

Syllabus

Web Development – COMP 2500

10:00 am MWF – Science 207

Spring 2020

Instructor: Dr. Frank McCown
Contact: 501-279-4826, HU Box 10764, fmccown@harding.edu
Home Page: <http://www.harding.edu/fmccown/classes/comp2500-s20/>
Office Hours: Science 208: 2-3 pm and 4-5 pm daily or by appointment

Course Description

This course provides a solid foundation of current web development technologies including HTTP, HTML, CSS, JavaScript, PHP, and MySQL. The Apache web server and Linux OS will be the primary platform used. Prerequisite: COMP 1700 or 1500/1510.

Required online textbook: *Web Programming* by McCown, et al. with zyLabs 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: **HARDINGCOMP2500McCownSpring2020**
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.

Participation

Each class is a mixture of lecture, discussion, and trying things out on the computer. Your attendance is necessary to be successful. To encourage your engagement and to help the instructor gauge whether the class understands the material, you will often be asked multiple choice questions during class using Plickers. Your response is recorded, and the percentage of correct responses forms your participation score (5% of your overall grade).

You will be given a Plickers card on the second day of class. It is your responsibility to bring your Plickers card to class *every day*. If you forget your Plickers card, you will receive a 0 for your participation score that day.

Your attendance is recorded in Canvas. You may enjoy two “free skips”, but each unexcused absence after that will result in a **1% deduction** from your participation score. If you are absent, you should check Canvas for missing notes and homework assignments and watch missed class on Echo360. Late work will be penalized unless your absence is excused.

Exams

The course includes 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 instructor’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 and Homework

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. No points are awarded for completing Participation Activities late. Your lowest reading assignment score is dropped from your final grade.

Some zyBook sections include **Challenge Activities**, which require you to type a few lines of code. Challenge Activities may be assigned as homework problems. Other homework may also be assigned to help give you more practice.

Programming Assignments

A collection of short programming assignments, called zyLabs, are to be completed outside of class. zyLabs are auto-graded, and you can submit your solutions as many times as you'd like before the due date. You can complete the zyLabs by yourself or work with a partner. Each student must submit their own solution. If you work with someone and both of you submit very similar solutions, put the name of the person you worked with in comments in your program. You are encouraged to write all the code yourself, but seeking help from friends, the class tutors, and myself is encouraged.

A final project, which incorporates all we've learned this semester, will be averaged in with the programming assignments. The final project 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 errors. 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 Canvas 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 Canvas.

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:

Reading:	5%
Participation:	5%
Homework:	15%
Programming Assignments:	25%
Exams:	30%
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) a programming assignment or homework is late, up to 50%. Nothing more than one week late 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.

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 Canvas. If you want to print them out, please do so *before* class so you don't disrupt others.
 - **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.

COVID-19

This section was added to the syllabus when Harding made the decision to move all courses on online to prevent the spread of COVID-19. None of us signed-up for this, but we must roll with the changes and do our best to finish the semester strong.

Please keep me informed of any difficulties you may be encountering. If you or a family member become ill, please let me know. If you have trouble accessing the internet, let me know. I'm here to help.

Course lectures will be posted to Echo360 every Monday and Wednesday before 10am Central Time. We will meet on Zoom at 10am every Friday so we can check in and have class synchronously. The Zoom meeting will be recorded and posted to Echo360 shortly after each meeting.

You are expected to watch the course videos each MWF and do any homework posted on Canvas. You will continue to read from your zyBook the sections assigned on Canvas before class time on MWF. Exams will be taken on Canvas.

Some topics which I had planned to cover may be dropped, but we will cover all essentials. My goal is to run the course roughly the same as it was on campus. You will need to be very self-disciplined in this new format. I encourage you to set aside two hours each day Mon-Fri to watch videos, read, and do homework. Create a schedule and stick to it. Remove as many distractions as you can from your workspace. Seek help from when you need it.

I will continue to hold the same office hours. You can call me at my office, email me, or we can setup a Zoom meeting.

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

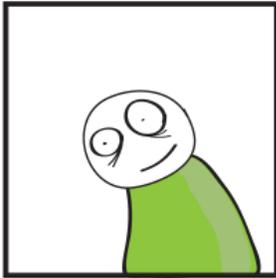
It is the policy for Harding University to accommodate students with disabilities, pursuant to federal and state law. Therefore, any student with a *documented disability* condition (e.g. physical, learning, psychological, vision, hearing, etc.) who needs to arrange reasonable accommodations must contact 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

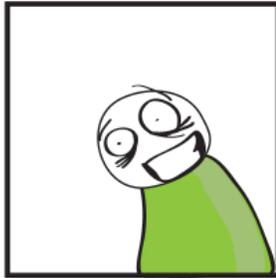
The following schedule is subject to change but gives you an idea of how the class will progress:

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

Learning to code



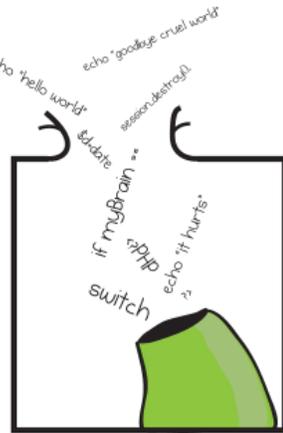
HTML



CSS



Javascript



PHP
`if ($SESSION['mybrain'] <= 2hours of sleep{
explode();}`