

# Student Learning Outcomes 2020: School of Medicine - Graduate Studies

## PROGRAM

Behavioral Neuroscience (MS-BEHN)

## STUDENT LEARNING OUTCOMES

Advance knowledge in selected area of concentration.

Apply fundamental knowledge of ethics in research.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate advanced knowledge in one specialized area.

Demonstrate master's-level competence in written and verbal communication

Design, conduct, and interpret their own research.

Interpret and critique scientific literature.

**PROGRAM**

Behavioral Neuroscience (PHD-BEHN)

**STUDENT LEARNING OUTCOMES**

Advance knowledge in selected area of concentration.

Apply fundamental knowledge of ethics in research.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate advanced knowledge in one specialized area.

Demonstrate doctoral-level competence in written and verbal communication.

Design, conduct, and interpret their own research.

Develop ancillary skills, where necessary, to obtain positions outside scientific research.

**PROGRAM****STUDENT LEARNING OUTCOMES**

Behavioral Neuroscience (PHD-BEHN)

Formulate hypothesis based on current concepts in the field.

Interpret and critique scientific literature.

Biochemistry Molecular Biolo (MS-BAMB)

Advance knowledge in selected area of concentration.

Apply fundamental knowledge of ethics in research.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate advanced knowledge in one specialized area.

Demonstrate doctoral-level competence in written and verbal communication.

**PROGRAM****STUDENT LEARNING OUTCOMES**

Biochemistry Molecular Biolo (MS-BAMB)

Design, conduct, and interpret their own research.

Develop ancillary skills, where necessary, to obtain positions outside scientific research.

Formulate hypothesis based on current concepts in the field.

Interpret and critique scientific literature.

Biochemistry Molecular Biolo (MS-BMB)

Accurately and professionally communicate results with others verbally and in writing.

Collect and store data in accordance with good lab practices.

Critically evaluate a defined body of knowledge relevant to their field.

**PROGRAM****STUDENT LEARNING OUTCOMES**

Biochemistry Molecular Biolo (MS-BMB)

Demonstrate analytical skills.

Design and conduct independent, innovative research in accordance with the scientific research method.

Identify significant and original problems that will impact human health.

Biochemistry Molecular Biolo (PHD-BAMB)

Advance knowledge in selected area of concentration

Demonstrate doctoral-level competence in written and verbal communication

Demonstrate knowledge and understanding of core facts, concepts, and principles that is broad across the degree field and deep in the student's specialty field. (Domain: Cognitive; Levels: Knowledge, Comprehension) – This SLO is for acquiring existing kno

Design, conduct, and interpret their own research

**PROGRAM**

Biochemistry Molecular Biolo (PHD-BAMB)

**STUDENT LEARNING OUTCOMES**

Formulate hypothesis based on current concepts in the field

Biochemistry Molecular Biolo (PHD-BMB)

Advance knowledge in selected area of concentration.

Apply fundamental knowledge of ethics in research.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate advanced knowledge in one specialized area.

Demonstrate doctoral-level competence in written and verbal communication.

Design, conduct, and interpret their own research.

**PROGRAM**

Biochemistry Molecular Biolo (PHD-BMB)

**STUDENT LEARNING OUTCOMES**

Develop ancillary skills, where necessary, to obtain positions outside scientific research.

Formulate hypothesis based on current concepts in the field.

Interpret and critique scientific literature.

Bioinform Computation Biomed (MS-BCB)

Apply fundamental knowledge of ethics and implement solutions that assure confidentiality, security and integrity while maximizing the availability of data, information, and knowledge.

Apply knowledge of bioinformatics and computational biomedicine, and related disciplines, to solve problems in research, clinical and/or educational settings.

Apply the principles of team science to solve complex information problems.

Appriase applicable bioinformatics concepts, methods, and tools to solve challenging problems in their focus area.

## PROGRAM

Bioinform Computation Biomed (MS-BCB)

## STUDENT LEARNING OUTCOMES

Communicate professionally, including during interactions with others, and while giving and receiving feedback.

Demonstrate and promote informatics solutions that help to ensure patient safety within relevant clinical settings.

Effectively communicate in written and verbal form to both peers and non-experts.

Engage in lifelong learning through: finding, interpreting and critically appraising professional literature in order to stay informed of advances in their chosen field; and connecting with the larger professional community through participating in confer

Function as a productive member of a multidisciplinary collaborative team of biological or other scientists, informatics, information technology, clinical, administrative, and other experts.

Given a problem, formulate a plan, critically compare options, make timely decisions or recommendations, identify, and improve outcomes in light of evolving evidence.

Identify and apply appropriate research and methods to analyze, contextualize, interpret results, and evaluate their internal and external validity.



**PROGRAM****STUDENT LEARNING OUTCOMES**

Bioinform Computation Biomed (MS-BCB)

Integrate the culture and diversity of a population when carrying out research and/or professional practice in informatics.

Bioinform Computation Biomed (PHD-BCB)

Apply a broad knowledge of bioinformatics and computational medicine, and related disciplines, to solve problems in research, clinical and educational settings.

Apply a broad knowledge of bioinformatics and computational medicine, and related disciplines, to solve problems in research, clinical and educational settings.

Apply fundamental knowledge of ethics in research and implement solutions that assure confidentiality, security and integrity while maximizing the availability of data, information, and knowledge.

Apply fundamental knowledge of ethics in research and implement solutions that assure confidentiality, security and integrity while maximizing the availability of data, information, and knowledge.

Apply the principles of team science to solve complex information problems.

Apply the principles of team science to solve complex information problems.

## PROGRAM

Bioinform Computation Biomed (PHD-BCB)

## STUDENT LEARNING OUTCOMES

Apply the principles of team science to solve complex information problems.

Apply the principles of team science to solve complex information problems.

Apply the principles of team science to solve complex information problems.

Appraise applicable bioinformatics concepts, methods, and tools to solve challenging problems in their focus area.

Appraise applicable bioinformatics concepts, methods, and tools to solve challenging problems in their focus area.

Appraise applicable bioinformatics concepts, methods, and tools to solve challenging problems in their focus area.

Appraise applicable bioinformatics concepts, methods, and tools to solve challenging problems in their focus area.

**PROGRAM**

Bioinform Computation Biomed (PHD-BCB)

**STUDENT LEARNING OUTCOMES**

Appraise applicable bioinformatics concepts, methods, and tools to solve challenging problems in their focus area.

Communicate professionally, including during interactions with others, and while giving and receiving feedback.

Demonstrate and promote informatics solutions that help to ensure patient safety within relevant clinical settings.

Effectively communicate and disseminate scientific research in written and verbal form to both peers and non-experts.

Engage in lifelong learning through: finding, interpreting and critically appraising scientific literature in order to fill knowledge gaps and stay informed of scientific advances; synthesizing and applying new knowledge to their own research; and connect

Function as a productive member of a multidisciplinary collaborative team of biological and related scientists, informatics, information technology, clinical, administrative, and other experts.

Function as a productive member of a multidisciplinary collaborative team of biological and related scientists, informatics, information technology, clinical, administrative, and other experts.

## PROGRAM

Bioinform Computation Biomed (PHD-BCB)

## STUDENT LEARNING OUTCOMES

Function as a productive member of a multidisciplinary collaborative team of biological and related scientists, informatics, information technology, clinical, administrative, and other experts.

Function as a productive member of a multidisciplinary collaborative team of biological and related scientists, informatics, information technology, clinical, administrative, and other experts.

Have experience and training utilizing modern frameworks for rapid prototyping (as relevant), and how to extract information from a wide variety of databases.

Have experience and training utilizing modern frameworks for rapid prototyping (as relevant), and how to extract information from a wide variety of databases.

Have experience and training utilizing modern frameworks for rapid prototyping (as relevant), and how to extract information from a wide variety of databases.

Have experience and training utilizing modern frameworks for rapid prototyping (as relevant), and how to extract information from a wide variety of databases.

Have experience and training utilizing modern frameworks for rapid prototyping (as relevant), and how to extract information from a wide variety of databases.

## PROGRAM

Bioinform Computation Biomed (PHD-BCB)

## STUDENT LEARNING OUTCOMES

Identify and define problems, critically compare options, make timely decisions or recommendations, identify uncertainties, and use findings to improve outcomes in light of evolving evidence.

Identify and define problems, critically compare options, make timely decisions or recommendations, identify uncertainties, and use findings to improve outcomes in light of evolving evidence.

Identify and define problems, critically compare options, make timely decisions or recommendations, identify uncertainties, and use findings to improve outcomes in light of evolving evidence.

Identify and define problems, critically compare options, make timely decisions or recommendations, identify uncertainties, and use findings to improve outcomes in light of evolving evidence.

Identify and define problems, critically compare options, make timely decisions or recommendations, identify uncertainties, and use findings to improve outcomes in light of evolving evidence.

Identify and define problems, critically compare options, make timely decisions or recommendations, identify uncertainties, and use findings to improve outcomes in light of evolving evidence.

Identify gaps in scientific knowledge; formulate a research question; design a research study; employ and apply appropriate methods or develop new methods as necessary; analyze, contextualize, and interpret results; and evaluate the internal and external

## PROGRAM

Bioinform Computation Biomed (PHD-BCB)

Biomedical Engineering (MS-BME)

## STUDENT LEARNING OUTCOMES

Integrate the culture and diversity of a population when developing research ideas, conducting research, evaluating implementation, and/or interpreting research findings.

Advance knowledge in selected area of concentration.

Apply fundamental knowledge of ethics in research.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate advanced knowledge in one specialized area.

Demonstrate master's-level competence in written and verbal communication

Design, conduct, and interpret their own research.

**PROGRAM**

Biomedical Engineering (MS-BME)

**STUDENT LEARNING OUTCOMES**

Interpret and critique scientific literature.

Biomedical Engineering (PHD-BME)

Advance knowledge in selected area of concentration.

Apply fundamental knowledge of ethics in research.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate advanced knowledge in one specialized area.

Demonstrate doctoral-level competence in written and verbal communication.

Design, conduct, and interpret their own research.

## PROGRAM

Biomedical Engineering (PHD-BME)

## STUDENT LEARNING OUTCOMES

Develop ancillary skills, where necessary, to obtain positions outside scientific research.

Formulate hypothesis based on current concepts in the field.

Interpret and critique scientific literature.

Biomedical Informatics (BCRT-BMI)

Apply fundamental knowledge of ethics and implement solutions that assure confidentiality, security and integrity while maximizing the availability of data, information, and knowledge.

Apply selected informatics methods and tools related to personal health, health care, public health, and biomedical research in an industrial workplace.

Apply selected informatics methods and tools related to personal health, health care, public health, and biomedical research in an industrial workplace.

Communicate professionally, including during interactions with others, and while giving and receiving feedback.



**PROGRAM**

Biomedical Informatics (BCRT-BMI)

**STUDENT LEARNING OUTCOMES**

Demonstrate and promote informatics solutions that help to ensure patient safety within relevant clinical settings.

Display familiarity with the use of information technology tools.

Display familiarity with the use of information technology tools.

Effectively communicate in written and verbal form to both peers and non-experts.

Engage in lifelong learning through: finding, interpreting and critically appraising professional literature in order to stay informed of advances in their chosen field; and connecting with the larger professional community through participating in confer

Exhibit knowledge in the underlying health domains that are related to the field of clinical informatics.

Exhibit knowledge in the underlying health domains that are related to the field of clinical informatics.

**PROGRAM****STUDENT LEARNING OUTCOMES**

Biomedical Informatics (BCRT-BMI)

Function as a productive member of a multidisciplinary collaborative team of biological or other scientists, informatics, information technology, clinical, administrative, and other experts.

Function as a productive member of a multidisciplinary collaborative team of biological or other scientists, informatics, information technology, clinical, administrative, and other experts.

Identify and apply appropriate research and methods to analyze, contextualize, interpret results, and evaluate their internal and external validity.

Integrate the culture and diversity of a population when carrying out research and/or professional practice in informatics.

Understand complex health and health information problems by balancing constraints (economic, regulatory) while integrating the priorities of different stakeholders (including health care professionals, researchers, and patients).

Understand complex health and health information problems by balancing constraints (economic, regulatory) while integrating the priorities of different stakeholders (including health care professionals, researchers, and patients).

Biomedical Informatics (MBI-BMI)

Apply informatics theories, methods and tools related to personal health, health care, public health, and biomedical research in an industrial workplace.

**PROGRAM**

Biomedical Informatics (MBI-BMI)

**STUDENT LEARNING OUTCOMES**

Apply informatics theories, methods and tools related to personal health, health care, public health, and biomedical research in an industrial workplace.

Apply informatics theories, methods and tools related to personal health, health care, public health, and biomedical research in an industrial workplace.

Carry out research under the mentorship of a faculty member in biomedical informatics.

Carry out research under the mentorship of a faculty member in biomedical informatics.

Carry out research under the mentorship of a faculty member in biomedical informatics.

Critically select, apply, and evaluate information and other technologies in support of informatics methods for solving biomedical and health problems.

Critically select, apply, and evaluate information and other technologies in support of informatics methods for solving biomedical and health problems.

## PROGRAM

Biomedical Informatics (MBI-BMI)

## STUDENT LEARNING OUTCOMES

Critically select, apply, and evaluate information and other technologies in support of informatics methods for solving biomedical and health problems.

Demonstrate knowledge in the underlying biological, clinical, and health domains to be able to apply informatics tools.

Demonstrate knowledge in the underlying biological, clinical, and health domains to be able to apply informatics tools.

Demonstrate knowledge in the underlying biological, clinical, and health domains to be able to apply informatics tools.

Demonstrate the ability to analyze and address ethical and legal issues in the field of clinical informatics.

Display effective oral and written presentation skills.

Display effective oral and written presentation skills.

**PROGRAM****STUDENT LEARNING OUTCOMES**

Biomedical Informatics (MBI-BMI)

Display effective oral and written presentation skills.

Identify differences in organizations and personal behaviors that affect the diffusion of informatics technology.

Identify differences in organizations and personal behaviors that affect the diffusion of informatics technology.

Identify differences in organizations and personal behaviors that affect the diffusion of informatics technology.

Biomedical Informatics (MS-BMI)

Apply informatics theories, methods and tools related to personal health, health care, public health, and biomedical research in an academic setting.

Apply informatics theories, methods and tools related to personal health, health care, public health, and biomedical research in an academic setting.

Apply informatics theories, methods and tools related to personal health, health care, public health, and biomedical research in an academic setting.

**PROGRAM**

Biomedical Informatics (MS-BMI)

**STUDENT LEARNING OUTCOMES**

Carry out in-depth research under the mentorship of a faculty member in biomedical informatics.

Carry out in-depth research under the mentorship of a faculty member in biomedical informatics.

Communicate effectively in oral presentations and in the written form.

Communicate effectively in oral presentations and in the written form.

Communicate effectively in oral presentations and in the written form.

Communicate the results of an investigation in a scholarly manner.

Critically select, apply, and evaluate information and other technologies in support of informatics methods for solving biomedical and health problems.

## PROGRAM

Biomedical Informatics (MS-BMI)

## STUDENT LEARNING OUTCOMES

Critically select, apply, and evaluate information and other technologies in support of informatics methods for solving biomedical and health problems.

Critically select, apply, and evaluate information and other technologies in support of informatics methods for solving biomedical and health problems.

Demonstrate knowledge in the underlying biological, clinical and health domains that are related to the field of clinical informatics.

Demonstrate knowledge in the underlying biological, clinical and health domains that are related to the field of clinical informatics.

Demonstrate knowledge in the underlying biological, clinical and health domains that are related to the field of clinical informatics.

Demonstrate the ability to analyze and address ethical and legal issues in the field of clinical informatics.

Biomedical Informatics (PHD-BMI)

Advance knowledge in selected area of concentration.

**PROGRAM**

Biomedical Informatics (PHD-BMI)

**STUDENT LEARNING OUTCOMES**

Advance knowledge in selected area of concentration.

Advance knowledge in selected area of concentration.

Advance knowledge in selected area of concentration.

Advance knowledge in selected area of concentration.

Advance knowledge in selected area of concentration.

Apply fundamental knowledge of ethics in research.

Apply fundamental knowledge of ethics in research.



**PROGRAM**

Biomedical Informatics (PHD-BMI)

**STUDENT LEARNING OUTCOMES**

Apply fundamental knowledge of ethics in research;.

Apply fundamental knowledge of ethics in research;.

Apply fundamental knowledge of ethics in research;.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

**PROGRAM**

Biomedical Informatics (PHD-BMI)

**STUDENT LEARNING OUTCOMES**

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate advanced knowledge in one specialized area.

Demonstrate advanced knowledge in one specialized area.

Demonstrate advanced knowledge in one specialized area.

Demonstrate advanced knowledge in one specialized area.

Demonstrate advanced knowledge in one specialized area.

**PROGRAM**

Biomedical Informatics (PHD-BMI)

**STUDENT LEARNING OUTCOMES**

Demonstrate doctoral-level competence in written and verbal communication.

Demonstrate doctoral-level competence in written and verbal communication.

Demonstrate doctoral-level competence in written and verbal communication.

Demonstrate doctoral-level competence in written and verbal communication.

Demonstrate doctoral-level competence in written and verbal communication.

Demonstrate doctoral-level competence in written and verbal communication.

Demonstrate doctoral-level competence in written and verbal communication.

**PROGRAM****STUDENT LEARNING OUTCOMES**

Biomedical Informatics (PHD-BMI)

Design, conduct, and interpret his/her own research.

Design, conduct, and interpret his/her own research.

Design, conduct, and interpret his/her own research.

Design, conduct, and interpret his/her own research.

Design, conduct, and interpret his/her own research.

Design, conduct, and interpret his/her own research.

Develop ancillary skills, where necessary, for career development.

**PROGRAM**

Biomedical Informatics (PHD-BMI)

**STUDENT LEARNING OUTCOMES**

Develop ancillary skills, where necessary, for career development.

Formulate hypotheses based on current concepts in the field.

Formulate hypotheses based on current concepts in the field.

Formulate hypotheses based on current concepts in the field.

Formulate hypotheses based on current concepts in the field.

Formulate hypotheses based on current concepts in the field.

Formulate hypotheses based on current concepts in the field.

**PROGRAM****STUDENT LEARNING OUTCOMES**

Biomedical Informatics (PHD-BMI)

Interpret and critique scientific literature.

Interpret and critique scientific literature.

Interpret and critique scientific literature.

Interpret and critique scientific literature.

Interpret and critique scientific literature.

Cancer Biology (MS-CANB)

Advance knowledge in selected area of concentration.

Apply fundamental knowledge of ethics in research.

**PROGRAM**

Cancer Biology (MS-CANB)

**STUDENT LEARNING OUTCOMES**

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate advanced knowledge in one specialized area.

Demonstrate masters-level competence in written and verbal communication.

Design, conduct, and interpret their own research.

Formulate hypothesis based on current concepts in the field.

Interpret and critique scientific literature.

Cancer Biology (PHD-CANB)

5.Design, conduct, and interpret their own research

**PROGRAM**

Cancer Biology (PHD-CANB)

**STUDENT LEARNING OUTCOMES**

Advance knowledge in selected area of concentration

Apply fundamental knowledge of ethics in research

Demonstrate a basic knowledge of central concepts in the relevant scientific field

Demonstrate advanced knowledge in one specialized area

Demonstrate doctoral-level competence in written and verbal communication

Develop ancillary skills, where necessary, to obtain positions outside scientific research

Develop ancillary skills, where necessary, to obtain positions outside scientific research



**PROGRAM**

Cancer Biology (PHD-CANB)

**STUDENT LEARNING OUTCOMES**

Formulate hypothesis based on current concepts in the field

Interpret and critique scientific literature

Cell Developmental Biology (MS-CELL)

Accurately and professionally communicate results with others verbally and in writing.

Collect and store data in accordance with good lab practices.

Critically evaluate a defined body of knowledge relevant to their field.

Demonstrate analytical skills.

Design and conduct independent, innovative research in accordance with the scientific research method.

**PROGRAM****STUDENT LEARNING OUTCOMES**

Cell Developmental Biology (MS-CELL)

Identify significant and original problems that will impact human health.

Cell Developmental Biology (PHD-CELL)

Advance knowledge in selected area of concentration.

Apply fundamental knowledge of ethics in research.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate advanced knowledge in one specialized area.

Demonstrate doctoral-level competence in written and verbal communication.

Design, conduct, and interpret their own research.

## PROGRAM

Cell Developmental Biology (PHD-CELL)

## STUDENT LEARNING OUTCOMES

Develop ancillary skills, where necessary, to obtain positions outside scientific research.

Formulate hypothesis based on current concepts in the field.

Interpret and critique scientific literature.

Clinical Psychology (PHD-CPSY)

SLO 1. Research: Critically evaluate, independently formulate, conduct and disseminate research or other scholarly activities that are of sufficient quality and rigor to have the potential to contribute to the scientific, psychological, or professional kn

SLO 1. Research: Critically evaluate, independently formulate, conduct and disseminate research or other scholarly activities that are of sufficient quality and rigor to have the potential to contribute to the scientific, psychological, or professional kn

SLO 1. Research: Critically evaluate, independently formulate, conduct and disseminate research or other scholarly activities that are of sufficient quality and rigor to have the potential to contribute to the scientific, psychological, or professional kn

SLO 10. Supervision: Demonstrate knowledge of supervision models and practices.

**PROGRAM**

Clinical Psychology (PHD-CPSY)

**STUDENT LEARNING OUTCOMES**

SLO 10. Supervision: Demonstrate knowledge of supervision models and practices.

SLO 10. Supervision: Demonstrate knowledge of supervision models and practices.

SLO 11. Consultation and interprofessional/interdisciplinary skills: Demonstrates knowledge of consultation models and practices and respect for the roles and perspectives of other professions.

SLO 11. Consultation and interprofessional/interdisciplinary skills: Demonstrates knowledge of consultation models and practices and respect for the roles and perspectives of other professions.

SLO 11. Consultation and interprofessional/interdisciplinary skills: Demonstrates knowledge of consultation models and practices and respect for the roles and perspectives of other professions.

SLO 2. Ethics: Apply ethical decision-making processes in accordance with relevant laws, regulations, rules, and policies; and relevant professional standards and guidelines.

SLO 2. Ethics: Apply ethical decision-making processes in accordance with relevant laws, regulations, rules, and policies; and relevant professional standards and guidelines.

**PROGRAM**

Clinical Psychology (PHD-CPSY)

**STUDENT LEARNING OUTCOMES**

SLO 2. Ethics: Apply ethical decision-making processes in accordance with relevant laws, regulations, rules, and policies; and relevant professional standards and guidelines.

SLO 3. Individual and Cultural Diversity: Work effectively and respectfully with diverse individuals and groups including an understanding of how their own personal/cultural history, attitudes, and biases may affect how they understand and interact with p

SLO 3. Individual and Cultural Diversity: Work effectively and respectfully with diverse individuals and groups including an understanding of how their own personal/cultural history, attitudes, and biases may affect how they understand and interact with p

SLO 4. Individual and Cultural Diversity: The ability to integrate awareness and knowledge of individual and cultural differences in the conduct of professional roles (e.g., research, services, and other professional activities).

SLO 4. Individual and Cultural Diversity: The ability to integrate awareness and knowledge of individual and cultural differences in the conduct of professional roles (e.g., research, services, and other professional activities).

SLO 6. Professional values and attitudes: Engage in self-reflection regarding one's personal and professional functioning and engage in activities to maintain and improve performance, well-being, and professional effectiveness.

SLO 6. Professional values and attitudes: Engage in self-reflection regarding one's personal and professional functioning and engage in activities to maintain and improve performance, well-being, and professional effectiveness.

## PROGRAM

Clinical Psychology (PHD-CPSY)

## STUDENT LEARNING OUTCOMES

SLO 7. Communication and interpersonal skills: Develop and maintain effective relationships with a wide range of individuals through oral, written and nonverbal means in an accurate and effective manner that is sensitive to a range of audiences.

SLO 7. Communication and interpersonal skills: Develop and maintain effective relationships with a wide range of individuals through oral, written and nonverbal means in an accurate and effective manner that is sensitive to a range of audiences.

SLO 8. Assessment: Select, apply and interpret appropriate and evidenced-based assessment tools and methods to measure and gather relevant data using multiple sources to gain an understanding of human behavior within its context (e.g., family, social, soc

SLO 8. Assessment: Select, apply and interpret appropriate and evidenced-based assessment tools and methods to measure and gather relevant data using multiple sources to gain an understanding of human behavior within its context (e.g., family, social, soc

SLO 9. Intervention: Implement evidence-based interventions informed by the current scientific literature, assessment findings, diversity characteristics, and contextual variables by modifying and adapting evidence-based approaches, intervention goals and

SLO 9. Intervention: Implement evidence-based interventions informed by the current scientific literature, assessment findings, diversity characteristics, and contextual variables by modifying and adapting evidence-based approaches, intervention goals and

SLO5. Professional values and attitudes: Respond and behave professionally and ethically in ways that reflect the values and attitudes of psychology, including integrity, deportment, behavior, professional identity, accountability, lifelong learning, and

**PROGRAM****STUDENT LEARNING OUTCOMES**

Clinical Psychology (PHD-CPSY)

SLO5. Professional values and attitudes: Respond and behave professionally and ethically in ways that reflect the values and attitudes of psychology, including integrity, deportment, behavior, professional identity, accountability, lifelong learning, and

Computer Science Engineering (MS-CSE)

Advance knowledge in selected area of concentration.

Apply fundamental knowledge of ethics in research.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate advanced knowledge in one specialized area.

Demonstrate master's-level competence in written and verbal communication

Design, conduct, and interpret their own research.

**PROGRAM**

Computer Science Engineering (MS-CSE)

**STUDENT LEARNING OUTCOMES**

Interpret and critique scientific literature.

Computer Science Engineering (PHD-CSE)

Advance knowledge in selected area of concentration.

Apply fundamental knowledge of ethics in research.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate advanced knowledge in one specialized area.

Demonstrate doctoral-level competence in written and verbal communication.

Design, conduct, and interpret their own research.



**PROGRAM**

Computer Science Engineering (PHD-CSE)

**STUDENT LEARNING OUTCOMES**

Develop ancillary skills, where necessary, to obtain positions outside scientific research.

Formulate hypothesis based on current concepts in the field.

Interpret and critique scientific literature.

Dietetic Internship (BCRT-CD)

Analyze quality, financial and productivity data for use in planning.

Analyze risk in nutrition and dietetics practice.

Apply current nutrition informatics to develop, store, retrieve and disseminate information and data.

Apply evidence-based guidelines, systematic reviews and scientific literature.

**PROGRAM**

Dietetic Internship (BCRT-CD)

**STUDENT LEARNING OUTCOMES**

Apply leadership skills to achieve desired outcomes.

Assign patient care activities to NDTRs and/or support personnel as appropriate.

Conduct clinical and customer service quality management activities.

Conduct feasibility studies for products, programs or services with consideration of costs and benefits.

Conduct nutrition focused physical assessment.

Conduct projects using appropriate research methods, ethical procedures and data analysis.

Coordinate procurement, production, distribution and service of goods and services, demonstrating and promoting responsible use of resources.

**PROGRAM**

Dietetic Internship (BCRT-CD)

**STUDENT LEARNING OUTCOMES**

Deliver respectful, science-based answers to client questions concerning emerging trends.

Demonstrate active participation, teamwork and contributions in group settings.

Demonstrate advocacy on local, state or national legislative and regulatory issues or policies impacting the nutrition and dietetics profession.

Demonstrate effective communications skills for clinical and customer services in a variety of formats and settings.

Demonstrate negotiation skills.

Demonstrate professional attributes in all areas of practice.

Demonstrate professional writing skills in preparing professional communications.

## PROGRAM

Dietetic Internship (BCRT-CD)

## STUDENT LEARNING OUTCOMES

Design, implement and evaluate presentations to a target audience.

Develop a plan to provide or develop a product, program or service that includes a budget, staffing needs, equipment and supplies.

Develop and deliver products, programs or services that promote consumer health, wellness and lifestyle management.

Develop and evaluate recipes, formulas and menus for acceptability and affordability that accommodate the cultural diversity and health needs of various populations, groups and individuals.

Develop nutrition education materials that are culturally and age appropriate and designed for the educational level of the audience.

Evaluate emerging research for application in nutrition and dietetics practice.

Explain the process for coding and billing for nutrition and dietetics services to obtain reimbursement from public or private payers, fee-for-service and value-based payment systems.

**PROGRAM**

Dietetic Internship (BCRT-CD)

**STUDENT LEARNING OUTCOMES**

Function as a member of interprofessional teams.

Incorporate critical-thinking skills in overall practice.

Justify programs, products, services and care using appropriate evidence or data.

Participate in management of human resources.

Participate in professional and community organizations.

Perform management functions related to safety, security and sanitation that affect employees, customers, patients, facilities and food.

Perform self-assessment and develop goals for self-improvement throughout the program.

## PROGRAM

Dietetic Internship (BCRT-CD)

## STUDENT LEARNING OUTCOMES

Perform the Nutrition Care Process and use standardized nutrition language for individuals, groups and populations of differing ages and health status, in a variety of settings.

Practice and/or role play mentoring and precepting others.

Practice in compliance with current federal regulations and state statutes and rules, as applicable and in accordance with accreditation standards and the Scope of Nutrition and Dietetics Practice and Code of Ethics for the Profession of Nutrition and Dietetics.

Prepare a plan for professional development according to Commission on Dietetic Registration guidelines.

Propose and use procedures as appropriate to the practice setting to promote sustainability, reduce waste and protect the environment.

Refer clients and patients to other professionals and services when needs are beyond individual scope of practice.

Select indicators of program quality and/or customer service and measure achievement of objectives.

**PROGRAM****STUDENT LEARNING OUTCOMES**

Dietetic Internship (BCRT-CD)

Show cultural competence/sensitivity in interactions with clients, colleagues and staff.

Use effective education and counseling skills to facilitate behavior change.

Electrical Engineering (MS-ECE)

Advance knowledge in selected area of concentration.

Apply fundamental knowledge of ethics in research.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate advanced knowledge in one specialized area.

Demonstrate master's-level competence in written and verbal communication

**PROGRAM****STUDENT LEARNING OUTCOMES**

Electrical Engineering (MS-ECE)

Design, conduct, and interpret their own research.

Interpret and critique scientific literature.

Electrical Engineering (PHD-ECE)

Advance knowledge in selected area of concentration.

Apply fundamental knowledge of ethics in research.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate advanced knowledge in one specialized area.

Demonstrate doctoral-level competence in written and verbal communication.



**PROGRAM****STUDENT LEARNING OUTCOMES**

Electrical Engineering (PHD-ECE)

Design, conduct, and interpret their own research.

Develop ancillary skills, where necessary, to obtain positions outside scientific research.

Formulate hypothesis based on current concepts in the field.

Interpret and critique scientific literature.

Environmental Sci Enginrng (PHD-ESE)

Advance knowledge in selected area of concentration.

Apply fundamental knowledge of ethics in research.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

**PROGRAM****STUDENT LEARNING OUTCOMES**

Environmental Sci Enginrng (PHD-ESE)

Demonstrate advanced knowledge in one specialized area.

Demonstrate doctoral-level competence in written and verbal communication.

Design, conduct, and interpret their own research.

Develop ancillary skills, where necessary, to obtain positions outside scientific research.

Formulate hypothesis based on current concepts in the field.

Interpret and critique scientific literature.

Food Systems Society (MS-FSS)

Program Learning Objective 1: Explain concepts, theories, and processes of social justice and social change in food systems and society.

**PROGRAM**

Food Systems Society (MS-FSS)

**STUDENT LEARNING OUTCOMES**

Program Learning Objective 1: Explain concepts, theories, and processes of social justice and social change in food systems and society.

Program Learning Objective 2: Analyze theory and evidence to address social problems in food systems and society.

Program Learning Objective 3: Apply critical thinking, communication, and collaboration skills to address social problems in food systems and society.

Program Learning Objective 3: Apply critical thinking, communication, and collaboration skills to address social problems in food systems and society.

Program Learning Objective 3: Apply critical thinking, communication, and collaboration skills to address social problems in food systems and society.

Program Learning Objective 3: Apply critical thinking, communication, and collaboration skills to address social problems in food systems and society.

Program Learning Objective 3: Apply critical thinking, communication, and collaboration skills to address social problems in food systems and society.

**PROGRAM**

Health Clinical Informatics (BCRT-HCIN)

**STUDENT LEARNING OUTCOMES**

Adhere to the professional and legal conduct standards of the field of health and clinical informatics.

Apply selected informatics methods and tools related to personal health, health care, public health, and biomedical research in an industrial workplace.

Apply selected informatics methods and tools related to personal health, health care, public health, and biomedical research in an industrial workplace.

Display effective teamwork and written presentation skills.

Display effective teamwork and written presentation skills.

Display effective teamwork and written presentation skills.

Display familiarity with the use of information technology tools .

**PROGRAM****STUDENT LEARNING OUTCOMES**

Health Clinical Informatics (BCRT-HCIN)

Exhibit knowledge in the biological, health and clinical information systems that are related to the field of biomedical informatics.

Exhibit knowledge in the biological, health and clinical information systems that are related to the field of biomedical informatics.

Exhibit knowledge in the biological, health and clinical information systems that are related to the field of biomedical informatics.

Identify differences in organizations and personal behaviors that affect the diffusion of informatics technology.

Identify differences in organizations and personal behaviors that affect the diffusion of informatics technology.

Health Clinical Informatics (MS-HCIN)

Apply fundamental knowledge of ethics and implement solutions that assure confidentiality, security and integrity while maximizing the availability of data, information, and knowledge.

Apply fundamental knowledge of ethics and implement solutions that assure confidentiality, security and integrity while maximizing the availability of data, information, and knowledge.

## PROGRAM

Health Clinical Informatics (MS-HCIN)

## STUDENT LEARNING OUTCOMES

Apply fundamental knowledge of ethics and implement solutions that assure confidentiality, security and integrity while maximizing the availability of data, information, and knowledge.

Apply knowledge of health and clinical informatics and related disciplines, to solve problems in research, clinical and/or educational settings.

Apply knowledge of health and clinical informatics and related disciplines, to solve problems in research, clinical and/or educational settings.

Apply knowledge of health and clinical informatics and related disciplines, to solve problems in research, clinical and/or educational settings.

Apply knowledge of health and clinical informatics and related disciplines, to solve problems in research, clinical and/or educational settings.

Apply knowledge of health and clinical informatics and related disciplines, to solve problems in research, clinical and/or educational settings.

Apply knowledge of health and clinical informatics and related disciplines, to solve problems in research, clinical and/or educational settings.

**PROGRAM**

Health Clinical Informatics (MS-HCIN)

**STUDENT LEARNING OUTCOMES**

Communicate professionally, including during interactions with others, and while giving and receiving feedback.

Demonstrate and promote informatics solutions that help to ensure patient safety within relevant clinical settings

Effectively communicate in written and verbal form to both peers and non-experts.

Effectively communicate in written and verbal form to both peers and non-experts.

Effectively communicate in written and verbal form to both peers and non-experts.

Engage in lifelong learning through: finding, interpreting and critically appraising professional literature in order to stay informed of advances in their chosen field; and connecting with the larger professional community through participating in conferences

Function as a productive member of a multidisciplinary collaborative team of biological or other scientists, informatics, information technology, clinical, administrative, and other experts.

## PROGRAM

Health Clinical Informatics (MS-HCIN)

## STUDENT LEARNING OUTCOMES

Given a problem, formulate a plan, critically compare options, make timely decisions or recommendations, identify, and improve outcomes in light of evolving evidence.

Given a problem, formulate a plan, critically compare options, make timely decisions or recommendations, identify, and improve outcomes in light of evolving evidence.

Given a problem, formulate a plan, critically compare options, make timely decisions or recommendations, identify, and improve outcomes in light of evolving evidence.

Given a problem, formulate a plan, critically compare options, make timely decisions or recommendations, identify, and improve outcomes in light of evolving evidence.

Given a problem, formulate a plan, critically compare options, make timely decisions or recommendations, identify, and improve outcomes in light of evolving evidence.

Given a problem, formulate a plan, critically compare options, make timely decisions or recommendations, identify, and improve outcomes in light of evolving evidence.

Identify and apply appropriate research and methods to analyze, contextualize, interpret results, and evaluate their internal and external validity.



**PROGRAM****STUDENT LEARNING OUTCOMES**

Health Clinical Informatics (MS-HCIN)

Integrate the culture and diversity of a population when carrying out research and/or professional practice in informatics.

Solve complex health and health information problems by balancing constraints (economic, regulatory) while integrating the priorities of different stakeholders (including health care professionals, researchers, and patients).

Health Clinical Informatics (PHD-HCIN)

Apply a broad knowledge of health and clinical informatics, and related disciplines, to solve problems in research, clinical and educational settings.

Apply a broad knowledge of health and clinical informatics, and related disciplines, to solve problems in research, clinical and educational settings.

Apply a broad knowledge of health and clinical informatics, and related disciplines, to solve problems in research, clinical and educational settings.

Apply a broad knowledge of health and clinical informatics, and related disciplines, to solve problems in research, clinical and educational settings.

Apply a broad knowledge of health and clinical informatics, and related disciplines, to solve problems in research, clinical and educational settings.

## PROGRAM

Health Clinical Informatics (PHD-HCIN)

## STUDENT LEARNING OUTCOMES

Apply a broad knowledge of health and clinical informatics, and related disciplines, to solve problems in research, clinical and educational settings.

Apply fundamental knowledge of ethics in research and implement solutions that assure confidentiality, security and integrity while maximizing the availability of data, information, and knowledge.

Apply fundamental knowledge of ethics in research and implement solutions that assure confidentiality, security and integrity while maximizing the availability of data, information, and knowledge.

Apply fundamental knowledge of ethics in research and implement solutions that assure confidentiality, security and integrity while maximizing the availability of data, information, and knowledge.

Apply fundamental knowledge of ethics in research and implement solutions that assure confidentiality, security and integrity while maximizing the availability of data, information, and knowledge.

Apply fundamental knowledge of ethics in research and implement solutions that assure confidentiality, security and integrity while maximizing the availability of data, information, and knowledge.

Apply fundamental knowledge of ethics in research and implement solutions that assure confidentiality, security and integrity while maximizing the availability of data, information, and knowledge.

## PROGRAM

Health Clinical Informatics (PHD-HCIN)

## STUDENT LEARNING OUTCOMES

Apply fundamental knowledge of ethics in research and implement solutions that assure confidentiality, security and integrity while maximizing the availability of data, information, and knowledge.

Appraise applicable informatics concepts, methods, and tools to solve challenging health informatics problems in their focus area.

Appraise applicable informatics concepts, methods, and tools to solve challenging health informatics problems in their focus area.

Appraise applicable informatics concepts, methods, and tools to solve challenging health informatics problems in their focus area.

Appraise applicable informatics concepts, methods, and tools to solve challenging health informatics problems in their focus area.

Appraise applicable informatics concepts, methods, and tools to solve challenging health informatics problems in their focus area.

Communicate professionally, including during interactions with others, and while giving and receiving feedback.

**PROGRAM**

Health Clinical Informatics (PHD-HCIN)

**STUDENT LEARNING OUTCOMES**

Demonstrate and promote informatics solutions that help to ensure patient safety within relevant clinical settings.

Demonstrate and promote informatics solutions that help to ensure patient safety within relevant clinical settings.

Demonstrate and promote informatics solutions that help to ensure patient safety within relevant clinical settings.

Demonstrate and promote informatics solutions that help to ensure patient safety within relevant clinical settings.

Demonstrate and promote informatics solutions that help to ensure patient safety within relevant clinical settings.

Effectively communicate and disseminate scientific research in written and verbal form to both peers and non-experts.

Effectively communicate and disseminate scientific research in written and verbal form to both peers and non-experts.

## PROGRAM

Health Clinical Informatics (PHD-HCIN)

## STUDENT LEARNING OUTCOMES

Effectively communicate and disseminate scientific research in written and verbal form to both peers and non-experts.

Effectively communicate and disseminate scientific research in written and verbal form to both peers and non-experts.

Effectively communicate and disseminate scientific research in written and verbal form to both peers and non-experts.

Engage in lifelong learning through: finding, interpreting and critically appraising scientific literature in order to fill knowledge gaps and stay informed of scientific advances; synthesizing and applying new knowledge to their own research; and connect

Function as a productive member of a multidisciplinary collaborative team of informatics, information technology, clinical, administrative, and other experts.

Function as a productive member of a multidisciplinary collaborative team of informatics, information technology, clinical, administrative, and other experts.

Function as a productive member of a multidisciplinary collaborative team of informatics, information technology, clinical, administrative, and other experts.

**PROGRAM**

Health Clinical Informatics (PHD-HCIN)

**STUDENT LEARNING OUTCOMES**

Have experience and training utilizing modern frameworks for rapid prototyping, and how to extract information from a wide variety of databases, as relevant.

Have experience and training utilizing modern frameworks for rapid prototyping, and how to extract information from a wide variety of databases, as relevant.

Have experience and training utilizing modern frameworks for rapid prototyping, and how to extract information from a wide variety of databases, as relevant.

Have experience and training utilizing modern frameworks for rapid prototyping, and how to extract information from a wide variety of databases, as relevant.

Have experience and training utilizing modern frameworks for rapid prototyping, and how to extract information from a wide variety of databases, as relevant.

Identify and define problems, critically compare options, make timely decisions or recommendations, identify uncertainties, and use findings to improve outcomes in light of evolving evidence.

Identify and define problems, critically compare options, make timely decisions or recommendations, identify uncertainties, and use findings to improve outcomes in light of evolving evidence.

## PROGRAM

Health Clinical Informatics (PHD-HCIN)

## STUDENT LEARNING OUTCOMES

Identify and define problems, critically compare options, make timely decisions or recommendations, identify uncertainties, and use findings to improve outcomes in light of evolving evidence.

Identify and define problems, critically compare options, make timely decisions or recommendations, identify uncertainties, and use findings to improve outcomes in light of evolving evidence.

Identify and define problems, critically compare options, make timely decisions or recommendations, identify uncertainties, and use findings to improve outcomes in light of evolving evidence.

Identify and define problems, critically compare options, make timely decisions or recommendations, identify uncertainties, and use findings to improve outcomes in light of evolving evidence.

Identify gaps in scientific knowledge; formulate a research question; design a research study; employ and apply appropriate methods or develop new methods as necessary; analyze, contextualize, and interpret results; and evaluate the internal and external

Identify gaps in scientific knowledge; formulate a research question; design a research study; employ and apply appropriate methods or develop new methods as necessary; analyze, contextualize, and interpret results; and evaluate the internal and external

Identify gaps in scientific knowledge; formulate a research question; design a research study; employ and apply appropriate methods or develop new methods as necessary; analyze, contextualize, and interpret results; and evaluate the internal and external

## PROGRAM

Health Clinical Informatics (PHD-HCIN)

## STUDENT LEARNING OUTCOMES

Identify gaps in scientific knowledge; formulate a research question; design a research study; employ and apply appropriate methods or develop new methods as necessary; analyze, contextualize, and interpret results; and evaluate the internal and external

Identify gaps in scientific knowledge; formulate a research question; design a research study; employ and apply appropriate methods or develop new methods as necessary; analyze, contextualize, and interpret results; and evaluate the internal and external

Integrate the culture and diversity of a population when developing research ideas, conducting research, evaluating implementation, and/or interpreting research findings.

Solve complex health and health information problems by applying the principles of team science to the scope of practice and roles of different stakeholders (including health care professionals, researchers, and patients).

Solve complex health and health information problems by applying the principles of team science to the scope of practice and roles of different stakeholders (including health care professionals, researchers, and patients).

Solve complex health and health information problems by applying the principles of team science to the scope of practice and roles of different stakeholders (including health care professionals, researchers, and patients).

Solve complex health and health information problems by applying the principles of team science to the scope of practice and roles of different stakeholders (including health care professionals, researchers, and patients).



## PROGRAM

Health Clinical Informatics (PHD-HCIN)

Healthcare Management (BCRT-HCMN)

## STUDENT LEARNING OUTCOMES

Solve complex health and health information problems by applying the principles of team science to the scope of practice and roles of different stakeholders (including health care professionals, researchers, and patients).

Analyze complex organizations using frameworks.

Assess how those stakeholders operate in a mutually influencing system.

Demonstrate awareness of differing perspectives of others.

Demonstrate capacity for reflective practice.

Demonstrate selection and application of emotional self-regulation techniques in professional settings.

Describe specific and relevant stakeholders in the healthcare system and describe their stakes.

## PROGRAM

Healthcare Management (BCRT-HCMN)

## STUDENT LEARNING OUTCOMES

Predict problems with consideration of uncertainties and risks.

Healthcare Management (MBA-HCMN)

Analyze the potential short- and long-term implications (intended and unintended) that healthcare policy, finance, and operations decisions have on providing value from multiple stakeholders' (especially patients') points of view.

Assess your emotions, strengths, weaknesses, drivers, values and goals and analyze how they affect others.

Craft meaningful and actionable problem statements with strong consideration towards diverse stakeholders.

Demonstrate a thorough consideration of context, purpose and audience.

Describe complex relationships from multiple perspectives.

Describe relevant and specific stakeholders in the healthcare system, articulate their stakes, and illustrate how those stakeholders operate in a mutually influencing system.

## PROGRAM

Healthcare Management (MBA-HCMN)

## STUDENT LEARNING OUTCOMES

Evaluate an organizational dilemma through an ethical framework.

Identify strengths and perspectives of others to build and strengthen relationships.

Present a message that is clear, concise and insightful.

Present complex information with relevant justification and analysis.

Systematically gather and methodically analyze primary and secondary data most relevant to the situation.

Thoughtfully design and rigorously evaluate potential solutions.

Translate and apply their understanding of the complex healthcare system to address specific healthcare organizational, business, and quality issues faced by stakeholders in the healthcare system.

**PROGRAM**

Healthcare Management (MS-HCMN)

**STUDENT LEARNING OUTCOMES**

Analyze complex organizations using frameworks.

Analyze the potential short- and long-term implications (intended and unintended) of healthcare policy and operations decisions.

Assess how those stakeholders operate in a mutually influencing system.

Create a message that is clear and concise.

Critically evaluate qualitative and quantitative information using decision-making frameworks and tools.

Demonstrate awareness of differing perspectives of others.

Demonstrate capacity for reflective practice.

**PROGRAM**

Healthcare Management (MS-HCMN)

**STUDENT LEARNING OUTCOMES**

Demonstrate selection and application of emotional self-regulation techniques in professional settings.

Describe specific and relevant stakeholders in the healthcare system and describe their stakes.

Evaluate an organizational dilemma through an ethical framework.

Make decisions and evidence-based recommendations that improve outcomes.

Predict problems with consideration of uncertainties and risks.

Present complex information with relevant justification and analysis.

Present information appropriate to the context, purpose, and audience.

## PROGRAM

Hlth Sci Tech Entrepreneurship (BCRT-HSTE)

## STUDENT LEARNING OUTCOMES

1.0 Generate a high quality business plan for a new technology-based venture that describes the value proposition, customer segments and access channels; analyzes competition and the market; describes intellectual property protection, forecasts revenue an

1.0 Generate a high quality business plan for a new technology-based venture that describes the value proposition, customer segments and access channels; analyzes competition and the market; describes intellectual property protection, forecasts revenue an

1.0 Generate a high quality business plan for a new technology-based venture that describes the value proposition, customer segments and access channels; analyzes competition and the market; describes intellectual property protection, forecasts revenue an

1.0 Generate a high quality business plan for a new technology-based venture that describes the value proposition, customer segments and access channels; analyzes competition and the market; describes intellectual property protection, forecasts revenue an

1.0 Generate a high quality business plan for a new technology-based venture that describes the value proposition, customer segments and access channels; analyzes competition and the market; describes intellectual property protection, forecasts revenue an

2.0 Have had a real experience commercializing a medical invention

3.0 Take advantage of a network of technology and business entrepreneurial contacts.

**PROGRAM**

Hlth Sci Tech Entrepreneurship (BCRT-HSTE)

**STUDENT LEARNING OUTCOMES**

3.0 Take advantage of a network of technology and business entrepreneurial contacts.

3.0 Take advantage of a network of technology and business entrepreneurial contacts.

4.0 Explain the role and significance of teams in building successful technology ventures.

4.0 Explain the role and significance of teams in building successful technology ventures.

4.0 Explain the role and significance of teams in building successful technology ventures.

4.0 Explain the role and significance of teams in building successful technology ventures.

5.0 Identify critical components of utilizing external resources, including board of directors, professionals and consultants.

## PROGRAM

Hlth Sci Tech Entrepreneurship (BCRT-HSTE)

## STUDENT LEARNING OUTCOMES

6.0 Examine business opportunities based on criteria used by angel investors and venture capitalists.

6.0 Examine business opportunities based on criteria used by angel investors and venture capitalists.

7.0 Access outstanding research scientists with high-technology needs for commercialization

7.0 Access outstanding research scientists with high-technology needs for commercialization

Human Investigations Prgm (BCRT-HIP)

Appraise the role of community engagement as a strategy for identifying community health issues, translating health research to communities and reducing health disparities

Appraise the role of community engagement as a strategy for identifying community health issues, translating health research to communities and reducing health disparities

Appraise the role of community engagement as a strategy for identifying community health issues, translating health research to communities and reducing health disparities



**PROGRAM**

Human Investigations Prgm (BCRT-HIP)

**STUDENT LEARNING OUTCOMES**

Communicate clinical and translational research findings to different groups of individuals, including colleagues, students, the lay public, and the media.

Communicate clinical and translational research findings to different groups of individuals, including colleagues, students, the lay public, and the media.

Communicate clinical and translational research findings to different groups of individuals, including colleagues, students, the lay public, and the media.

Communicate clinical and translational research findings to different groups of individuals, including colleagues, students, the lay public, and the media.

Communicate clinical and translational research findings to different groups of individuals, including colleagues, students, the lay public, and the media.

Describe the basic principles and practical importance of random variation, systematic error, sampling error, measurement error, hypothesis testing, type I and type II errors, and confidence limits.

Describe the basic principles and practical importance of random variation, systematic error, sampling error, measurement error, hypothesis testing, type I and type II errors, and confidence limits.

## PROGRAM

Human Investigations Prgm (BCRT-HIP)

## STUDENT LEARNING OUTCOMES

Describe the basic principles and practical importance of random variation, systematic error, sampling error, measurement error, hypothesis testing, type I and type II errors, and confidence limits.

Describe the basic principles and practical importance of random variation, systematic error, sampling error, measurement error, hypothesis testing, type I and type II errors, and confidence limits.

Describe the basic principles and practical importance of random variation, systematic error, sampling error, measurement error, hypothesis testing, type I and type II errors, and confidence limits.

Describe trends and best practices in informatics for the organization of biomedical and health information and research data.

Evaluate the reliability and validity of measures, threats to study validity (bias).

Evaluate the reliability and validity of measures, threats to study validity (bias).

Evaluate the reliability and validity of measures, threats to study validity (bias).

**PROGRAM**

Human Investigations Prgm (BCRT-HIP)

**STUDENT LEARNING OUTCOMES**

Evaluate the reliability and validity of measures, threats to study validity (bias).

Evaluate the reliability and validity of measures, threats to study validity (bias).

Generate a hypothesis and specific aims for a clinical or translational research study.

Generate a hypothesis and specific aims for a clinical or translational research study.

Generate a hypothesis and specific aims for a clinical or translational research study.

Generate a hypothesis and specific aims for a clinical or translational research study.

Identify appropriate study methods (study design) for a research question as to feasibility, efficiency, and bias-free inference.

## PROGRAM

Human Investigations Prgm (BCRT-HIP)

## STUDENT LEARNING OUTCOMES

Identify appropriate study methods (study design) for a research question as to feasibility, efficiency, and bias-free inference.

Identify appropriate study methods (study design) for a research question as to feasibility, efficiency, and bias-free inference.

Identify appropriate study methods (study design) for a research question as to feasibility, efficiency, and bias-free inference.

Identify the fundamental principles of the protection of human subjects and essential elements of voluntary informed consent; minimize risks to human subjects; and protect vulnerable populations.

Identify the fundamental principles of the protection of human subjects and essential elements of voluntary informed consent; minimize risks to human subjects; and protect vulnerable populations.

Identify the fundamental principles of the protection of human subjects and essential elements of voluntary informed consent; minimize risks to human subjects; and protect vulnerable populations.

Identify the fundamental principles of the protection of human subjects and essential elements of voluntary informed consent; minimize risks to human subjects; and protect vulnerable populations.

**PROGRAM**

Human Investigations Prgm (BCRT-HIP)

**STUDENT LEARNING OUTCOMES**

Identify, interpret, and critique the state of knowledge regarding a research question.

Identify, interpret, and critique the state of knowledge regarding a research question.

Identify, interpret, and critique the state of knowledge regarding a research question.

Identify, interpret, and critique the state of knowledge regarding a research question.

Identify, interpret, and critique the state of knowledge regarding a research question.

Incorporate adult learning principles and mentoring strategies into interactions with beginning scientists and scholars in order to engage them in clinical and translational research.

Incorporate adult learning principles and mentoring strategies into interactions with beginning scientists and scholars in order to engage them in clinical and translational research.

## PROGRAM

Human Investigations Prgm (BCRT-HIP)

## STUDENT LEARNING OUTCOMES

Incorporate adult learning principles and mentoring strategies into interactions with beginning scientists and scholars in order to engage them in clinical and translational research.

Manage a research project across its fiscal, personnel, regulatory compliance and problem solving requirements.

Manage a research project across its fiscal, personnel, regulatory compliance and problem solving requirements.

Manage a research project across its fiscal, personnel, regulatory compliance and problem solving requirements.

Propose an appropriate study design and protocol for a clinical and translational research study.

Propose an appropriate study design and protocol for a clinical and translational research study.

Propose an appropriate study design and protocol for a clinical and translational research study.

**PROGRAM**

Human Investigations Prgm (BCRT-HIP)

**STUDENT LEARNING OUTCOMES**

Propose an appropriate study design and protocol for a clinical and translational research study.

Propose an appropriate study design and protocol for a clinical and translational research study.

Recognize the principles of building and managing an interdisciplinary/ intradisciplinary/ multidisciplinary team that matches the objectives of the research problem.

Recognize the principles of building and managing an interdisciplinary/ intradisciplinary/ multidisciplinary team that matches the objectives of the research problem.

Recognize the principles of building and managing an interdisciplinary/ intradisciplinary/ multidisciplinary team that matches the objectives of the research problem.

Recognize the relevance of demographic, geographic, and ethnographic features within communities and populations when designing a clinical study.

Recognize the relevance of demographic, geographic, and ethnographic features within communities and populations when designing a clinical study.

## PROGRAM

Human Investigations Prgm (BCRT-HIP)

## STUDENT LEARNING OUTCOMES

Recognize the relevance of demographic, geographic, and ethnographic features within communities and populations when designing a clinical study.

Recognize the relevance of demographic, geographic, and ethnographic features within communities and populations when designing a clinical study.

Recognize the relevance of demographic, geographic, and ethnographic features within communities and populations when designing a clinical study.

Human Investigations Prgm (MCR-HIP)

Appraise the role of community engagement as a strategy for identifying community health issues, translating health research to communities and reducing health disparities

Appraise the role of community engagement as a strategy for identifying community health issues, translating health research to communities and reducing health disparities

Appraise the role of community engagement as a strategy for identifying community health issues, translating health research to communities and reducing health disparities

Appraise the role of community engagement as a strategy for identifying community health issues, translating health research to communities and reducing health disparities



## PROGRAM

Human Investigations Prgm (MCR-HIP)

## STUDENT LEARNING OUTCOMES

Communicate clinical and translational research findings to different groups of individuals, including colleagues, students, the lay public, and the media

Communicate clinical and translational research findings to different groups of individuals, including colleagues, students, the lay public, and the media

Communicate clinical and translational research findings to different groups of individuals, including colleagues, students, the lay public, and the media

Communicate clinical and translational research findings to different groups of individuals, including colleagues, students, the lay public, and the media

Communicate clinical and translational research findings to different groups of individuals, including colleagues, students, the lay public, and the media

Communicate clinical and translational research findings to different groups of individuals, including colleagues, students, the lay public, and the media

Describe the basic principles and practical importance of random variation, systematic error, sampling error, measurement error, hypothesis testing, type I and type II errors, and confidence limits.

**PROGRAM**

Human Investigations Prgm (MCR-HIP)

**STUDENT LEARNING OUTCOMES**

Describe the basic principles and practical importance of random variation, systematic error, sampling error, measurement error, hypothesis testing, type I and type II errors, and confidence limits.

Describe the basic principles and practical importance of random variation, systematic error, sampling error, measurement error, hypothesis testing, type I and type II errors, and confidence limits.

Describe the basic principles and practical importance of random variation, systematic error, sampling error, measurement error, hypothesis testing, type I and type II errors, and confidence limits.

Describe the basic principles and practical importance of random variation, systematic error, sampling error, measurement error, hypothesis testing, type I and type II errors, and confidence limits.

Describe the basic principles and practical importance of random variation, systematic error, sampling error, measurement error, hypothesis testing, type I and type II errors, and confidence limits.

Describe trends and best practices in informatics for the organization of biomedical and health information and research data.

Evaluate the reliability and validity of measures, threats to study validity (bias).

**PROGRAM**

Human Investigations Prgm (MCR-HIP)

**STUDENT LEARNING OUTCOMES**

Evaluate the reliability and validity of measures, threats to study validity (bias).

Evaluate the reliability and validity of measures, threats to study validity (bias).

Evaluate the reliability and validity of measures, threats to study validity (bias).

Evaluate the reliability and validity of measures, threats to study validity (bias).

Evaluate the reliability and validity of measures, threats to study validity (bias).

Generate a hypothesis and specific aims for a clinical or translational research study.

Generate a hypothesis and specific aims for a clinical or translational research study.

**PROGRAM**

Human Investigations Prgm (MCR-HIP)

**STUDENT LEARNING OUTCOMES**

Generate a hypothesis and specific aims for a clinical or translational research study.

Generate a hypothesis and specific aims for a clinical or translational research study.

Identify appropriate study methods (study design) for a research question as to feasibility, efficiency, and bias-free inference

Identify appropriate study methods (study design) for a research question as to feasibility, efficiency, and bias-free inference

Identify appropriate study methods (study design) for a research question as to feasibility, efficiency, and bias-free inference

Identify appropriate study methods (study design) for a research question as to feasibility, efficiency, and bias-free inference

Identify appropriate study methods (study design) for a research question as to feasibility, efficiency, and bias-free inference

## PROGRAM

Human Investigations Prgm (MCR-HIP)

## STUDENT LEARNING OUTCOMES

Identify appropriate study methods (study design) for a research question as to feasibility, efficiency, and bias-free inference

Identify the fundamental principles of the protection of human subjects and essential elements of voluntary informed consent; minimize risks to human subjects; and protect vulnerable populations.

Identify the fundamental principles of the protection of human subjects and essential elements of voluntary informed consent; minimize risks to human subjects; and protect vulnerable populations.

Identify the fundamental principles of the protection of human subjects and essential elements of voluntary informed consent; minimize risks to human subjects; and protect vulnerable populations.

Identify the fundamental principles of the protection of human subjects and essential elements of voluntary informed consent; minimize risks to human subjects; and protect vulnerable populations.

Identify, interpret, and critique the state of knowledge regarding a research question.

Identify, interpret, and critique the state of knowledge regarding a research question.

**PROGRAM**

Human Investigations Prgm (MCR-HIP)

**STUDENT LEARNING OUTCOMES**

Identify, interpret, and critique the state of knowledge regarding a research question.

Identify, interpret, and critique the state of knowledge regarding a research question.

Identify, interpret, and critique the state of knowledge regarding a research question.

Identify, interpret, and critique the state of knowledge regarding a research question.

Incorporate adult learning principles and mentoring strategies into interactions with beginning scientists and scholars in order to engage them in clinical and translational research.

Incorporate adult learning principles and mentoring strategies into interactions with beginning scientists and scholars in order to engage them in clinical and translational research.

Incorporate adult learning principles and mentoring strategies into interactions with beginning scientists and scholars in order to engage them in clinical and translational research.

**PROGRAM**

Human Investigations Prgm (MCR-HIP)

**STUDENT LEARNING OUTCOMES**

Manage a research project across its fiscal, personnel, regulatory compliance and problem solving requirements.

Manage a research project across its fiscal, personnel, regulatory compliance and problem solving requirements.

Manage a research project across its fiscal, personnel, regulatory compliance and problem solving requirements.

Manage a research project across its fiscal, personnel, regulatory compliance and problem solving requirements.

Propose an appropriate study design and protocol for a clinical and translational research study.

Propose an appropriate study design and protocol for a clinical and translational research study.

Propose an appropriate study design and protocol for a clinical and translational research study.

**PROGRAM**

Human Investigations Prgm (MCR-HIP)

**STUDENT LEARNING OUTCOMES**

Propose an appropriate study design and protocol for a clinical and translational research study.

Propose an appropriate study design and protocol for a clinical and translational research study.

Propose an appropriate study design and protocol for a clinical and translational research study.

Recognize the principles of building and managing an interdisciplinary/ intradisciplinary/ multidisciplinary team that matches the objectives of the research problem.

Recognize the principles of building and managing an interdisciplinary/ intradisciplinary/ multidisciplinary team that matches the objectives of the research problem.

Recognize the principles of building and managing an interdisciplinary/ intradisciplinary/ multidisciplinary team that matches the objectives of the research problem.

Recognize the principles of building and managing an interdisciplinary/ intradisciplinary/ multidisciplinary team that matches the objectives of the research problem.



## PROGRAM

Human Investigations Prgm (MCR-HIP)

## STUDENT LEARNING OUTCOMES

Recognize the relevance of demographic, geographic, and ethnographic features within communities and populations when designing a clinical study.

Recognize the relevance of demographic, geographic, and ethnographic features within communities and populations when designing a clinical study.

Recognize the relevance of demographic, geographic, and ethnographic features within communities and populations when designing a clinical study.

Recognize the relevance of demographic, geographic, and ethnographic features within communities and populations when designing a clinical study.

Recognize the relevance of demographic, geographic, and ethnographic features within communities and populations when designing a clinical study.

Human Nutrition (MS-HNUT)

Apply their advanced knowledge of nutrient metabolism and physiology to explain relationships between nutrient intake, indicators of nutritional status, and health and disease.

Apply their advanced knowledge of nutrient metabolism and physiology to explain relationships between nutrient intake, indicators of nutritional status, and health and disease.

## PROGRAM

Human Nutrition (MS-HNUT)

## STUDENT LEARNING OUTCOMES

Communicate effectively with clients, patients, peers, mentors, and collaborators in a professional and ethical manner that fosters a constructive and collaborative working environmental for all.

Communicate effectively with clients, patients, peers, mentors, and collaborators in a professional and ethical manner that fosters a constructive and collaborative working environmental for all.

Communicate effectively with clients, patients, peers, mentors, and collaborators in a professional and ethical manner that fosters a constructive and collaborative working environmental for all.

Communicate effectively with clients, patients, peers, mentors, and collaborators in a professional and ethical manner that fosters a constructive and collaborative working environmental for all.

Communicate effectively with clients, patients, peers, mentors, and collaborators in a professional and ethical manner that fosters a constructive and collaborative working environmental for all.

Communicate effectively with clients, patients, peers, mentors, and collaborators in a professional and ethical manner that fosters a constructive and collaborative working environmental for all.

Develop a project to answer a nutrition-related question: including problem identification, a review of existing literature, collection of data or conduction of a project, statistical analysis of results and statement of conclusion.

**PROGRAM**

Human Nutrition (MS-HNUT)

**STUDENT LEARNING OUTCOMES**

Develop a project to answer a nutrition-related question: including problem identification, a review of existing literature, collection of data or conduction of a project, statistical analysis of results and statement of conclusion.

Develop a project to answer a nutrition-related question: including problem identification, a review of existing literature, collection of data or conduction of a project, statistical analysis of results and statement of conclusion.

Disseminate research results or other scholarly work about nutrition-related topics to scientists, health care professionals and members of the general public using poster, oral presentation, and written formats.

Perform a thorough review of the nutrition-related scientific literature using library resources, evidence-based guidelines, systematic reviews and other peer-reviewed material and critically analyze this material for scientific merit.

Perform a thorough review of the nutrition-related scientific literature using library resources, evidence-based guidelines, systematic reviews and other peer-reviewed material and critically analyze this material for scientific merit.

Perform a thorough review of the nutrition-related scientific literature using library resources, evidence-based guidelines, systematic reviews and other peer-reviewed material and critically analyze this material for scientific merit.

Perform a thorough review of the nutrition-related scientific literature using library resources, evidence-based guidelines, systematic reviews and other peer-reviewed material and critically analyze this material for scientific merit.

## PROGRAM

Human Nutrition (MS-HNUT)

## STUDENT LEARNING OUTCOMES

Perform a thorough review of the nutrition-related scientific literature using library resources, evidence-based guidelines, systematic reviews and other peer-reviewed material and critically analyze this material for scientific merit.

Perform a thorough review of the nutrition-related scientific literature using library resources, evidence-based guidelines, systematic reviews and other peer-reviewed material and critically analyze this material for scientific merit.

Utilize the Nutrition Physical Examination to identify physical signs and symptoms of nutrition-related disease in patients and communicate these findings to the healthcare team using the Nutrition Care Process.

Utilize the Nutrition Physical Examination to identify physical signs and symptoms of nutrition-related disease in patients and communicate these findings to the healthcare team using the Nutrition Care Process.

Medical Physics (MS-MP)

1. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to explain the components, functionality and design of x-ray systems utilized in imaging and therapeutic devices found in Radiation Medicine or Diagnostic Radiology.

1. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to explain the components, functionality and design of x-ray systems utilized in imaging and therapeutic devices found in Radiation Medicine or Diagnostic Radiology.

1. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to explain the components, functionality and design of x-ray systems utilized in imaging and therapeutic devices found in Radiation Medicine or Diagnostic Radiology.

## PROGRAM

Medical Physics (MS-MP)

## STUDENT LEARNING OUTCOMES

1. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to explain the components, functionality and design of x-ray systems utilized in imaging and therapeutic devices found in Radiation Medicine or Diagnostic Radiology.

2. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to explain the components, functionality and design of a linear accelerator utilized for external beam radiation therapy treatment in Radiation Medicine.

2. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to explain the components, functionality and design of a linear accelerator utilized for external beam radiation therapy treatment in Radiation Medicine.

2. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to explain the components, functionality and design of a linear accelerator utilized for external beam radiation therapy treatment in Radiation Medicine.

2. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to explain the components, functionality and design of a linear accelerator utilized for external beam radiation therapy treatment in Radiation Medicine.

3. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to communicate the risks associated with the use of radiation to members of the general public, patients, and professionals in healthcare.

3. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to communicate the risks associated with the use of radiation to members of the general public, patients, and professionals in healthcare.

## PROGRAM

Medical Physics (MS-MP)

## STUDENT LEARNING OUTCOMES

3. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to communicate the risks associated with the use of radiation to members of the general public, patients, and professionals in healthcare.

3. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to communicate the risks associated with the use of radiation to members of the general public, patients, and professionals in healthcare.

3. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to communicate the risks associated with the use of radiation to members of the general public, patients, and professionals in healthcare.

3. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to communicate the risks associated with the use of radiation to members of the general public, patients, and professionals in healthcare.

3. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to communicate the risks associated with the use of radiation to members of the general public, patients, and professionals in healthcare.

3. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to communicate the risks associated with the use of radiation to members of the general public, patients, and professionals in healthcare.

4. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to apply radiation safety principles in the calculation and design of radiation shielding. This will include communicating with a team of individuals from equipment man

**PROGRAM**

Medical Physics (MS-MP)

**STUDENT LEARNING OUTCOMES**

4. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to apply radiation safety principles in the calculation and design of radiation shielding. This will include communicating with a team of individuals from equipment man

4. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to apply radiation safety principles in the calculation and design of radiation shielding. This will include communicating with a team of individuals from equipment man

4. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to apply radiation safety principles in the calculation and design of radiation shielding. This will include communicating with a team of individuals from equipment man

4. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to apply radiation safety principles in the calculation and design of radiation shielding. This will include communicating with a team of individuals from equipment man

4. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to apply radiation safety principles in the calculation and design of radiation shielding. This will include communicating with a team of individuals from equipment man

5. Upon graduation, students will be prepared to take Part 1 of the American Board of Radiology Initial Certification Exam.

5. Upon graduation, students will be prepared to take Part 1 of the American Board of Radiology Initial Certification Exam.

**PROGRAM**

Medical Physics (MS-MP)

**STUDENT LEARNING OUTCOMES**

6. Students will execute a research project based on in-depth knowledge of scientific literature, experimental design, and statistical tools.

6. Students will execute a research project based on in-depth knowledge of scientific literature, experimental design, and statistical tools.

6. Students will execute a research project based on in-depth knowledge of scientific literature, experimental design, and statistical tools.

6. Students will execute a research project based on in-depth knowledge of scientific literature, experimental design, and statistical tools.

6. Students will execute a research project based on in-depth knowledge of scientific literature, experimental design, and statistical tools.

6. Students will execute a research project based on in-depth knowledge of scientific literature, experimental design, and statistical tools.

7. At the end of the Oregon Medical Physics Program (OMPP), students will be able to explain the biological and chemical pathway for radiation-induced carcinogenesis, including time intervals and all potential outcomes.



**PROGRAM****STUDENT LEARNING OUTCOMES**

Medical Physics (MS-MP)

7. At the end of the Oregon Medical Physics Program (OMPP), students will be able to explain the biological and chemical pathway for radiation-induced carcinogenesis, including time intervals and all potential outcomes.

8. Students will exhibit professional and ethical characteristics in the clinical areas where medical imaging exams and radiation therapy treatments are performed.

8. Students will exhibit professional and ethical characteristics in the clinical areas where medical imaging exams and radiation therapy treatments are performed.

Medical Physics (PHD-MP)

1. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to explain the components, functionality and design of x-ray systems utilized in imaging and therapeutic devices found in Radiation Medicine or Diagnostic Radiology.

1. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to explain the components, functionality and design of x-ray systems utilized in imaging and therapeutic devices found in Radiation Medicine or Diagnostic Radiology.

10. Demonstrate the ability to transfer knowledge through the formal education process (ability to teach in the formal educational setting).

10. Demonstrate the ability to transfer knowledge through the formal education process (ability to teach in the formal educational setting).

## PROGRAM

Medical Physics (PHD-MP)

## STUDENT LEARNING OUTCOMES

2. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to explain the components, functionality and design of a linear accelerator utilized for external beam radiation therapy treatment in Radiation Medicine.

2. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to explain the components, functionality and design of a linear accelerator utilized for external beam radiation therapy treatment in Radiation Medicine.

3. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to communicate the risks associated with the use of radiation to members of the general public, patients, and professionals in healthcare.

3. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to communicate the risks associated with the use of radiation to members of the general public, patients, and professionals in healthcare.

3. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to communicate the risks associated with the use of radiation to members of the general public, patients, and professionals in healthcare.

3. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to communicate the risks associated with the use of radiation to members of the general public, patients, and professionals in healthcare.

4. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to apply radiation safety principles in the calculation and design of radiation shielding. This will include communicating with a team of individuals from equipment man

**PROGRAM**

Medical Physics (PHD-MP)

**STUDENT LEARNING OUTCOMES**

4. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to apply radiation safety principles in the calculation and design of radiation shielding. This will include communicating with a team of individuals from equipment man

4. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to apply radiation safety principles in the calculation and design of radiation shielding. This will include communicating with a team of individuals from equipment man

5. Upon graduation, students will be prepared to take Part 1 of the American Board of Radiology Initial Certification Exam.

6. Students will execute a research project based on in-depth knowledge of scientific literature, experimental design, and statistical tools.

6. Students will execute a research project based on in-depth knowledge of scientific literature, experimental design, and statistical tools.

6. Students will execute a research project based on in-depth knowledge of scientific literature, experimental design, and statistical tools.

7. At the end of the Oregon Medical Physics Program (OMPP), students will be able to explain the biological and chemical pathway for radiation-induced carcinogenesis, including time intervals and all potential outcomes.

## PROGRAM

Medical Physics (PHD-MP)

## STUDENT LEARNING OUTCOMES

8. Students will exhibit professional and ethical characteristics in the clinical areas where medical imaging exams and radiation therapy treatments are performed.

9. Contribute to the application and translation of new Medical Physics knowledge through scholarly inquiry, discovery, and dissemination.

Microbiology (MS-MBIO)

Advance knowledge in selected area of concentration.

Apply fundamental knowledge of ethics in research.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate advanced knowledge in one specialized area.

Demonstrate doctoral-level competence in written and verbal communication.

**PROGRAM****STUDENT LEARNING OUTCOMES**

Microbiology (MS-MBIO)

Design, conduct, and interpret their own research.

Develop ancillary skills, where necessary, to obtain positions outside scientific research.

Formulate hypothesis based on current concepts in the field.

Interpret and critique scientific literature.

Microbiology (PHD-MBIO)

Advance knowledge in selected area of concentration.

Apply fundamental knowledge of ethics in research.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

**PROGRAM****STUDENT LEARNING OUTCOMES**

Microbiology (PHD-MBIO)

Demonstrate advanced knowledge in one specialized area.

Demonstrate doctoral-level competence in written and verbal communication.

Design, conduct, and interpret their own research.

Develop ancillary skills, where necessary, to obtain positions outside scientific research.

Formulate hypothesis based on current concepts in the field.

Interpret and critique scientific literature.

Molecular Medical Genetics (MS-MGEN)

Accurately and professionally communicate results with others verbally and in writing.

**PROGRAM****STUDENT LEARNING OUTCOMES**

Molecular Medical Genetics (MS-MGEN)

Collect and store data in accordance with good lab practices.

Critically evaluate a defined body of knowledge relevant to their field.

Demonstrate analytical skills.

Design and conduct independent, innovative research in accordance with the scientific research method.

Identify significant and original problems that will impact human health.

Molecular Medical Genetics (PHD-MGEN)

Advance knowledge in selected area of concentration.

Apply fundamental knowledge of ethics in research.

**PROGRAM**

Molecular Medical Genetics (PHD-MGEN)

**STUDENT LEARNING OUTCOMES**

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate advanced knowledge in one specialized area.

Demonstrate doctoral-level competence in written and verbal communication.

Design, conduct, and interpret their own research.

Develop ancillary skills, where necessary, to obtain positions outside scientific research.

Formulate hypothesis based on current concepts in the field.

Interpret and critique scientific literature.



**PROGRAM**

Neuroscience (MS-NSC)

**STUDENT LEARNING OUTCOMES**

Advance knowledge in selected area of concentration.

Apply fundamental knowledge of ethics in research.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate advanced knowledge in one specialized area.

Demonstrate master's-level competence in written and verbal communication

Design, conduct, and interpret their own research.

Interpret and critique scientific literature.

**PROGRAM**

Neuroscience (PHD-NSC)

**STUDENT LEARNING OUTCOMES**

Advance knowledge in selected area of concentration.

Apply fundamental knowledge of ethics in research.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

Demonstrate advanced knowledge in one specialized area.

Demonstrate doctoral-level competence in written and verbal communication.

Design, conduct, and interpret their own research.

Develop ancillary skills, where necessary, to obtain positions outside scientific research.

**PROGRAM****STUDENT LEARNING OUTCOMES**

Neuroscience (PHD-NSC)

Formulate hypothesis based on current concepts in the field.

Interpret and critique scientific literature.

Physician Assistant (MPAS-PHAS)

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in Clinical Reasoning. Clinical reasoning is defined as the ability to identify and define problems, critically compare options, make timely decisions

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in Clinical Reasoning. Clinical reasoning is defined as the ability to identify and define problems, critically compare options, make timely decisions

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in Interpersonal & communication skills. Interpersonal and communication skills encompass verbal, nonverbal, and written exchange of information. Physi

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in Interpersonal & communication skills. Interpersonal and communication skills encompass verbal, nonverbal, and written exchange of information. Physi

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in Interpersonal & communication skills. Interpersonal and communication skills encompass verbal, nonverbal, and written exchange of information. Physi

**PROGRAM**

Physician Assistant (MPAS-PHAS)

**STUDENT LEARNING OUTCOMES**

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in lifelong learning. Lifelong learning includes practice-based learning and improvement including the processes through which clinicians engage in cri

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in Medical knowledge: Medical knowledge includes an understanding of the pathophysiology, etiology, risk factors, epidemiology, signs and symptoms, dif

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in Medical knowledge: Medical knowledge includes an understanding of the pathophysiology, etiology, risk factors, epidemiology, signs and symptoms, dif

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in Medical knowledge: Medical knowledge includes an understanding of the pathophysiology, etiology, risk factors, epidemiology, signs and symptoms, dif

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in Medical knowledge: Medical knowledge includes an understanding of the pathophysiology, etiology, risk factors, epidemiology, signs and symptoms, dif

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in Patient care. Patient care includes age appropriate assessment, evaluation, and management. Physician assistants must demonstrate caring and respect

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in Patient care. Patient care includes age appropriate assessment, evaluation, and management. Physician assistants must demonstrate caring and respect

## PROGRAM

Physician Assistant (MPAS-PHAS)

## STUDENT LEARNING OUTCOMES

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in Patient care. Patient care includes age appropriate assessment, evaluation, and management. Physician assistants must demonstrate caring and respect

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in Patient care. Patient care includes age appropriate assessment, evaluation, and management. Physician assistants must demonstrate caring and respect

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in Practice-based learning and improvement. Practice-based learning and improvement includes the processes through which clinicians engage in critical

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in Practice-based learning and improvement. Practice-based learning and improvement includes the processes through which clinicians engage in critical

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in Professionalism. Professionalism is the expression of positive values and ideals as care is delivered. Foremost, it involves prioritizing the interest

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in Professionalism. Professionalism is the expression of positive values and ideals as care is delivered. Foremost, it involves prioritizing the interest

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in Professionalism. Professionalism is the expression of positive values and ideals as care is delivered. Foremost, it involves prioritizing the interest

**PROGRAM****STUDENT LEARNING OUTCOMES**

Physician Assistant (MPAS-PHAS)

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in safety and quality improvement. Safety and Quality Improvement are defined as the ability to identify situations that compromise safety and particip

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in Systems-based practice. Systems-based practice encompasses the societal, organizational, and economic environments in which health care is delivered

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in Systems-based practice. Systems-based practice encompasses the societal, organizational, and economic environments in which health care is delivered

Upon completion of the Physician Assistant program, the graduate will be able to demonstrate competence in teamwork. Teamwork is defined as knowledge of team-based professional skills, roles, and responsibilities to ensure an environment for safe, efficie

Physiology Pharmacology (PHD-PHPH)

Advance knowledge in selected area of concentration.

Apply fundamental knowledge of ethics in research.

Demonstrate a basic knowledge of central concepts in the relevant scientific field.

**PROGRAM****STUDENT LEARNING OUTCOMES**

Physiology Pharmacology (PHD-PHPH)

Demonstrate advanced knowledge in one specialized area.

Demonstrate doctoral-level competence in written and verbal communication.

Design, conduct, and interpret their own research.

Develop ancillary skills, where necessary, to obtain positions outside scientific research.

Formulate hypothesis based on current concepts in the field.

Interpret and critique scientific literature.

Radiation Therapy (BS-RATH)

Demonstrate an understanding of health policy and health systems with specific attention towards billing and compliance, and patient safety issues.

**PROGRAM**

Radiation Therapy (BS-RATH)

**STUDENT LEARNING OUTCOMES**

Recognize side-effects or complications commonly associated with each treatment procedure, and recommend the appropriate patient care, with respect for patient preferences, needs, attitudes, beliefs and values.

Recognize side-effects or complications commonly associated with each treatment procedure, and recommend the appropriate patient care, with respect for patient preferences, needs, attitudes, beliefs and values.

Apply foundational knowledge of Ethics, Physics, Anatomy, Physiology and Oncology in the review and verification of all approved treatment plans, instructions, prescriptions and images, to ensure that the information is consistent and valid before deliver

Apply foundational knowledge of Ethics, Physics, Anatomy, Physiology and Oncology in the review and verification of all approved treatment plans, instructions, prescriptions and images, to ensure that the information is consistent and valid before deliver

Apply foundational knowledge of Ethics, Physics, Anatomy, Physiology and Oncology in the review and verification of all approved treatment plans, instructions, prescriptions and images, to ensure that the information is consistent and valid before deliver

Apply foundational knowledge of Ethics, Physics, Anatomy, Physiology and Oncology in the review and verification of all approved treatment plans, instructions, prescriptions and images, to ensure that the information is consistent and valid before deliver

Apply foundational knowledge of Ethics, Physics, Anatomy, Physiology and Oncology in the review and verification of all approved treatment plans, instructions, prescriptions and images, to ensure that the information is consistent and valid before deliver



## PROGRAM

Radiation Therapy (BS-RATH)

## STUDENT LEARNING OUTCOMES

Apply foundational knowledge of Ethics, Physics, Anatomy, Physiology and Oncology in the review and verification of all approved treatment plans, instructions, prescriptions and images, to ensure that the information is consistent and valid before deliver

Apply radiation safety practices in regards to environmental safety and to safely deliver an approved treatment plan for quality care.

Apply radiation safety practices in regards to environmental safety and to safely deliver an approved treatment plan for quality care.

Demonstrate professionalism as a radiation therapist and the ability to work effectively in an interdisciplinary/ interprofessional team in clinical decision-making and ethical problem-solving

Demonstrate professionalism as a radiation therapist and the ability to work effectively in an interdisciplinary/ interprofessional team in clinical decision-making and ethical problem-solving

Demonstrate the abilities required to foster and work effectively within collaborative, team-based environments

Demonstrate the abilities required to foster and work effectively within collaborative, team-based environments

**PROGRAM**

Radiation Therapy (BS-RATH)

**STUDENT LEARNING OUTCOMES**

Demonstrate the abilities required to foster and work effectively within collaborative, team-based environments

Demonstrate the ability to identify and define problems, critically compare options, make timely decisions or recommendations, identify uncertainties and use findings to improve outcomes in light of evolving evidence

Demonstrate the ability to identify and define problems, critically compare options, make timely decisions or recommendations, identify uncertainties and use findings to improve outcomes in light of evolving evidence

Demonstrate understanding of current evidence-based literature and treatment standards related to organs at risk (OAR), acceptable dose limits and the side effects associated with radiation.

Employ effective oral and written communication skills with colleagues and patients of all ages, backgrounds and beliefs.

Employ effective oral and written communication skills with colleagues and patients of all ages, backgrounds and beliefs.

Interact with diverse patients, families and communities professionally with integrity using appropriate verbal and nonverbal communication.

**PROGRAM**

Radiation Therapy (BS-RATH)

**STUDENT LEARNING OUTCOMES**

Interact with diverse patients, families and communities professionally with integrity using appropriate verbal and nonverbal communication.

Operate ionizing-radiation producing equipment, and recognize any inconsistencies or malfunctions of that equipment.

Understand the value of continuing education and apply research skills towards increasing knowledge and understanding of the current trends in the treatment and cure of cancer.

Understand the value of continuing education and apply research skills towards increasing knowledge and understanding of the current trends in the treatment and cure of cancer.