Outlook**
A person in public health practice and program management can expect to earn between $33,000 and $63,000.

**Academic Requirements**
Programs in public health practice and program management are highly interdisciplinary. Many cater to established professionals with prior public health experience. The curriculum may cover a wide range of areas, including public health practice, epidemiology, program analysis and data-based inference. Due to the large emphasis of experience associated with his field of study any schools and programs may offer this program as a part-time, on-line, or as a combined executive program option.

You can search for schools in this field on the Association of Schools & Programs of Public Health's (ASPPH) website. The School of Public Health Application Service (SOPHAS) is the centralized online application service for students applying to a school or program of public health accredited by the Council on Education for Public Health (CEPH). A complete list of accredited schools and programs can be found on the CEPH website.

**Other Related Fields**
**Health Care Administration**
Health Care administration is the field relating to leadership, management, and administration of public health systems, health care systems, hospitals, and hospital networks.
Health Services Administration
Health services administration refers to the process of directing, supervising and planning the delivery of medical treatment to patients.

Health Systems and Policy
Health Systems and Policy provides students with advanced knowledge and skills in understanding health systems, health services, and health policy. Graduates are prepared for positions as health services researchers, teachers and practitioners in settings such as governmental and non-governmental organizations, universities, health insurance, and health systems.

Public Health
Public health aims to improve the quality of life through prevention and treatment of disease, including mental health. This is done through the surveillance of cases and health indicators, and through the promotion of healthy behaviors. Common public health initiatives include promotion of handwashing and breastfeeding, delivery of vaccinations, suicide prevention, and distribution of condoms to control the spread of sexually transmitted diseases. Public health is an interdisciplinary field. For example, epidemiology, biostatistics and health services are all relevant. Other important subfields include environmental health, community health, behavioral health, health economics, public policy, mental health, occupational safety, gender issues in health, and sexual and reproductive health.

Programs in Oregon
Health Care Administration
Concordia University - BS
Linn-Benton Community College - AAS, BS
Pacific University - MS
Southern Oregon University - BS
Umpqua Community College - AAS
Warner Pacific University - BS

Health Services Administration
George Fox University - BS
Linn-Benton Community College - Certificate, BS
Portland State University - MS

Health Systems and Policy
Portland State University - PhD

Public Health
Central Oregon Community College - AAS
Oregon Health Science University - MS
Oregon State University - BS, MS, PhD
Pacific University - BS

Resources
Association of Schools and Programs of Public Health
American Public Health Association
Council on Education for Public Health
Delta Omega
National Board of Public Health Examiners
Social Work

Social work offers a wide range of career opportunities, from entry-level practitioner to doctoral-level researcher and educator. Social workers are in demand and employment of social workers is projected to grow 12% from 2014 to 2024, faster than the average for all occupations, per the Bureau of Labor Statistics (BLS).

Social work is an evidence-based profession that promotes human and community well-being. Guided by a person-in-environment framework, a global perspective, respect for human diversity, and knowledge based on scientific inquiry, the purpose of social work is actualized through its quest for social and economic justice, the prevention of conditions that limit human rights, the elimination of poverty, and the enhancement of the quality of life for all persons, locally and globally. To create a more just society, the Grand Challenges for Social Work was launched to address some of society’s toughest social problems such as homelessness, health disparities, and economic inequality.
Social Worker

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<th>Average Salary</th>
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<td>$41k - 71k</td>
<td>4 - 10</td>
<td>Excellent</td>
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Social workers are a diverse group of skilled professionals who assist individuals, groups or communities to restore or enhance their capacity for social functioning. The approach to care is oriented toward solving problems and promoting positive social change.

Professional social workers respond to and help prevent crises, and they counsel individuals, families, groups and communities on how to cope with the stresses of everyday life. Social workers work with people of diverse cultural and economic backgrounds. They often help people with socio-economic disadvantages, including severe poverty, unemployment, discrimination or inadequate housing. They also help people who have serious illness, disabilities or substance abuse problems, as well as families with serious domestic conflicts, sometimes involving child abuse or intimate partner violence.

Professional social workers work in a variety of practice settings, including:
- Schools
- Hospitals and other health care settings
- Mental health and substance use clinics
- Senior centers and other aging services organizations
- Private practice
- Prisons
- Corporations
- Military
- Social services agencies
- Elected office
- Policy advocacy organizations

The settings in which professional social workers work may be public (governmental) or private, nonprofit or for profit. Social workers who work in health care settings can be considered allied health professionals.

Social workers usually specialize in one or more of over 40 practice areas, including disaster relief, child welfare services, homeless family assistance and gerontology services, among many others. Although many social workers provide services directly to clients, others function in supervisory, administrative, research, teaching, policy or community organizing roles. Professional social workers’ responsibilities often overlap with those of other practitioners in the mental health and behavioral health fields. Clinical social workers have specialized training in mental health. They provide psychotherapy services, just as psychologists and psychiatrists do but are unable to write prescriptions or perform testing.

To be effective, social workers must have a deep understanding of human development and behavior. They also must have an appreciation for the effects of various social, economic and cultural factors and an understanding of how these factors interact.

**Working Conditions**

Full-time social workers usually work a standard 40-hour week. Some work evenings and weekends to meet with clients, attend community meetings and handle emergencies. Others may work part time.
Social workers usually spend most of their time in an office or facility but also may travel locally to visit clients, meet with service providers or participate in meetings.

To tend to patient care or client needs, many hospitals and long-term care facilities are employing social workers on teams with a broad mix of occupations, including physicians, nurses, physical therapists, dietitians, speech and language therapists and direct care workers (such as certified nursing assistants).

Although the work can be emotionally draining and challenging, many professional social workers find great fulfillment in their careers.

**Salary and Outlook**
A person in Social Work can expect to earn an average of $41,000 and $71,000.

**Academic Requirements**
A bachelor’s degree in social work (BSW) is the minimum requirement to qualify for most jobs. Clinical positions and some jobs in public or private agencies typically require a master’s degree (MSW), as do most supervisory, administrative and staff training positions. College/university teaching positions and most research appointments require a doctorate in social work (DSW or Ph.D.). The Council on Social Work Education provides a directory of accredited social work programs.

Undergraduate social work programs prepare graduates for direct service positions, such as caseworker, and include courses in social work values and ethics, dealing with a culturally diverse clientele, at-risk populations, promotion of social and economic justice, human behavior and the social environment, social welfare policy and services, social work practice, social research methods and field education. Accredited BSW programs require a minimum of 400 hours of supervised field experience.

Master’s degree programs prepare graduates for work in their chosen field of concentration and continue to develop the skills required to perform clinical assessments, manage large caseloads, take on supervisory roles, engage in policy-level advocacy and explore new ways of drawing upon social services to meet the needs of clients. MSW programs last two years and include a minimum of 900 hours of supervised field instruction, or internship. Most MSW programs offer advanced standing for those with a bachelor’s degree from an accredited social work program, but a BSW is not required. For MSW applicants holding a bachelor’s degree in another field, it is important to have taken courses in psychology, biology, sociology, economics, political science and social work. Facility with a second language also is very helpful.

All states and the District of Columbia have licensing, certification or registration requirements regarding social work practice. Each jurisdiction requires an individual to have a social work degree from a CSWE-accredited social work program in order to sit for a licensing exam. Licensing exists to provide state and provincial governments with a way to verify that a social worker has the skills and knowledge necessary to provide a safe level of practice. Licensing also establishes social work practice as a separate and distinct branch of mental health services and gives governments a way to monitor the professional conduct of social workers.

In addition, for social workers seeking recognition of their professional achievements or to gain a foothold in a new social work specialty area, the National Association of Social Workers (NASW) offers voluntary credentials. NASW’s social work credentials are indicative of the profession’s presence within multiple specialty practice areas such as gerontology, hospice and palliative care, health care, case management, youth and family, and addictions.
Other Related Fields
Social and Behavioral Studies
Social and Behavioral Studies applies to a unique range of disciplines like anthropology, sociology, and psychology, among them that involve careful analysis of human behavior.

Social Services
Social Services prepares students for employment as mental health aides, group residence workers, neighborhood outreach workers, social casework assistants and other similar positions. In many instances, social service workers are employed under the supervision of a social worker, or in some cases a psychologist. Employment opportunities exist in such areas as day care, nursery school education, mental health, group and community work at the public and private levels.

Programs in Oregon
Social and Behavioral Studies
George Fox University - BS
Social Services
Chemeketa Community College - AAS
Mount Hood Community College - AAS
Social Work
Concordia University - BS
George Fox University - BS, MS
Mount Hood Community College - AAS, BS
Oregon Health Science University - MS
Pacific University - BS, MS
Portland State University - BS, MS
Treasure Valley Community College - AAS
University of Portland - BS
Warner Pacific University - BS

Resources
Association of Social Work Boards
Council on Social Work Education
National Association of Social Workers
Speech Language Hearing

Careers in communication sciences and disorders, audiologist, speech-language pathologist and speech, language and hearing scientist, are extremely rewarding and the need for professionals is expected to grow over the coming decade.

No wonder these professions offer so much potential and so many choices:

• Work settings include schools, hospitals, nursing homes, businesses, private practice, universities, research laboratories, corporations, industry and government agencies.
• Clients include infants, children, adolescents, adults and older people— in other words, people of all ages.
• Opportunities in research and higher education are expected to increase as baby boomers currently in these positions retire. Clinical opportunities will be even greater for those with bilingual and multicultural expertise.

By working in audiology, speech-language-pathology or the related sciences, you can help people not only address a specific disorder but meet their human potential.
Audiologist (Doctor of Audiology)

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<tr>
<th>Average Salary</th>
<th>Years Higher Education</th>
<th>Job Outlook</th>
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<tr>
<td>$61k - 96k</td>
<td>8</td>
<td>Excellent</td>
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Audiology is the science of hearing, balance and related disorders. Audiologists are experts in the nonmedical diagnosis and management of disorders of the auditory and balance systems. They frequently work with other medical specialists, speech-language pathologists, educators, engineers, scientists and allied health professionals and technicians. In industrial audiology, audiologists plan and execute programs of hearing conservation for workers.

Audiologists specialize in:

- Identifying and assessing hearing and balance problems
- Rehabilitating persons with hearing and balance disorders
- Preventing hearing loss

Clinical audiologists work in a variety of settings and can specialize in pediatrics, geriatrics, balance, cochlear implants, hearing aids, tinnitus and auditory processing, among other issues. Audiologists provide a number of services including:

- Evaluating hearing
- Counseling patients and their families and caregivers
- Fitting hearing aids
- Evaluating and treating balance disorders
- Determining an individual's need for assistive devices
- Teaching communication strategies, including speech reading

Working Conditions

Audiologists work in a wide range of settings, including health care settings, educational facilities and in government agencies. They typically work 40 to 50 hours per week; some work part-time.

As communication professionals, audiologists have the unique opportunity to:

- Work with other medical and rehabilitation professionals to care for patients
- Provide services to a range of age groups, from newborns to adults
- Counsel and educate patients and their families and caregivers
- Use technology to evaluate and treat communication and related disorders and conduct research in communication sciences and disorders
- Develop skills to serve as supervisors, mentors or administrators

Salary and Outlook

An audiologist can expect to earn an average of $61,000 to 96,000.

Academic Requirements

Some colleges and universities offer an undergraduate degree in communication sciences and disorders (CSD), but it's not necessary. However, if you do not major in CSD, you may need to complete some prerequisites before applying to graduate school.

Audiologists must earn a doctoral degree (an AuD) from a program accredited by the Council on Academic Accreditation and get a passing score on a national examination. The American
Speech-Language Hearing Association (ASHA) provides a listing of accredited schools offering an AuD program. Those individuals who have a graduate degree with major emphasis in audiology (AuD) may become certified by the Council for Clinical Certification, which issues Certificates of Clinical Competence for both audiology and speech-language pathology.

In almost all states, a current license in audiology or speech-language pathology is also required to practice.

Other Fields of Study
Pre-Audiology
Pre-audiology is a pre-professional program that will prepare you to apply for a graduate or professional-level program.

Programs in Oregon
Audiology
Pacific University - PhD
Pre-Audiology
Pacific University - BS

Resources
American Speech-Language Hearing Association
Speech-language pathology is the study and treatment of human communication and its disorders. Speech-language pathologists work with the full range of human communication to evaluate, diagnose and treat speech, language and swallowing disorders in individuals of all ages, from infants to the elderly.

Speech-language pathologists often work as part of a team, which may include teachers, physicians, audiologists, psychologists, social workers and rehabilitation counselors.

Their responsibilities may include:

• Preparing future professionals in colleges and universities
• Managing agencies, clinics or private practices
• Engaging in research to enhance knowledge about human communication processes
• Developing new methods and equipment to evaluate problems
• Establish more effective treatments.
• Investigating behavioral patterns associated with communication disorders
• Working with employees to improve communication with their customers

Working Conditions
Speech-language pathologists work in a variety of settings, including educational settings, health care facilities and private practice, among others. Most full-time speech-language pathologists work 40 hours per week; some work part time. Those who work on a contract basis may spend a substantial amount of time traveling between facilities.

As communication professionals, speech-language pathologists have the unique opportunity to:

• Work with other medical and rehabilitation professionals to care for patients
• Provide services to a range of age groups, from newborns to adults
• Counsel and educate patients and their families and caregivers
• Use technology to evaluate and treat communication and related disorders and conduct research in communication sciences and disorders
• Develop skills to serve as supervisors, mentors or administrators

Speech-language pathology requires attention to detail, specialized knowledge and skills and intense concentration. The emotional needs of clients and their families may also be demanding.

Salary and Outlook
A speech-language pathologist can expect to earn an average of between $60,000 and $71,000.

Academic Requirements
If you are in high school, you should decide what your major will be. Some colleges and universities offer an undergraduate degree in communication sciences and disorders (CSD), but it's not necessary. However, if you do not major in CSD, you may need to complete some prerequisites before applying to graduate school.
Speech-language pathologists must:

- Earn a graduate degree in speech-language pathology from a program accredited by the Council on Academic Accreditation.
- Complete a supervised postgraduate clinical fellowship.
- Get a passing score on a national examination.

The American Speech-Language Hearing Association (ASHA) provides a listing of accredited schools offering a speech-language pathology program.

Those individuals who have a graduate degree with major emphasis in speech-language pathology may become certified by the Council for Clinical Certification, which issues certificates of clinical competence for both audiology and speech-language pathology. In almost all states, a current license in audiology or speech-language pathology is also required to practice.

Other Related Fields

Communications Science and Disorders
Communication Science and Disorders students study the nature and development of our communication abilities, a central aspect of the human condition. They also learn about communication disorders which involve impairments in hearing, speech, voice, resonance, fluency, swallowing, and language processes.

Speech and Hearing Science
Speech and hearing sciences concern the processes and disorders of human communication and swallowing across the life span. This includes the study of typical hearing, speech, and language, cognitive-communication, and swallowing development; anatomy and physiology of speech, hearing, and swallowing; speech acoustics and perception; the nature of language, speech, cognitive-communication, swallowing, and hearing disorders in children and adults; social and cultural aspects of communication disorders; and the clinical processes involved in identification, prevention, and remediation of those disorders.

Speech-Language Pathology Assistant
Speech pathology assistants work directly under licensed speech pathologists, aiding them in their daily responsibilities.

Speech Communications
Speech communications programs are focused on developing and enhancing students' communication skills through speeches and presentations, while studying communication concepts.

Programs in Oregon

Communications Science and Disorders
Pacific University - BS

Speech and Hearing Science
Portland State University - BS, MS

Speech-Language Pathologist
Pacific University - BS

Speech-Language Pathology Assistant
Chemeketa Community College - AAS
Speech Communications
Umpqua Community College - AAS

Resources
American Speech-Language-Hearing Association
Sports Medicine

Sports medicine focuses on helping people improve their athletic performance, recover from injury and prevent future injuries. It is a fast-growing health care field, because health workers who specialize in sports medicine help all kinds of people, not just athletes.

Sports medicine professionals treat amateur athletes, those who want better results from their exercise program, people who have suffered injuries and are trying to regain full function and those with disabilities who are trying to increase mobility and capability.

The career path you take will depend on your interests, your educational goals and the environment in which you want to work. Many careers in this field require advanced degrees, and certification can improve your chances of landing a great job.

If you’re interested in sports medicine, consider volunteering with the medical personnel who assist your school’s sports teams. You can observe the work they do and learn more about what a career in sports medicine entails.
Athletic training encompasses the prevention, examination, diagnosis, treatment and rehabilitation of emergent, acute or chronic injuries and medical conditions.

Athletic trainers are highly qualified, multi-skilled health care professionals who work as part of a collaborative inter-professional health care team. They work with physicians and other health care professionals to provide injury/illness prevention and wellness protection, clinical evaluation and diagnosis, immediate and emergency care, treatment and rehabilitation and organizational and professional health and well-being.

Many people think athletic trainers and personal trainers are the same career, but they are not. There is a significant difference in the education, skill set and job duties of an athletic trainer versus that of a personal trainer. Athletic training uses a medical model for professional education that includes both didactic and clinical education.

**Working Conditions**
Athletic trainers work in a variety of different professional settings, including:

- Hospital emergency departments
- Intercollegiate athletics
- Law enforcement and military
- Occupational and industrial settings
- Performing arts
- Physician offices
- Professional sports
- Secondary schools
- Sports medicine clinics

This fast-paced, challenging profession provides an opportunity for people entering the profession to engage in optimal patient care while working in a dynamic medical environment.

**Salary Range and Outlook**
If you become an athletic trainer, your job prospects are good: According to the U.S. Bureau of Labor Statistics (BLS), this field is projected to grow 21% between 2014 and 2024, much faster than the average for all occupations. Athletic training is recognized by the American Medical Association, Health Resources Services Administration and the Department of Health and Human Services as a health care profession. Typically, athletic trainers earn a salary of $38,000 to $82,000 per year, with the average salary, as of 2014, at $55,036.

**Academic Requirements**
Athletic trainers must graduate from an accredited professional program. Those programs are currently at both the bachelor’s and master’s level. Within the next six to seven years, all students enrolling in professional education in athletic training will be earning degrees at the master’s level.
Athletic training students receive formal training in the following content areas:

- Acute care of injury and illness
- Clinical examination and diagnosis
- Evidence-based practice
- Health care administration
- Prevention and health promotion
- Professional development and responsibility
- Psychosocial strategies and referral
- Therapeutic interventions

Once you successfully graduate, you are eligible to take a comprehensive exam administered by the Board of Certification. Once certified, you must maintain ongoing continuing education requirements in order to retain your credential.

In addition, a significant number of athletic trainers have advanced degrees earned by the completion of specializations, residencies, fellowships and doctoral programs.

Other Related Fields

Human Performance
Human performance programs are designed for students seeking graduate training to develop knowledge and skills related to nutrition and exercise in maintaining and improving health and physical performance.

Performance Trainer
Sports performance training programs are a type of training program that is designed to improve fitness (in the broad sense of the term) level for the purpose of improving ability to perform a given sport.

Pre-Athletic Training
Pre-Athletic training programs provide students with an entry into graduate athletic programs. Athletic trainers are health care professionals who work with physicians to optimize their patients’ activity. They provide physical medicine, prevent and diagnose injury, and treat and rehabilitate acute and chronic issues that would impair or limit their patients’ activity.

Programs in Oregon

Athletic Training
Linfield College - BS
Oregon State University - BS
Pacific University - BS, MS

Human Performance
Chemeketa Community College - AAS

Performance Trainer
Portland Community College - Certificate
Southwestern Oregon Community College - Certificate

Pre-Athletic Training
Concordia University - BS

Resources
Board of Certification, Inc.
Commission on Accreditation of Athletic Training Education
National Athletic Trainers’ Association
### Exercise Physiologist

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<th>Average Salary</th>
<th>Years Higher Education</th>
<th>Job Outlook</th>
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<td>$30k - 73k</td>
<td>4 - 6</td>
<td>Very Good</td>
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Exercise physiologists analyze their patients’ fitness in order to help them improve their health or maintain good health. They help patients with heart disease and other chronic conditions, like diabetes or pulmonary (lung) disease, to regain their health. They also work with both amateur and professional athletes who are hoping to boost their performance.

Using stress tests and other evaluation tools, the exercise physiologist evaluates a patient’s cardiovascular function and metabolism and then designs a fitness plan that will meet the patient’s goals and/or needs, including building endurance and strength and increasing fitness and flexibility.

A certified exercise physiologist is trained to:

- Administer exercise stress tests in healthy and unhealthy populations
- Evaluate a person’s overall health, with special attention to cardiovascular function and metabolism
- Develop individualized exercise prescriptions to increase physical fitness, strength, endurance, and flexibility
- Design customized exercise programs to meet health care needs and athletic performance goals

Sports medicine and athletic training facilities employ exercise physiologists to create programs that help athletes reduce the number of injuries and recover faster from them.

Makers of athletic equipment hire exercise physiologists to design sports gear. Exercise physiologists also run their own businesses as sports or athletic performance consultants. You may also meet exercise physiologists who work as clinicians, sports directors, coaches or trainers, wellness directors, exercise managers, program coordinators, rehabilitation specialists or several other titles.

An exercise physiologist is not the same as a personal trainer. An exercise physiologist is a health care professional who has completed a degree in exercise physiology and/or has been certified by the American Society of Exercise Physiologists.

### Working Conditions

Exercise physiologists work in:

- Athletic training programs at colleges and universities
- Corporate wellness programs
- Fitness facilities
- Hospitals
- Military training centers
- Rehabilitation clinics

### Salary Range and Outlook

Salaries for exercise physiologists vary by location, certification and experience. The median base salary is $46,270, with a range between $30,700 and $73,000.
Academic Requirements
While many employers hire exercise physiologists with a bachelor’s degree, those who wish to work in cardiac rehabilitation are likely to need a master’s degree. The academic coursework in exercise physiology should include:

- Biomechanics
- Cardiac rehabilitation
- ECG interpretation
- Exercise physiology
- Exercise physiology research
- Exercise testing and prescription
- Kinesiology (functional anatomy)
- Psychophysiology
- Sports nutrition
- Statistics

Internships provide hands-on experience developing and monitoring exercise programs. Look for an exercise physiology program that is accredited by The American Society of Exercise Physiology.

To become board certified, you must pass an examination administered by ASEP. The examination tests both academic knowledge and laboratory and practical skills. In addition, exercise physiologists are expected to sustain their professional membership and complete continuing education courses throughout their careers.

Other Related Fields

Applied Health and Fitness
Applied Health and Fitness degree for students with interests in physical activity and exercise.

Exercise Science
Exercise Science programs focus on kinesiology concepts in human movement, exercise and management.

Exercise Specialist
Exercise Specialist study programs were created to help individuals gain valuable expertise in creating programs for clients with a range of medical conditions.

Group Fit Leader
Group fit leader programs certify fitness professionals to teach, lead, and motivate individuals through intentionally-designed exercise classes.

Health and Human Performance
Health and human performance programs are a general pre-health professional curriculum that prepares students for health-related graduate programs (e.g., physical therapy, occupational therapy, medical school, etc.), exercise science graduate programs (e.g., exercise physiology, health promotion, biomechanics), as well as entry-level occupations within the health and wellness industry.

Health and Sports Fitness
Health and sports fitness programs place emphasis on skill development and the enjoyment of being physically active. Programs promote fun, safety, camaraderie, team work, and sportsmanship.
Health Coaching
Health Coaching programs combine wellness, nutrition, and health sciences to become a health coach.

Health Exercise Science
Health exercise science provides a strong academic background and provide students with an abundance of opportunities to gain critical knowledge and experiences to prepare them for future careers or continued education in graduate programs like exercise physiology.

Healthy Older Adults Fitness
Healthy older adults fitness programs train students to develop regular exercise programs that can help older adults stay independent and prevent many health problems that come with age.

Human Performance
Human Performance programs are designed for students seeking graduate training to develop knowledge and skills related to nutrition and exercise in maintaining and improving health and physical performance.

Human Physiology
Human physiology programs focus on the scientific study of the functions and mechanisms which work within a human system.

Personal Training
Personal training programs certify students to have a varying degree of knowledge of general fitness involved in exercise prescription and instruction.

Pre-Athletic Training
Pre-Athletic training programs provide students with an entry into graduate athletic programs. Athletic trainers are healthcare professionals who work with physicians to optimize their patients’ activity. They provide physical medicine, prevent and diagnose injury, and treat and rehabilitate acute and chronic issues that would impair or limit their patients’ activity.

Programs in Oregon

Applied Health and Fitness
Portland State University - BS

Exercise Science
Central Oregon Community College - AAS
Corban University - BS
Eastern Oregon University - BS
George Fox University - BS
Linfield College - BS
Linn-Benton Community College - AAS
Multnomah University - BS
Northwest Christian University - BS
Pacific University - BS
Portland Community College - AAS
Warner Pacific University - BS
Western Oregon University - BS

Exercise Specialist
Rogue Community College - Certificate
Group Fit Leader
Portland Community College - Certificate
Southwest Oregon Community College - Certificate

Health and Human Performance
George Fox University - BS

Health and Sports Fitness
Concordia University - BS
Mount Hood Community College - Certificate
University of Western States - MS

Health Coaching
Central Oregon Community College - AAS
Portland State University - BS

Health Exercise Science
Central Oregon Community College - AAS
Corban University - BS
Eastern Oregon University - BS
George Fox University - BS
Linfield College - BS
Linn-Benton Community College - AAS
Multnomah University - BS
Pacific University - BS
Northwest Christian University - BS
Portland Community College - AAS
Warner Pacific University - BS
Western Oregon University - BS

Healthy Older Adults Fitness
Portland Community College - Certificate

Human Performance
Chemeketa Community College - AAS

Human Physiology
University of Oregon - BS

Personal Training
Portland Community College - Certificate
Southwestern Oregon Community College - Certificate

Pre-Athletic Training
Concordia University - BS

Resources
American Society of Exercise Physiologists
Primary Care Sports Medicine Physician

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<th>Average Salary</th>
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<th>Job Outlook</th>
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<td>$203k</td>
<td>10 - 15</td>
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Sports medicine physicians, who may be allopathic (MD) or osteopathic physicians (DO), focus their practice on health care for athletes and physically active individuals.

Sports medicine primary care physicians treat anyone who is physically active help them improve performance, enhance overall health, prevent injury and maintain their physical activity throughout their lives. Some work with professional and amateur sports teams.

While some sports medicine physicians are surgeons who repair damage to tendons, ligaments and joints, primary care sports medicine is non-surgical care. It involves:

- Comprehensive health care for the active patient, including diagnosis and treatment of sports or activity-related and unrelated injuries and illnesses
- Use of manual techniques to prevent and treat muscular and skeletal conditions common in athletes
- Special knowledge of the principles of athletic conditioning
- Focus on injury prevention and rehabilitation, including injuries common to specific sports
- Nutritional guidance to build strength and endurance in support of athletic performance

Sports medicine is not a recognized residency training specialty. However, a physician can achieve special qualifications in sports medicine after completing a residency program in another specialty. Most primary care sports medicine physicians choose family medicine. Many also choose to specialize in pediatrics, internal medicine, emergency medicine, neuromusculoskeletal and rehabilitation medicine.

Working Conditions
As a primary care sports medicine physician, you may work exclusively with a particular athletic team, a university sports program a fitness club, or in a private or group practice.

In addition to treating patients, primary care sports medicine physicians often consult with athletic trainers, coaches and athletic directors on injury prevention and performance enhancement.

This field is expanding beyond the traditional realm of professional and college athletics. More and more Americans are seeking primary care sports medicine physicians to improve health, maintain strength and endurance and sustain an active lifestyle.

Salary Range and Outlook
The average salary of a primary care sports medicine physician is $202,600. Salaries depend on where the physician is employed and the amount of experience the physician has.

Academic Requirements
While sports medicine is a recognized subspecialty, physicians cannot obtain primary board certification in primary care sports medicine. You must first complete three years of residency training in a recognized specialty, such as family medicine, emergency medicine, internal medicine or pediatrics.
Once you have completed your residency, you can pursue a fellowship in sports medicine, which generally lasts from one to two years. A good deal of what you will learn during your fellowship will be about sports injuries and how to treat them. Your sports medicine training will also focus on exercise physiology, rehabilitation, nutrition, cardiology and treatment of traumatic injury. Primary care sports medicine emphasizes the prevention of injury through proper training and technique.

You will also spend time in an orthopedic surgeon’s office and assisting in orthopedic surgery in order to learn first hand about surgeries your patients may need. It’s also likely that you will get hands-on training as a team doctor for a college or high school.

Once you have completed your fellowship, you will take an exam to receive a Certification of Added Qualification (CAQ) in sports medicine. A physician who successfully completes the CAQ is considered to be board certified in sports medicine. Continuing education is required to maintain certification. The two organizations that certify physicians are the American Board of Medical Specialties and the American Osteopathic Association’s Bureau of Osteopathic Specialists.

Other Related Fields
Allopathic Medicine
Allopathic medicine refers to the practice of traditional or conventional Western medicine. The term allopathic medicine is most often used to contrast conventional medicine with alternative medicine or homeopathy.

Sports Medicine
Sports medicine is a branch of medicine that deals with physical fitness and the treatment and prevention of injuries related to sports and exercise.

Sports Performance Psychology
Sport and performance psychology focuses on helping athletes, performers and others reach goals and cope with the anxiety that can impede performance in many venues, from athletics to business.

Programs in Oregon
Allopathic Medicine
Oregon Health Sciences University - PhD

Sports Medicine
University of Western States - MS
Warner Pacific University - MS

Sports Performance Psychology
University of Western States - MS

Resources
American Medical Society for Sports Medicine
American Osteopathic Academy of Sports Medicine
If you hear the word, “veterinary,” you likely immediately think of animals. And rightly so since veterinary medicine is the branch of medicine that deals with the prevention, diagnosis and treatment of disease as well as disease prevention in animals of all types, from family pets to farm livestock and zoo animals.

What you may not know is that veterinary health care workers also contribute to human public health by working to control zoonotic disease, those diseases passed from non-human animals to humans, such as Lyme disease and West Nile virus, for example. The scope of veterinary medicine is wide, covering all animal species, both domesticated and wild, with a range of conditions that can affect different species.

Veterinary medical workers include:

- Veterinarians: Physicians who protect the health of both animals and humans, veterinarians may have their own practice caring for companion animals, or they may work in zoos, wildlife parks, or aquariums; focus on public health and regulatory medicine; enter academia or research; or they may pursue other career paths.

- Veterinary technicians: These workers assist veterinarians with surgery, laboratory procedures, radiography, anesthesiology, treatment and nursing and client education. Almost every state requires a veterinary technician to pass a credentialing exam to ensure a high level of competency.

- Veterinary assistants: They support the veterinarian and/or the veterinary technician in their daily tasks. The assistant may be asked to perform kennel work, assist in the restraint and handling of animals, feed and exercise the animals, or spend time on clerical duties.

- Animal behaviorists are also a part of the veterinary field though they are not usually found in a veterinarian’s office. They study the way animals behave and try to determine what causes certain types of behavior and what factors can prompt behavior change.
Are you fascinated by non-human animals? Do you wonder why they do the things they do? Perhaps you should think about becoming an animal behaviorist. Animal behaviorists study the way animals behave and try to determine what causes certain types of behavior and what factors can prompt behavior change.

They usually specialize in certain types of animals, whether it’s fish, birds, large animals, wild animals, livestock or household pets. They also may focus on certain types of behavior, such as hunting, mating or raising offspring. Many things can influence how an animal behaves, including hunger, illness, hormones, the presence of a potential predator or prey, even the weather.

Animal behaviorists identify behaviors and try to ask questions shaped by Tinbergen’s four questions, named after Niko Tinbergen, a Dutch biologist and ornithologist:

- What caused the non-human animal to perform the behavior at this particular moment?
- What is the developmental trajectory of the behavior? (When does the animal first perform it, and does it require learning?)
- What is the function or purpose of the behavior?
- What is the evolutionary history of the behavior? (That is, can we track it through a phylogenetic lineage and see how or if it has changed?)

Some animal behaviorists specialize in anthrozoology, the way animals interact with people. However, most anthrozoologists are not animal behaviorists. People who work with pet behavior are applied animal behaviorists. These specialists are often concerned with promoting behavior change in animals by altering aspects of the human-animal relationship. For example, an applied animal behaviorist may come to your home and observe your family’s interactions with a pet to determine why the pet is behaving badly and what changes the family can make in order to improve the pet’s behavior.

Animal behaviorists work in a variety of settings, including universities and research facilities, zoos, animal training facilities, animal shelters, companies that make pet products, organizations that promote animal welfare and in private practice, helping pet and livestock owners better understand and care for their animals.

**Working Conditions**
Some animal behaviorists are employed in academic settings, usually in biology or psychology departments, where they teach and engage in high-level research. Companies that use non-human animals may employ individuals whose role is to study behavior and provide behavioral enrichment. Many begin their careers as full-time or part-time research assistants.

Larger zoos may employ animal behaviorists and animal behavior assistants to conduct research and serve as curators, designing appropriate environments for animals, monitoring behavior, developing educational displays and speaking to the public about animal behavior. Animal behaviorists who specialize in behavior change work in private practice, zoos, animal shelters or in the veterinary field. Some train animals to perform as entertainment, or serve as companion animals.
Animal behaviorists may also be hired by government agencies, such as the U.S. Fish and Wildlife Service or state or local wildlife agencies to monitor wild populations, or the U.S. Department of Agriculture to inspect facilities that house non-human animals.

**Salary Range and Outlook**
The career paths taken by animal behaviorists vary widely, so it's difficult to determine an average salary for this career. Animal behaviorists working in private practice or for private companies typically earn more than researchers or those working for nonprofit organizations, such as zoos.

Typical entry-level jobs in zoos or shelters could start at less than $30,000. At higher levels, or in industry, salaries can be considerably higher.

**Academic Requirements**
To pursue a career as an animal behaviorist, you should:

- Major in biology or psychology or animal behavior in college.
- Seek out volunteer opportunities or internships, or work part-time and over the summers in settings that give you plenty of opportunity to interact directly with non-human animals. Get to know professional animal behaviorists, making it clear that you are interested in this type of career.

Many zoos and animal shelters welcome volunteers and/or interns, and these are excellent ways to gain experience. Similarly, many graduate students and field researchers "hire" volunteer field assistants. Although these are usually unpaid, they provide excellent experience and preparation for graduate research.

If you want to conduct research into animal behavior or work as a lead curator at a zoo or animal museum, you will most likely need at least five years of zoo experience, and perhaps a post-graduate (master's or doctorate) degree in veterinary medicine, animal husbandry, ethology (the study of animal behavior in a natural environment), comparative psychology, behavioral ecology, sociobiology or another specialized scientific field, such as ornithology (the study of birds). A Ph.D. may also be required if you plan to teach at the college level.

If you want to focus on behavior change, particularly in helping people better relate to their pets, you can become an associate applied animal behaviorist (which requires a master's degree) or a certified applied animal behaviorist (requiring a doctorate).

The Animal Behavior Society offers a certification program and a directory of training programs in North America (last updated in 2008).

**Other Fields of Study**
**Biology**
Biology is the study of life. Programs typically focus on molecular, cellular, and ecological discoveries which form the basis of biology and are applied to the associations that exist among living organisms, including human evolution. Careers in the health care and pre-professional studies in dentistry, medicine, optometry, medical technology, podiatry, veterinary medicine, ecology, marine biology, and genetics are all possibilities for biology students.
**Integrative Biology**
Integrative biology programs are for students who are interested in ecology and environmental sciences, or whole-organism biology, including the study of genetic, cellular, and morphological processes in animals and plants.

**Pre-Veterinary**
Pre-Veterinary is the course of study you take to prepare for admission to veterinary medical school. Not a major, per se, pre-vet is rather a guiding principle for your education designed to increase your chances for admission to veterinary schools.

**Psychology**
A program in psychology the study of the mind and behavior. The discipline embraces all aspects of the human experience, from the functions of the brain to the actions of nations, and from child development to care for the aged. In every conceivable setting from scientific research centers to mental health care services, “the understanding of behavior” is the enterprise of psychologists.

**Programs in Oregon**

**Biology**
- Central Oregon Community College - AAS
- Chemeketa Community College - AAS
- Clackamas Community College - AAS
- Clatsop Community College - AAS
- Concordia University - BS
- Eastern Oregon University - BS
- George Fox University - BS
- Lewis & Clark College - BS
- Linn-Benton Community College - AAS
- Mount Hood Community College - AAS
- Multnomah University - BS
- Northwest Christian University - BS
- Oregon Institute of Technology - BS
- Oregon State University - BS
- Oregon State University Cascades - BS
- Pacific University - BS
- Portland State University - BS, MS, PhD
- Reed College - BS
- Rogue Community College - AAS
- Southern Oregon University - BS
- Treasure Valley Community College - AAS
- Umpqua Community College - AAS
- University of Oregon - BS
- University of Portland - BS
- University of Western States - BS
- Warner Pacific University - BS
- Western Oregon University - BS
- Willamette University - BS

**Integrative Biology**
- Oregon State University - MS, PhD

**Pre-Veterinary**
- Central Oregon Community College - AAS
- Eastern Oregon University - BS
George Fox University - BS
Multnomah University - BS
Oregon Institute of Technology - BS
Oregon State University-Cascades - BS
Reed College - BS
Southern Oregon University - BS
Warner Pacific University - BS
Western Oregon University - BS

**Psychology**
Chemeketa Community College - AAS
Clatsop Community College - AAS
Concordia University - BS, MS
Corban University - BS
George Fox University - BS, MS, PhD
Lewis & Clark University - BS
Linfield College - BS
Linn-Benton Community College - AAS
Multnomah University - BS
Mount Hood Community College - AAS
Northwest Christian University - BS
Oregon Institute of Technology - BS
Oregon State University - BS, MS, PhD
Pacific University - BS
Portland State University - BS, MS
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS
University of Portland - BS
Warner Pacific University - BS
Western Oregon University - BS
Willamette University - BS

**Resources**
American Association of Zoo Keepers, Inc.
Animal Behavior Society
International Society for Anthrozoology
International Society for Behavioral Ecology
Veterinarian

<table>
<thead>
<tr>
<th>Average Salary</th>
<th>Years Higher Education</th>
<th>Job Outlook</th>
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<tbody>
<tr>
<td>$102k</td>
<td>8</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

Veterinarians play a major role in the health of our society by caring for animals and by using their expertise and education to protect and improve human health as well. It's likely that you are most familiar with veterinarians who care for our companion animals, but there is more than that one career to choose from if you decide to become a veterinarian.

There are many opportunities for veterinarians, and it's worth exploring them to discover which is the best fit for you. There is a growing need for vets with post-graduate education in particular specialties, such as molecular biology, laboratory animal medicine, toxicology, immunology, diagnostic pathology or environmental medicine. The veterinary profession also is becoming more involved in aquaculture, comparative medical research, food production and international disease control.

For example:

- You may work to protect animal and human health by working at a government agency like the United States Department of Agriculture. Or you may want to put your expertise as a veterinarian to work with an agency like the National Institutes of Health or the Centers for Disease Control to aid biosecurity, public health or disease prevention.
- You may decide to join the U.S. Army Corps or Air Force to work on food safety or care for military working dogs. The military also provides advanced training in specialty areas for those who commit to service.
- You can also go to work for a corporation that provides animal care or animal-related products or choose a research career.

**Working Conditions**

Veterinarians work in different kinds of environments. Those who care for companion animals may be in a workplace filled with activity and noise while veterinarians who care for farm animals may spend a lot of time outside. If you are a veterinarian working in research, you may spend your workdays in a lab. Veterinarians who work on policy or for a corporation may spend their workdays in an office.

If you are in a veterinary practice, you will likely put in long hours and be on call in the evenings and on weekends.

**Salary and Outlook**

A veterinarian can expect to earn an average salary of $102,000.

**Academic Requirements**

Prospective veterinarians must graduate from a four-year program at an accredited college of veterinary medicine with a Doctor of Veterinary Medicine (D.V.M. or V.M.D.) degree and obtain a license to practice. The prerequisites for admission vary by veterinary medical college. Many of these colleges do not require a bachelor’s degree for entrance, but all require a significant number of credit hours—ranging from 45 to 90 semester hours—at the undergraduate level. However, most of the students admitted have completed an undergraduate program.
You can start preparing for a career as a veterinarian while you are still in high school:

- Study hard so you can maintain a high GPA and score well on your SAT or ACT test.
- Take as many math and science classes as you can.
- Look for chances to participate in extracurricular activities that involve animals like 4-H and Future Farmers of America.
- Volunteer with a local veterinarian or at an animal shelter.

When you get to college, you should continue studying hard to get good grades. It's a good idea to major in pre-veterinary studies but it's not necessary. The Association of American Medical Colleges (AAVMC) notes in a brochure that “veterinary medical students come from all kinds of backgrounds and majors, including the arts or humanities. The important thing is to accumulate the necessary prerequisites, especially prerequisites in math and science, which vary by school. It's best to start taking math and science early in your academic career, but you can also pick up those classes along the way.”

You will also want to join your school’s pre-vet club if there is one and continue gaining experience by volunteering with or working for a veterinarian and/or volunteering at an animal shelter.

Applicants to veterinary medical school are not required to have a bachelor’s degree, but more than 90% of all entering students do. The other 10% choose to start veterinary school after their junior year of college. AAVMC publishes a summary of course prerequisites required by veterinary schools.

Know the specific course requirements and deadlines for each of the schools to which you’re applying. If you have questions, ask them. Don’t listen to anyone but officials from that school. You may apply to vet school while still working to complete the required courses, as long as you complete all the prerequisites within the vet school’s timeline. (Some schools require all prerequisites to be completed by the end of the spring semester prior to the fall you will enter the program, no last-minute summer school courses.)

Remember that the burden for submitting a complete application (which includes evaluations, transcripts and fees), meeting deadlines, and making it to your interview falls on you. It is also your responsibility to ensure that your evaluators comply with the application deadlines. Veterinary schools try to communicate effectively, but ultimately it is the applicant's responsibility to be sure all is well.

Other Fields of Study

Biology
Biology is the study of life. Programs typically focus on molecular, cellular, and ecological discoveries which form the basis of biology and are applied to the associations that exist among living organisms, including human evolution. Careers in the health care and pre-professional studies in dentistry, medicine, optometry, medical technology, podiatry, veterinary medicine, ecology, marine biology, and genetics are all possibilities for biology students.

Pre-Veterinary
Pre-Veterinary is the course of study you take to prepare for admission to veterinary medical school. Not a major, per se, pre-vet is rather a guiding principle for your education designed to increase your chances for admission to veterinary schools.
Programs in Oregon

Biology
Central Oregon Community College - AAS
Chemeketa Community College - AAS
Clackamas Community College - AAS
Clatsop Community College - AAS
Concordia University - BS
Eastern Oregon University - BS
George Fox University - BS
Lewis & Clark College - BS
Linn-Benton Community College - AAS
Mount Hood Community College - AAS
Multnomah University - BS
Northwest Christian University - BS
Oregon Institute of Technology - BS
Oregon State University - BS
Oregon State University Cascades - BS
Pacific University - BS
Portland State University - BS, MS, PhD
Reed College - BS
Rogue Community College - AAS
Southern Oregon University - BS
Treasure Valley Community College - AAS
Umpqua Community College - AAS
University of Oregon - BS
University of Portland - BS
University of Western States - BS
Warner Pacific University - BS
Western Oregon University - BS
Willamette University - BS

Pre-Veterinary
Central Oregon Community College - AAS
Eastern Oregon University - BS
George Fox University - BS
Multnomah University - BS
Oregon Institute of Technology - BS
Oregon State University-Cascades - BS
Reed College - BS
Southern Oregon University - BS
Warner Pacific University - BS
Western Oregon University - BS

Veterinary Medicine
Clatsop Community College - AAS
Oregon State University - PhD

Resources
American Veterinary Medical Association
Association of American Veterinary Medical Colleges
Veterinary Technologist/Technician

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<tr>
<td>$25k - 27k</td>
<td>2</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

Owners of pets and other animals today expect state-of-the-art veterinary care. To provide this service, veterinarians use the skills of veterinary technologists and technicians, who perform many of the same duties for a veterinarian that a nurse would for a physician, including routine laboratory and clinical procedures.

Although specific job duties vary by employer, there often is little difference between the tasks done by technicians and by technologists, despite some differences in formal education and training. As a result, most workers in this occupation are called technicians.

Working Conditions
People who love animals get satisfaction from working with and helping them. However, some of the work may be unpleasant, physically and emotionally demanding, and sometimes dangerous. Veterinary technicians sometimes must clean cages and lift, hold, or restrain animals, risking exposure to bites or scratches. These workers must take precautions when treating animals with germicides or insecticides. The work setting can be noisy.

Salary and Outlook
A person who becomes a veterinary technologist/technician can expect to earn an average salary of between $25,000 and $27,000.

Academic Requirements
There are primarily two levels of education and training for entry to this occupation—a 2-year program for veterinary technicians and a 4-year program for veterinary technologists. Most entry-level veterinary technicians have a 2-year degree, usually an associate degree, from an accredited community college program in veterinary technology, in which courses are taught in clinical and laboratory settings using live animals. A few colleges offer veterinary technology programs that are longer and that may culminate in a 4-year bachelor’s degree in veterinary technology. These 4-year colleges, in addition to some vocational schools, also offer 2-year programs in laboratory animal science. Search for schools that provide training for this career.

Other Related Fields
Pre-Veterinary
Pre-Veterinary is the course of study you take to prepare for admission to veterinary medical school. Not a major, per se, pre-vet is rather a guiding principle for your education designed to increase your chances for admission to veterinary schools.

Veterinary Assistant
A veterinary assistant cares for animals in an animal hospital or clinic. Working under the supervision of a veterinarian or veterinary technician, he or she is responsible for feeding, bathing, exercising animals, and restraining them during examinations and treatment.
Programs in Oregon

Pre-Veterinary
Central Oregon Community College - AAS
Eastern Oregon University - BS
George Fox University - BS
Multnomah University - BS
Oregon Institute of Technology - BS
Oregon State University-Cascades - BS
Reed College - BS
Southern Oregon University - BS
Warner Pacific University - BS
Western Oregon University - BS

Veterinary Assistant
Blue Mountain Community College - Certificate
Linn-Benton Community College - Certificate

Veterinary Technician
Blue Mountain Community College - Certificate
Central Oregon Community College - Certificate
Portland Community College - AAS

Resources
American Veterinary Medical Association
National Association of Veterinary Technicians in America
Oregon Area Health Education Center (AHEC) works statewide to improve the availability, continuity and quality of health care for communities and populations in need. ORAHEC is a partnership between OHSU and five Regional Centers. Please contact the appropriate regional center for more information on AHEC programs, activities and resources.

Oregon AHEC Program Office  
www.ohsu.edu/area-health-education-centers/  503-494-3986

AHEC of Southwest Oregon  
www.healthyoregon.com  541-784-3660  
Serving Coos, Curry, Douglas, Jackson, Josephine and Lane counties

Cascades East AHEC  
www.cascadeseast.org  541-706-2617  
Serving Crook, Deschutes, Grant, Harney, Jefferson, Klamath and Lake counties and the Confederated Tribes of Warm Springs

Northeast Oregon AHEC  
www.neoahec.org  541-962-3422  
Serving Baker, Gilliam, Hood River, Malheur, Morrow, Sherman, Umatilla, Union, Wallowa, Wasco and Wheeler counties

Oregon Pacific AHEC  
www.opahec.org  541-768-4847  
Serving Benton, Clatsop, Columbia, Lincoln, Linn, Marion, Polk, Tillamook and Yamhill counties

Oregon Healthcare Workforce Institute  
www.oregonhwi.org  503-479-6002  
Serving Clackamas, Multnomah and Washington counties

For more information on AHEC nationally, contact the National AHEC Organization  www.nationalahec.org