CSCI 6710: Developing e-Commerce Systems
Fall 2014

Class Meeting	Tuesday and Thursday, 2pm – 3:15pm Science & Technology Building, Room 144 (Global Classroom)
Instructor	Dr. Mark Hills
Office	Science & Technology Building, C-110
Office Hours	Tuesday & Thursday 3:30pm – 5:00pm, Wednesday 10am – 11am, Wednesday 8pm – 9pm online, or by appointment
Phone	252-328-9692
Email	hillsma@ecu.edu (response within 24 hours during the week, possibly longer on weekends)
Skype	mahills
Course web page	http://blackboard.ecu.edu

Course Summary

The catalog description for this course is as follows:

> *Introduces use of concepts, technologies, and building blocks from computer science, practical software engineering, and business development in building e-Commerce systems. Systematic life-cycle approach to developing successful e-Commerce systems essential to wide range of organization and software developers.*

In this course we will cover a number of topics related to developing e-Commerce systems. We will focus on the typical web development stack used to build modern web applications; options for integrating with other web sites and other businesses; options for deploying web applications, including standard server-based options and newer cloud-based techniques; and internet security, including security concerns with browsers, application servers, and protocols used to exchange information with other sites. We will also discuss software engineering techniques (including testing and program analysis), web analytics and user experience, and topics of current research in e-Commerce such as recommender systems and online auctions. Finally, we will touch on a number of issues that come up in building real-world e-Commerce sites, such as working with multiple related vendors (web designers, product specialists, order fulfillment centers) and properly accounting for business considerations in building e-Commerce sites.

Prerequisites

The prerequisite for this course is CSCI 6230 (Software Engineering Foundations, also offered as SENG 6230). If you have not taken this course, please schedule time to meet with me to discuss your background and preparedness for this course.

Learning Outcomes

After taking this course, you should be prepared to:

- apply modern software engineering techniques and web technologies to build and extend e-Commerce applications;
- use secure programming techniques, program analysis and testing tools, and information from online security resources to understand the nature of security threats to web applications, find security problems in existing code, and build secure systems;
- understand the context of e-Commerce applications in the broader context of a business's business needs and existing technical infrastructure;
- engage with, and potentially add to, the research literature on web development and e-Commerce applications.

Textbooks

There is one required textbook for the course: *Web Application Security: A Beginner's Guide*, by Bryan Sullivan and Vincent Liu. This book is available through Amazon.com at http://www.amazon.com/Web-Application-Security-Beginners-Guide/dp/0071776168 and is also available at the ECU campus bookstore.

There is one recommended textbook for the course: *Learning PHP, MySQL, JavaScript, CSS & HTML5: A Step-by-Step Guide to Creating Dynamic Websites,* by Robin Nixon. This book is available through Amazon.com at http://www.amazon.com/Learning-MySQL-JavaScript-HTML5-Step-/dp/1491949465 and can also be ordered through the campus bookstore. The prior edition, which should provide much the same coverage (but does not include the newer HTML5 features) is also available on the ACM version of the Safari Books Online portal.

Beyond this, there are a number of available online resources that discuss this material. I will post links to some as we go. You should feel free to post links to anything useful that you find. I will also be posting links to conference or journal publications as the course progresses. These will all be available through the course Blackboard site, available at the link shown above.

Exams

There will be one midterm exam given during the course. The date of this exam is **Tuesday, October 21st**, from **2pm – 3:15pm** in our normal classroom. More details about the actual contents of the exam will be available closer to the exam date. The exam will be open book, open notes, but no electronic devices are allowed -- so, if you take notes using a laptop or tablet, please print them out in advance! We will review for the exam in class during the class period before the exam.

The final exam for the course will be on **Tuesday, December 16th**, from **2pm – 4:30pm** in our normal classroom. More details about the exam will be available closer to the exam date. The exam will be open book, open notes, but no electronic devices are allowed -- so, if you take notes using a laptop or tablet, please print them out in advance! The last regular day of class, Tuesday, December 9th, will be used to review for the final.

If you are taking the course online, you must have a proctor for both exams. You must use the University of North Carolina Proctoring Network. More information can be found at: http://online.northcarolina.edu/exams/overview.htm

Grading

Students will be evaluated based on a combination of class activities, including homework assignments, the midterm and final exams, and a group project. The final grade will be assessed with the following criteria, with grades normalized to a 100 point scale:

Grading	
A	≥ 90
B	≥ 80
C	≥ 70
F	< 70

This grade is based on the following relative weights of the various activities:

Weighting	
Homework	25%
Midterm Exam	25%
Final Exam	25%
Group Project	25%

We are currently scheduled to have **seven homework assignments,** each weighted equally. The group project will involve research in an area related to the topic of the course. Project teams **must** be made up of both on-campus and off-campus students. We will discuss team size and number of teams once we

have a good idea of how many students will be taking the course. Projects will include both a written final report and a final presentation as well as various deliverables along the way. Due dates for these deliverables will be posted shortly after the beginning of class.

Starfish

This course uses the Starfish system to provide you with information on your performance within the course. For more information, please see http://www.ecu.edu/cs-acad/advising/upload/Starfish-Student-Getting-Started.pdf.

Student conduct

Smoking is not permitted in classrooms. Please turn off telephones while in class. Laptops and tablets can be used for taking notes, but should not be used for other work (or recreational browsing, playing games, etc).

Students are expected to abide by the university's Student Honor Code. The homework that you do is a critical part of your education. Each student is expected to do his or her own work, except where teamwork is explicitly allowed or required. That does not mean you are not allowed to discuss your ideas with other students. Working in groups can be beneficial, and I encourage you to talk through ideas with other students. But outright copying is plagiarism and is unacceptable. Students who copy other students' work, or who allow their work to be copied, or who copy their work from other sources, such as the internet, are violating the ECU academic integrity policy.

Other potential academic integrity violations are cheating, falsification, multiple submissions of the same work in different classes, and attempts at any of these violations. Please see http://www.ecu.edu/cs-studentlife/policyhub/academic_integrity.cfm for more details.

Academic integrity violations can result in a grade penalty up to and including an F for the course.

Other Policies

No incompletes will be issued in this course except for extraordinary circumstances, and even then only if you are nearly done already, and have done work of acceptable quality, so that you have a realistic change to pass the course.

All homework solutions and project deliverables are due by the posted due date. If for some reason you are not able to complete the assignment on time, you must contact me directly with an explanation and request an extension. If something comes up and you are having trouble keeping up with the class, talk to me right away, ***don't wait until the end of the semester!***

Course participation is an important part of the course. If you do not participate you will make it harder to have the kinds of discussions we need to make the class interesting. Please read the assigned readings in a timely fashion, and come to class prepared to talk.

Success in the class is directly correlated with class attendance, so I highly recommend that you attend and actively participate. If for some reason you cannot attend, please let me know – my expectation is that you will watch the lecture online and ask me questions about the material if you have any. For online students, I recommend that you watch the lecture the day it is given and send any questions before the next class session (so I can address them in class). Falling behind will make the course more difficult than it would otherwise be. I will be taking attendance at regular points in the class for my own records.

To encourage use of the discussion groups on Blackboard, I will not answer any questions about the course material using either email or Skype. These questions ***must*** be posted in the discussion groups. You are welcome to contact me directly with questions about grading or other personal class-related items, or to discuss the material with me more fully if I agree to take it "offline" from the discussion groups. I will answer questions about the syllabus, but will not answer questions where the answer is already clearly given in the syllabus.

All code, test scripts, and other software artifacts for your projects must be stored in an online source repository set up on my server (details of how to do this will be provided using a webcast). Everyone involved in the project (including me) will have access to the repository, and you must make sure the repository is kept up to date (e.g., you cannot just create the repository and then put all the code into it at the end of the semester).

Weather emergencies

In the event of a weather emergency, information about ECU can be obtained through the following sources:

ECU emergency notices	http://www.ecu.edu/alert
ECU emergency information hotline	252-328-0062

Students with disabilities

East Carolina University seeks to comply fully with the Americans with Disabilities Act (ADA). Students requesting accommodations based on a disability must be registered with the Department for Disability Support Services located in Slay 138 ((252) 737-1016 (Voice/TTY)).

For more information, please see http://www.ecu.edu/cs-studentlife/dss/.

Retention Requirements

Academic requirements for retention have changed. Please be aware of the following new GPA requirements. Please discuss the retention requirements, entrance to major requirements, and your goals with your academic advisor.

GPA Hours at ECU (identified in Transcript in Banner Self Service) plus transferred credit hours	"Old" Retention Requirement All courses taken at ECU	New Retention Requirements Effective with Fall 2011 grades All courses taken at ECU
1-29 semester hours	1.6 GPA	1.8
30-59 semester hours	1.8 GPA	1.9
60-74 semester hours	1.9 GPA	2.0
75 or more semester hours	2.0 GPA	2.0

Caveats

Occasionally, it may be necessary to revise this syllabus due to extenuating circumstances. I reserve the right to revise this syllabus if the need arises. If I do so, I will provide you with advance notice.