COURSE NUMBER: ISTM 6205

COURSE TITLE: Internet Computing

SEMESTER: Spring 2017

COURSE DESCRIPTION: This course introduces the development of Web applications and the Internet as a modern computing platform. The course provides the student with the opportunity to understand Web technologies including concepts, architectures and development frameworks. This course examines the Internet as a hardware and software architecture for creating business applications. Topics covered include Web servers, Web application servers, Web application development methods, client side (including mobile) and server-side scripting, Web application development techniques, and cloud or grid computing. Many of the course labs are completed on a cloud computing platform using Infrastructure as a Service (IAAS) using Amazon EC2 cloud services.

PREREQUISITES: Programming foundation course.

PROFESSOR: Ross Lumley
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Office: Funger Hall 515

Office Hours: Tuesday 12:30-1:30pm (by appointment), Thursday 3:30-4:20 pm
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LEARNING OBJECTIVES: Upon completing this course, the students will be able to

1. Understand the basic concept, principles and standards of the Internet, the World Wide Web (WWW), and the standard technologies of building a website.
2. Understand the Model-View-Controller (MVC) frameworks for Web applications.
3. Understand the state-of-the-art web application development tools and languages for developing web applications.
4. Understand the use of user interface libraries, templates, and frameworks.
5. Design, develop, and maintain a user-interactive web site with database connection.
6. Know the alternative approaches to controlling the data transfer in Web applications.
7. Assess and manage the challenges underlying the development of stateless web applications.


Additional Required Readings
Assigned readings and tutorials are required assignments. This material WILL be on the exams.

Software
Amazon EC2 Cloud Services, PHP, mySQL, JavaScript, HTML, CSS, Firefox with Firebug (or Chrome)
Text Editor such as Notepad++ (Windows) (NOT Notepad) or Sublime (Mac or Windows) or Text Wrangler (Mac)
Putty (Windows) or Terminal (Mac) for secure shell (ssh) access to your virtual server on Amazon ec2 (after exam 1)

Tutorials from W3Schools.com
T1 - HTML http://www.w3schools.com/html/default.asp
T2 -
CSS http://www.w3schools.com/css/default.asp
T3 - Javascript http://www.w3schools.com/js/default.asp
T4 - PHP http://www.w3schools.com/php/default.asp
T5 - PHP/mySQL http://www.w3schools.com/php/php_mysql_intro.asp
T6 - Ajax http://www.w3schools.com/ajax/default.asp
T7 – jQuery http://www.w3schools.com/jquery/default.asp

Lectures
Lecture notes will be available on Blackboard.

Email
Please include ISTM6205 in the subject line of any email or it’s likely I’ll miss your email. I don’t check email over the weekend.
**GRADING:**

Grades are assigned within the framework that “A” means fully meets requirements of the assignment in an outstanding way, “B” fully meets requirements of the assignment in an average way; “C” failed to meet the requirements of the assignment.

- Student Projects - 2 projects (40%)
- Labs - 10 Labs, 20 points each (20%)
- Exam - 2 Exams, 200 points each (40%)

No extra credit will be available so please do not ask.

**Readings**

Students are expected to complete the reading assignments PRIOR to class.

**Labs**

There will be 10 labs in this course. The labs reinforce each week’s material and will be due one week later. We will walk through each lab in class after a discussion of the week’s material. Students should begin the labs on their own so that questions can be asked in class. Each lab will be due prior to the following week’s class. Late labs will not be graded. The labs will be graded based on completion.

**Exams**

Both exams will be closed-book.

**Missed Classes**

Attendance is expected at every class. If you have an unavoidable conflict, please make arrangements with a classmate to find out what was done in the class you missed. Do not email me and ask if you missed anything. I will reply “Yes, you missed everything.”

**ASSIGNMENTS:**

There will be 2 individual homework assignments. This assignment is designed to reinforce your understanding of the topics covered. The assignments will be hands-on in nature allowing the student to gain an understanding of how web applications are built. Everyone should independently do and turn in his/her own work. The assignment must be submitted electronically on Blackboard. Late assignments will lose 10% per day late. If you are away and cannot attend class you are still required to submit your assignment on time.

Grading is based on meeting the requirements of the assignment and the quality of the solution.

Assignments are to be submitted via Blackboard. Assignments will not be accepted by email.

**ACADEMIC INTEGRITY:**

Every aspect of the George Washington University Code of Academic Integrity will be supported and enforced. Academic dishonesty is defined as cheating of any kind, including misrepresenting one’s own work, taking credit for the work of others without crediting them and without authorization and the fabrication of information. Examples of cheating include:

- Using unauthorized materials, information or study aids in any exercise
- Fabrication or falsification of information
- Plagiarism - intentionally misrepresenting another's work, failure to paraphrase
• Forgery of academic documents
• Facilitating academic dishonesty
George Washington University’s academic integrity code and policies can be found at: http://studentconduct.gwu.edu/code-academic-integrity

UNIVERSITY POLICIES:

Religious Holiday Policy
Students should notify faculty during the first week of the semester of their intention to be absent from class on their day(s) of religious observance. Faculty should extend to these students the courtesy of absence without penalty on such occasions, including permission to make up examinations. Faculty who intend to observe a religious holiday should arrange at the beginning of the semester to reschedule missed classes or to make other provisions for their course-related activities.

Disability Support Services (DSS)
Any student who may need an accommodation based on the potential impact of a disability should contact the Disability Support Services office at 202-994-8250 in the Rome Hall, Suite 102, to establish eligibility and to coordinate reasonable accommodations. For additional information please refer to: gwired.gwu.edu/dss/

Mental Health Services 202-994-5300
The University Counseling Center (UCC) (http://counselingcenter.gwu.edu/) offers 24/7 assistance and referral to address students’ personal, social, career, and study skills problems. Services for students include:
• Crisis and emergency mental health consultations
• Confidential assessment, counseling services (individual and small group).