

Syllabus

Web Development – COMP/CENG 250

Section 1: 11:00 am MWF – Science 207

Section 2: 2:00 pm MWF – Science 207

Spring 2019

Instructor: Dr. Frank McCown
Contact: 501-279-4826, HU Box 10764, fmccown@harding.edu
Home Page: <http://www.harding.edu/fmccown/classes/comp250-f18/>
Office Hours: Science 208: 3-5 pm daily or by appointment

Course Description

This course provides a solid foundation of current Web development technologies including HTTP, HTML5, CSS, JavaScript, PHP, and MySQL. The Apache web server and Linux OS will be the primarily platform used. Prerequisite: COMP 170 or 150/151.

Required online textbook: *Web Programming* by McCown, et al. from zyBooks.

To get your zyBook:

1. Sign up for an account at learn.zybooks.com using your Harding email address
2. Enter zyBook code: **HARDINGCOMP250McCownSpring2019**
3. Click *Subscribe*

Student Learning Outcomes

At the end of this course, students will be able to...

1. Identify important events, individuals, and organizations in Internet and Web history.
2. Describe how web browsers and web servers communicate using HTTP.
3. Construct web pages using HTML and CSS for desktop and mobile browsers.
4. Write JavaScript code to respond to browser events, make asynchronous requests, and dynamically alter a web page.
5. Describe how user authentication works in a web environment.
6. Develop a website that uses PHP to store and retrieve data in a relational database.

Attendance

You are expected to be in class every day. You may enjoy two “free skips”, but each unexcused absence after that will result in a **1% deduction** from your final grade. If you are absent, you should check Easel for missing notes and homework assignments. Late work will be penalized unless your absence is excused.

Exams

There will be three regular exams and a comprehensive final exam that will also include all material covered after the third exam. If for **any** reason you are not able to take an exam, you must notify me **before** the exam (or as soon as you are physically possible). Failure to do so may result in a **zero** for the exam. Makeup exams for excused absences will be given, but a penalty of up to 75% will apply for unexcused absences, at the teacher’s discretion. If an official school function takes you out of class on an exam date, it is your responsibility to make arrangements one week prior to the exam as to when you will take the exam. Usually it will be given early, not late. Phones must be turned off and put away.

Reading Assignments, Homework Assignments, and Projects

Reading assignments require students to read and complete the Participation Activities (animations and questions) in the zyBook *before* class. Points are awarded based on the percent of completed Participation Activities. Students may complete the reading/questions **one day late** for half credit. No late credit is given for completing the reading/questions more than one day late.

Homework assignments are small assignments that are intended to give you practice implementing a concept introduced in class. Homework assignments are to be completed individually or in pairs (two people only). **Important:** If you complete a homework assignment with a partner, please write on the top of the assignment who your partner was.

Three large projects will be assigned that involve significant effort and require students to integrate several weeks' worth of learning. Projects may be completed independently or in pairs (two people only). Pair programming has been shown to have a number of benefits including increased personal satisfaction and fewer errors¹. If you work in pairs, both of you must work together on a *single* computer, and both of you must write *approximately half* of the code. **Do not write code without your partner present and watching.** Both of you should understand completely what is being written since you will have to complete your exams individually. When you submit a program to Easel that has been written in pairs, you must put comments in your code indicating the names of both programmers. Only one student needs to submit their solution to Easel.

Extra Credit

A maximum of 1.5% extra credit can be earned and applied to your final grade.

1. Computing Seminars: You will receive **0.1%** points extra credit to be added to your final grade for each Computing Seminar that you attend. Seminar meets every Friday at 7:00 am and sometimes on Thursdays at 4:00 pm in Science 113. The first seminar will begin around the 4th week of the semester. There will be approximately 15 seminars, thus allowing you to increase your final grade by 1.5%. See <http://www.harding.edu/academics/colleges-departments/sciences/computer-science> for the complete schedule.
2. Giving blood: Donating at the Red Cross blood drives will earn you **0.2%** added to your final grade each time you donate. Donate as many times as you'd like, and give me a signed note confirming your donation each time you donate.
3. The McChallenge: **1%** will be added to your final grade for the completion of extra work on the final project. You also earn the extra credit if you defeat me in a game of basketball, tennis, racquetball, Halo, chess, Trivia Pursuit, or any other sport/game that I know how to play. If you lose, you may still complete the extra work to get your 1%. Only one challenge per semester which must be completed *before* the final week of class. Come by my office to schedule a time to play.

Grades

Final grades are computed with the following weights:

Exams: 30%
Projects: 30%
Reading: 5%
Homework: 15%
Final Exam: 20%

Letter grades: A = 90-100%, B = 80-89% C = 70-79%, D = 60-69%, F = 0-59%

Late work: A maximum of 10% will be taken off *each day* (including weekends) an assignment is late, up to 50%. Nothing late more than 1 week will be accepted. Those with excused absences are still expected to turn in assignments as soon as you are physically capable of doing so.

Final grades are not rounded unless the student has given significant effort which is evidenced by regular attendance, completion of nearly all homework assignments, significant effort on projects, etc.

¹ See *All I Really Need to Know about Pair Programming I Learned in Kindergarten* (2000) for more information on effectively using pair programming.

Course Culture

1. Shortcuts don't exist.
 - You cannot learn without considerable effort. Be prepared to spend at least **two hours** outside of class for every hour in class (9 hours a week) studying, reading, completing homework and projects, and preparing for exams.
 - Keep up with your reading and homework. Start your homework and projects on time so you can get help from the instructor when needed.
 - Come by during office hours (or we'll arrange a time) for assistance on assignments. Visit the tutor in 201 who is available throughout the week in the evenings. Remember that I'm here to help you.
2. Be considerate of others.
 - Help create an environment where you and your classmates can effectively learn.
 - Be on time. Stay awake. Engage in class discussion. Ask questions.
 - Keep your phone put away.
 - Use your computer for coursework only so you do not distract yourself or those around you.
3. Glorify God in all you do.
 - "Whatever you do... do it all to the glory of God." – 1 Cor 10:31
 - Make the most of the time God has given you to learn and develop a skill.
 - Everyone is expected to hold to the **highest standard** of personal conduct and **integrity**. Cheating in all its forms is inconsistent with Christian faith and will result in sanctions up to and including dismissal from the class with a failing grade. You are cheating when you submit work performed by anyone but yourself and your partner. *Never* allow someone to view your source code as this often leads to cheating.
4. Miscellaneous
 - Check Canvas **daily** for announcements and discussions. Canvas contains class recordings (Echo360 link).
 - Notes for each day are available on Easel. If you want to print them out, please do so *before* class so you don't disrupt others.
 - Please adhere to the dress code as spelled out in the Student Handbook. Don't wear shorts to class, and men should not wear caps while in class. Please wear shoes to class (flip flops are OK).
 - **No food** or drink is permitted in the lab. However, I will allow you to bring in a drink with a lid until we have a spill.

Assessment

Harding University, since its charter in 1924, has been strongly committed to providing the best resources and environment for the teaching-learning process. The board, administration, faculty, and staff are wholeheartedly committed to full compliance with all criteria of the Higher Learning Commission. The university values continuous, rigorous assessment at every level for its potential to improve student learning and achievement and for its centrality in fulfilling the stated mission of Harding. Thus, a comprehensive assessment program has been developed that includes both the Academic units and the Administrative and Educational Support (AES) units. Specifically, all academic units will be assessed in reference to the following Expanded Statement of Institutional Purpose: **The University provides programs that enable students to acquire essential knowledge, skills, and dispositions in their academic disciplines for successful careers, advanced studies, and servant leadership.**

Students with Disabilities

It is the policy for Harding University to accommodate students with disabilities, pursuant to federal and state law. Therefore, any student with a *documented disability* condition (e.g. physical, learning, psychological, vision, hearing, etc.) who needs to arrange reasonable accommodations must contact the instructor and the Disabilities Office at the *beginning* of each semester. (If the diagnosis of the disability occurs during the academic year, the student must self-identify with the Disabilities Director *as soon as possible* in order to get academic accommodations in place for the remainder of the semester.) The Disabilities Office is located in Room 205 of the Student Center, telephone, (501) 279-4019.

Schedule

The following schedule is subject to change but gives you an idea of how the class will progress:

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|------------------|---|---------------------|--|------------------|--|
| Week 1 Jan 14 | Introduction Internet & Web history Terminology | Week 7 | Event handling DOM, CSS, timers Project 2 – JavaScript | Week 13 | Project 3 – PHP User authentication |
| Week 2 | <i>No class on Mon – MLK</i> HTTP Intro to HTML5 | Week 8 Mar 4 | Canvas, audio, video Exam 2 | Week 14 | Ajax Third-party web APIs |
| Week 3 | Links, images Lists, tables, misc. Taz Project 1 – Website | <i>Spring Break</i> | | Week 15 | Mobile web dev |
| Week 4 Feb 4 | Cascading Style Sheets Exam 1 | Week 9 | Intro to PHP Data types, arrays, functions | Week 16 May 6 | Final Exam |
| Week 5 | HTML forms Intro to JavaScript | Week 10 | Submitting form data File I/O | | |
| Week 6 | JavaScript objects Debugging | Week 11 | Cookies & sessions | | |
| | | Week 12 Apr 8 | MySQL and SQL Exam 3 | | |

