BMI 542/642 Computer Networks, Spring 2017

Instructor
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Text
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Overview
A continued intensive introduction to computer science, focusing on computer networks, communications protocols, client-server architecture, Internet, and computer security.

Prerequisites
Enrollment in the Biomedical Informatics program.

Grading
The class will require completion of eight homework assignments, two quizzes, a final examination and a term paper/project. The final grade will be determined with an approximate weighting of: homework and labs 25%, quizzes 30%, class participation 5%, final examination 20% and term paper or project 20%.

Class participation is graded each week on a 5 point scale. You are expected to participate in each discussion topic as you would an open discussion in class. Make your points, comment on other's posts, and support your points during the week. You should participate during the week, not just make a statement and never return. Posting earlier in the week is recommended; it allows your points to be central to the discussion during the week.

Late assignments will be penalized at 10% per day.

The final course assignment consists of either a paper or a network programming project with proposals due by week 5. For this project, create a network application related to medical informatics or write a 7-10 page single-spaced paper on computer networking and its ramifications in your area of interest.

For possible examples, consider a Java application to retrieve citations from the National Library of Medicine or a paper on the requirements and impacts of adding wireless access to an existing CPOE system.

Papers are expected to be of publication quality with supporting references.
Copyright Information

Every reasonable effort has been made to protect the copyright requirements of materials used in this course. Class participants are warned not to copy, audio, or videotape in violation of copyright laws. Journal articles will be kept on reserve at the library or online for student access. Copyright law does allow for making one personal copy of each article from the original article. This limit also applies to electronic sources.

To comply with the fair use doctrine of the US copyright law, Sakai course sites close three weeks after grades are posted with the Registrar. Please be sure to download all course material you wish to keep before this time as you will have no further access to your courses.

DMICE Communication Policy

1. If the syllabus directs the student to contact the TA before contacting the instructor, the student should do so. Otherwise, the student should contact the instructor and allow 2 business days (not including weekends) for a response.

2. If the student does not receive a response from the instructor within 2 business days, s/he should contact the TA (if there is one). When contacting the TA s/he should cc the instructor and Diane Doctor at doctord@ohsu.edu.

3. If a student does not receive a response from the TA within 1 business day (not including weekends), s/he should contact Diane Doctor at doctord@ohsu.edu and cc the instructor and the TA.

4. If Diane does not reply within 1 business day (not including weekends), the student should contact Andrea Ilg at ilgan@ohsu.edu.

5. Students having difficulties with Sakai should contact the Sakai Help Desk at sakai@ohsu.edu or at (877) 972-5249. Sakai help is available M-F from 8am to 9 pm and weekends from Noon to 5pm. Do not contact the instructor.

Syllabus Changes and Retention

This syllabus is not to be considered a contract between the student and the School of Medicine. It is recognized that changes may be made as the need arises. Students are responsible for keeping a copy of the course syllabus for their records.

Student Access
OHSU is committed to providing equal access to qualified students who experience a disability in compliance with Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and the ADA Amendments Act (ADA-AA) of 2008. If you have a disability or think you may have a disability (physical, sensory, chronic health, psychological or learning) please contact the Office for Student Access at (503) 494-0082 or studentaccess@ohsu.edu to discuss eligibility for academic accommodations. Information is also available at www.ohsu.edu/student-access. Because accommodations may take time to implement and cannot be applied retroactively, it is important to have this discussion as soon as possible. All information regarding a student’s disability is kept in accordance with relevant state and federal laws.

Academic Honesty

Academic honesty is required in order to pass this course. Students are encouraged to help each other understand the material; however homework assignments, papers, projects and examinations must be the work of the individual student. It is acceptable and even encouraged to discuss general networking issues and computer science concepts; however, there should be no sharing of actual answers for the homework exercises. The Professional Conduct Policy of the Graduate Studies Program is available from on campus at http://www.ohsu.edu/xd/education/schools/school-of-medicine/academic-programs/graduate-studies/loader.cfm?csModule=security/getfile&pageid=2121647 or on the departmental web site.

Commitment to Equity and Inclusion

Oregon Health & Science University is committed to creating and fostering a learning and working environment based on open communication and mutual respect. If you encounter sexual harassment, sexual misconduct, sexual assault, or discrimination based on race, color, religion, age, national origin or ancestry, veteran or military status, sex, marital status, pregnancy or parenting status, sexual orientation, gender identity, disability or any other protected status please contact the Affirmative Action and Equal Opportunity Department at 503-494-5148 or aaeo@ohsu.edu. Inquiries about Title IX compliance or sex/gender discrimination and harassment may be directed to the OHSU Title IX Coordinator at 503-494-0258 or titleix@ohsu.edu

Use of Sakai

This course will have an online component, which can be accessed through Sakai, OHSU’s online course management system. For any technical questions or if you need help logging in, please contact the Sakai Help Desk.

Hours: Sakai Help Desk is available Mon – Fri, 8 am – 9 pm and weekends 12 pm – 5 pm, Pacific Time.
Contact Information:
(Toll-free) 877-972-5249
(Web) http://atech.ohsu.edu/help
Tentative Schedule of Topics and Assignments

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<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Lecture topics</th>
<th>Assignments</th>
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<tbody>
<tr>
<td>1</td>
<td>4/3</td>
<td>Introduction to networking and the internet</td>
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<tr>
<td></td>
<td></td>
<td>Internet structure and protocols</td>
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<td>2</td>
<td>4/10</td>
<td>Application layer</td>
<td>Assignment 1 due</td>
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<tr>
<td>3</td>
<td>4/17</td>
<td>Lab #1 – Programming Quiz #1</td>
<td>Assignment 2 due</td>
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<td>4</td>
<td>4/24</td>
<td>Transport layer</td>
<td>Term paper/project proposal due</td>
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<td>Network layer</td>
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<td>5</td>
<td>5/1</td>
<td>Routing Data link layer</td>
<td>Assignment 3 due</td>
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<td>6</td>
<td>5/8</td>
<td>Multimedia/Wireless</td>
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<td>7</td>
<td>5/15</td>
<td>Lab #2 – Hands-on Routing</td>
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<td>8</td>
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<td>Security</td>
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<td>Network Management Internet Standards</td>
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<td>10</td>
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<td>Lab #3 – Understanding Protocols Network Specifications</td>
<td>Assignment 7 due</td>
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<td>Final</td>
<td>6/14</td>
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<td>Term paper/project due</td>
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