BASIC INFORMATION

Course

Name:	COMP 505 Advanced Web Authoring
Credits:	4
Prerequisites:	COMP 405 and COMP 425, or permission.
Term:	Spring 2015
Class Meetings:	Tuesday, 9 AM - 12 PM
Location:	P126, Pandora Mill building
Discovery Category:	None
Course Site:	http://comp505.andrewcurioso.com

Instructor

Name:	Andrew Curioso, Adjunct Professor
Program:	Computing Technology, Division of Science and Technology, UNH Manchester
Phone:	860-917-9581
Email:	Andrew.Curioso@unh.edu

Online Office hours:
Skype: Andrew.Curioso
Tu 9:00 PM - 11:00 PM, Th 4:00 PM - 6:00 PM, or by appointment.

How to get in touch with me

Course-related communication outside of class can take place exclusively on the online course forum or through Blackboard. For in-person, one-on-one communication, see me after class, during office hours, or by appointment.
If you have personal issues, questions, or concerns see me or email me at Andrew.Curioso@unh.org. I'll reply no later than the end of day on the next weekday.

Course Description

An introduction to web applications development. The course builds on introductory programming and web authoring. Emphasis is on dynamic web concepts and advanced programming techniques using markup languages and client-side and server-side scripting. Students learn to develop interactive web pages and integrate them with applications. Students participate in real-world team projects. 4 cr.

Resources

Textbook

Learning PHP, MySQL, JavaScript, CSS, Robin Nixon, Fourth Edition, O'Reilly Media, 2014.
Online version of the book is available free of charge for UNH students through Safari Books Online digital database. Go to UNH Library link in your Wildcats portal.
Supplemental reading material will be supplied through the course website.

Development Platform and Tools

The laptops in the Computing Technology labs, P128 and P132, are configured as development platforms for web applications. To do assigned work at home, you'll need to set up a similar configuration on your computer. Some development tools have installations for both Windows and Mac users. Others are specific to one operating system only.

For editing files

Windows users:	Notepad++
Mac users:	TextWrangler

Web application server

Both Windows & Mac users:	XAMPP (light edition) and Aptana Studio 3.

Source code management:

Both Windows & Mac users:	Git

Computing Resources

Technical instructions for setting up development tools and run-time environments can be found on the Computing Technology's wiki, OpenComputing at http://foss.unh.edu/resources. Go to "All Pages" in the left side menu to see all wiki articles. There are many other online computing resources out there. We'll collectively explore and share them.

Computing Services

Because of the highly collaborative nature of the course, which values sharing and openness, we'll be using a variety of services that support these values: collaboration, sharing, and openness. These services are:

- Git to submit assignments and collaborate with teammates
- Google Drive services to share learning and project artifacts
- Google Code, GitHub, or BitBucket for project hosting services
- Staging server on the department private network to test and demonstrate team projects
- Piazza service for the class forum

- Open Source course website

Tech Consultants

Computing Technology has two student tech consultants, Dave and Tyler. They are available to help with software configurations. Check their scheduled hours posted on the Tech Consultancy Workroom in P124 (by the elevator).

Course Site

The course site is at http://comp505.andrewcurioso.com/. It is the repository of course materials in digital form: syllabus, schedule, class agendas, assignments, practice questions, class notes, reading notes, and exam practice problems.

Class Forum

The class forum is at https://piazza.com/unh/spring2015/comp505. All outside class participation takes place on the forum. This is the place where we ask and answer questions to learn in the course.

Student Online Portfolio

All your work is committed to a Git repository. Your Git repository may be on Github, Bitbucket, or Google Code. Github is recommended; however, all code is public unless you pay a monthly fee. Therefore Bitbucket is a free alternative if you don't want your code to be public.
Only Git repositories must be shared with Andrew.Curioso@unh.edu

Instructional Approach

This course is 15 weeks with 3-hour class meetings in the Pandora building. You are expected to spend nine hours outside of class working on assignments and studying.
This class is highly depending on learning through experience and through collaboration with other learners.
Learning in this class is dependently on your active participation in both the course forums and class. Group project teams are expected to meet both in class and independently in order to meet the learning objectives.
For at least have of your class time you will be expected to work in pairs to find solutions to the course problems. By working as a team we can get the most out of the course.
Learners are encouraged to speak up if they feel that they do not understand the material and depending on your learning style you may need to spend more or less time outside of class reading the book or any of the many online resources for web development.

GOALS and LEARNING OBJECTIVES

Course Goals

Students will learn to develop interactive web pages and integrate them with web applications. Project experience emphasizes teamwork, effective communication, and authentic, real problems and challenges that require computational skills and practices.

Learning Objectives

Upon completion of this course students should be able to:

1. Apply dynamic web programming concepts and techniques.
2. Create and experiment with web applications.
3. Review, document, share, test, and deploy web applications.
4. Use open source software to collaborate with peers and develop and share their artifacts.
5. Communicate timely and work in teams effectively.
6. Argue for use of open source software tools and adoption of open source development practices.

COURSE REQUIREMENTS

Portfolios

All your work is "pushed" to an online Source Code Management for review. You may create a Git repository for your code as well as written responses to assignments. With the exception of the pages that have evaluation information, the rest of the portfolio should be public on the Web. Evaluation pages are private and shared only with the course instructor. Portfolios will be graded weekly during the semester.

Homework Assignments

There will be weekly outside class homework assignments. Homework assignments must be completed and "pushed" (committed)to your portfolios before class (no later than midnight, the day before class).

There are seven assignments that will be graded on a 4 point-scale (28% of the final grade). Grading is based on a rubric with input from you and me. To receive full credit for your assignment artifacts, you are asked to write a self-evaluation and participate on the class forum.

See Self-Evaluations and Class Forum Participation sections below.

Creative Project

There will be a creative project, which is a team project to create a web app that has to be proposed (pitched), designed, implemented, and presented to a general audience. Criteria for the project will be presented prior to proposals being due. Creative project artifacts must be completed and pushed to your online source code repository before class (no later than midnight, the day before class).
The creative project is 24% of the final grad. Grading is done by me and will be informed by reviews I will gather from your peers and team members. To receive full credit for the project artifacts, you are asked to write a self-evaluation. Timely communication and open collaboration with your team members factor into the grading of your project work. The class forum can be used to set up project team threads, to separate team-related traffic from class posts.

Self-Evaluations

Self-evaluating your weekly progress is a form of meta-learning. Meta-learning means learning about learning. Learning how to learn is a lifelong competency which will serve you very well. Academic advisors and employers care about this skill. Can you learn on the job? Can you apply what you've learned on your previous jobs or academic degrees across occupations and advanced studies? The more you practice with meta-learning tasks, the more prepared you'll be academically and in your career.
Self-evaluations are written every week in your online portfolio, with the exception of the midterm and final exam review and exam-taking weeks.

Self-Evaluation Template

You have to follow the self-evaluation template when you write your self-evaluations (see course site).
A self-evaluation file is named hwk# or cp#, where # is the number of the homework assignment or creative project iteration. The page content is structured by your answers to the following six prompts:

1. What are the lessons you learned and/or reinforced?
2. How did you improve your web development skills outside of class?
3. What if anything would you like clarification on?
4. Using the criteria in the self-evaluation rubric, what grade does your work deserve?

Each item must be answered in full sentences. Write clearly and check for grammatical and style errors. Include the item numbers.

Self-Evaluation Rubric

The self-evaluation rubric has assessment criteria and corresponding scores.

Evaluation	Score	Criteria
Very Good to Excellent	A	All work products are complete and meet all the specifications. Write-ups are impeccably written. All claims are adequately supported by evidence. All solutions are correct.
Good	B	No work products is missing. Most work products are complete and do meet the specifications. Write-ups have clarity and have no editing and style errors. Most of the claims are adequately supported by evidence. Most solutions are correct.
Satisfactory	C	Some work products are missing. Some work products are incomplete and do not meet the specifications. Write-ups lack clarity and have editing and style errors. Some of the claims are not adequately supported by evidence. Some solutions are incorrect.
Minimal or No Work	D or F	Work requirements were not completed on time OR self-evaluation is missing, OR work products show minimal work. Many of the requirements are not addressed. Most of the work products are incomplete and/or do not meet the specifications. Write-ups are sketchy and negligently written. Most of the solutions do not work.

Class Forum Participation

To receive full credit for each assignment, you are required to participate on the class forum at https://piazza.com/unh/fall2013/comp505 during the week scheduled to complete the assignment. Class forum contributions are questions, answers, follow-ups, or edits to other contributions.
There is a penalty of 50% of the total homework assignment full credit if you don't make weekly contributions: view your peer's posts, ask questions, write or edit answers, create and improve content with follow-ups.

Written Examinations

There will be a midterm (6th week of the semester) and comprehensive final exam (12th week of the semester).

GRADING AND EVALUATION OF STUDENT WORK

Student work encompasses: homework assignments, creative project, online portfolios, mid-

and final exam, class forum contributions, self-evaluations of weekly progress, and project presentations.
Final grade is calculated by using the following weights for the student work in this class:

- 7 homework assignments @ 4% each: 28%
- Creative project artifacts: abstract, proposal, and final report: 24%
- Mid-term exam and final exam @ 24% each: 48%
- 14% penalty if you don't contribute to the class forum on a weekly basis.
- 5% penalty for each unexcused absences (see policy on Attendance below).

COURSE POLICIES REGARDING STUDENT BEHAVIOR

Attendance

Attendance is taken every class. You are responsible for attending all classes and expected to abide by the University Policy on Attendance (as stated in the UNH Student Rights, Rules, and Responsibilities).
If you miss a class, you have the responsibility to:

- Email me about the circumstances for missing the class within a week of the absence.
- Check the course site and class forum and contact peers to find out what they missed.
- Make up the absence by writing a 300 word description of what you have missed and posting it to your online portfolio within a week of the absence.

Except for absences due to serious medical reasons or circumstances beyond your control, no more than two such makeups will be accepted. Each additional absence will lead to a reduction of 5 points from the final grade.

Late submissions and make-up exams

Policy for late submissions and make-up exams is very strict and applies only in exceptional cases of student illness, accident, or emergencies that are properly documented. A late submission or make-up exam may be granted ONLY IF:

- You email me prior to the deadline AND
- You explain and provide evidence for the circumstances that have prevented you from meeting the class requirement.

Failing to comply with these rules results in no credit for the late submission or missed exam.

Student use of computing devices

In-class use of any computing device is not allowed unless needed for lab activities and with the instructor's permission. Use of computing devices for non-class activities is not allowed. You will

be asked to leave the class if you fail to comply with these rules. Students with a learning disability that requires the use of a computing device must provide evidence from the Disabilities Services office.

STATEMENT ON ACADEMIC HONESTY

No collaboration is allowed while taking the exams. Cheating on the exam is penalized with failing the course.
Assignment submissions should be entirely your work and may not include work done by others. Collaboration on assignments is encouraged, but does not include preparing and submitting the final artifacts that are uploaded to your portfolio.
Failing to comply with these rules is considered a violation of academic honesty policy.
See http://www.unh.edu/vpsas/handbook/academic-honesty for more information. There are very serious repercussions if you deviate from the academic honesty policy:

- The penalty for the first occurrence of an instance of academic dishonesty and plagiarism is no credit for the assignment in question. The Associate Dean will be immediately notified of the incident.
- The second attempt is penalized with failing the course.

STUDENTS WITH DISABILITIES

UNH Manchester is committed to providing students with disabilities with a learning experience which assures them of equal access to all programs and facilities of the University, which makes all reasonable academic aids and adjustments for their disabilities and provides them with maximum independence and the full range of participation in all areas of life at UNH Manchester. Students who need to document their disability and determine any accommodations, services, or referrals should schedule an appointment with the UNH Manchester Disability Services Coordinator by calling 641-4170. For more information, please see http://manchester.unh.edu/student/disability.

TENTATIVE COURSE SCHEDULE

This is a tentative schedule, subject to change depending on the class pace, student learning needs, and/or unforeseen circumstances, such as school closing due to inclement weather. Check the posts on the class forum for up-to-date information.

Class #	In-Class	Assignments (due next week)

1	Overview of dynamic and static web pages; definition of wbe applications; HTML, CSS, JavaScript, and PHP; web server run-time environment and XAMPP and Source Control Management.	H1
2	First PHP program. Basic programming constructs. Overview of HTML, Javascript and CSS.	H2
3	Expressions. Control flow of program execution. Capture user interactions with forms.	H3
4	Data collections and arrays. Problem decomposition and programming language functions.	H4
5	More on arrays and functions.	Midterm review
6	Midterm.	Walk in the park
7	Introduction to Javascript.	H5
8	Persistent data. MySQL programming.	H6
9	Developing web applications. Connect a web interface with a database.	H7
10	More on developing web applications. Model-View-Controller pattern.	
11	Project work.	
12	Project proposals.	CP1
13	Final exam	CP2
14	Project work	CP3
15	Project presentations	