CS418/518: Web Programming
Spring 2024

LECTURE01: COURSE INTRODUCTION

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Courtesy: presentation slides from DR. JIAN WU, Dr. Justin Brunelle

INTRODUCTION

- Nasreen Arif
  - 2023 – present: Lecturer of Computer Science
  - 2019 – 2021: Principal Software Engineer at Techlogix
  - 2017 – 2019: Senior Software Engineer at Techlogix
  - 2015 – 2017: Software Engineer at TPS
  - 2014 - 2015: Software Engineer at Generic Solution & Consultancy

INTRODUCE YOURSELF

- Your name

- Your preferred name

- Are you taking this course in-person or online?

- Which program are you in?

- Why are you taking this course, what do you expect to gain from it?

- Share one or two interesting things about yourself so that your classmates can get to know you better.

WHY TAKING THIS COURSE?

- Most popular programming languages in 2023 according to Berkeley Extension.

- Our class will cover
    - JavaScript
    - HTML
    - CSS
    - MySql
    - React (a little)
    - Node (a little)

https://bootcamp.berkeley.edu/blog/most-in-demand-programming-languages/

HOW TO TAKE THIS COURSE?

- We will cover fundamental materials in class

- Students need to spend 3x time after class to

  - Explore materials beyond what is covered in the class

  - Resolve and solve technical challenges at system and application levels

  - Developing web applications

COURSE CONTENT

- How to build a web application: MySQL, JavaScript, HTML, CSS, React, NodeJs and frameworks.

- How to use GitHub for version control

OTHER SOFTWARE STACKS

- MEAN:
  - MongoDB, Express.js, AngularJS (or Angular), and Node.js
- MERN:
  - MongoDB/MySQL, Express.js, React.js, and Node.js
- MEVN:
 - MongoDB, Express.js, Vue.js, Node.js

WHY GITHUB?

- Industry standard

- Public!

- Accountability

- Branching/rollback/repository/tracing

COURSE LEARNING MANAGEMENT SYSTEM

- Canvas: canvas.odu.edu
  - For announcement, communication, and assignment submission

- GitHub: https://github.com/nasreenarif/cs418518-s24
  - For class materials, such as slides, assignments, project specifications , etc.

- Textbooks (not required)
  - Web Programming by John Dean
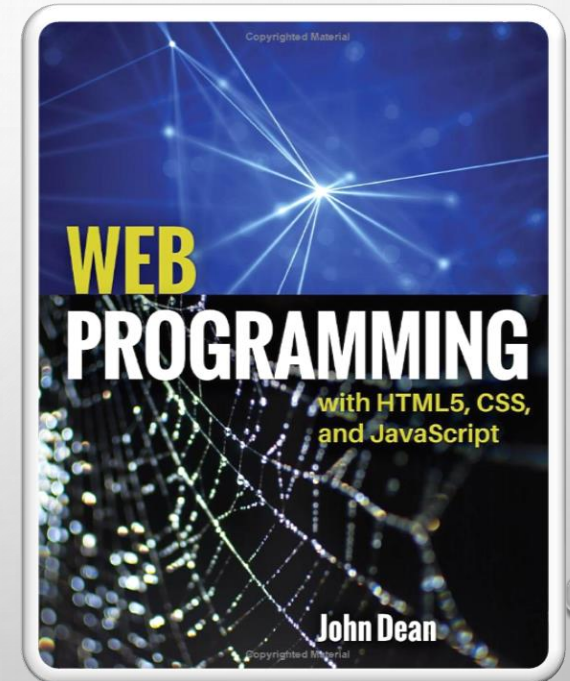
HARDWARE AND SOFTWARE REQUIREMENTS

- PC (with Windows 10+) or a Mac (with MacOS 10.14+) capable of web development activities.

- Web browser: Google Chrome or Mozilla Firefox. The development will be on your local machine.

COURSE OVERVIEW

- Time: 15 weeks (2 holidays, so 28 classes)
- Lectures:
  - Web architecture (1 session)
  - Basic structure of HTML (1 session)
  - JavaScript (6 sessions)
  - Cascading Style Sheets (1 session)
  - MySQL (1 session)
  - React (3 session)
  - NodeJs (3 sessions)
  - other topics (3 sessions)

- Assignment
  - 1 assignment –In person Students
  - 2 assignment – Online Students
- Project
  - 1 project
  - 3 milestones for project

POLICIES

- Attendance policy

- Late submission policy

- Academic integrity

- Copyright

- Disability accommodations

- Discrimination and Harassment (Title IX)

Title IX

"No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance."

A. Kate Couch, Title IX Coordinator
4111 Monarch Way Suite 106 Norfolk, VA 23508
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Email: TitleIXCoordinator@odu.edu

https://www.odu.edu/equity/title-ix

ADDITIONAL RESOURCES

- W3C: The World Wide Web Consortium is the main international standards organization for the World Wide Web.

- Stack Overflow: Stack Overflow is a question-and-answer site for programmers.

- Waterloo Course Website:
  - Web basics: https://open.cs.uwaterloo.ca/web-basics/
  - Web programming: http://opencs.uwaterloo.ca/web-programming/

- Git for source control (https://try.github.io)

PREREQUISITES

- Course prerequisites:
  - CS330 – OOP and design
  - CS312 – Internet Concept
- Assuming basic HTML knowledge

PREVIOUS COURSE PROJECTS

- Individual project
  - F16: stack overflow
  - F17: slack
  - F18: social media
  - F19: search engine (customized)
  - F20: search engine (ETD or image)
  - S21: Discussion forum of research papers ([Youtube video for an ETD search engine](#))
  - F21: Server status monitor and misinformation labeler ([Youtube video for fake scientific news labeler](#))
  - F22: Figure annotator and digital library search engine with Wiki cards

THIS SEMESTER'S PROJECT

- Project: Course Advising Portal
- Individual project for all students
- No collaborations!

GRADING

- Submissions via GitHub
  - Used for demos and grading
  - Creates a public portfolio
- Feedback/grading during demo
- Deadlines are hard, no extension will be granted without a doctor's note
- No "mercy grade" will be honored.
- Zero tolerance of plagiarism (do not refer to previous reports!)

GRADING OUTLINE

- 3 Milestones: 85%
  - Milestone 1: 25%
    - demo: 20%
    - report: 5%
  - Milestone 2: 30%:
    - demo: 25%
    - report 5%
  - Milestone 3: 30%
    - demo: 25%
    - report 5%

Online Students

Assignment: 15%

In person Students

- Attendance: 10%
  - Swipe your card!

- Assignment: 5%

- Extra credits
  - Implement extra useful feature (on third milestone)

- All features implemented after their original milestones are given only 50% credits.

All demos are evaluated based on
- Functionality: all links, buttons, text boxes, queries, actions should work
- Usability: web interface is user friendly and does not contain unnecessary (redundant) operations for users
- Aesthetics: web interface is designed to look nice

GRADING CHART

A	A-	B+	B	B-	C+	C*
94-100	90-93.99	87-89.99	84-86.99	80-83.99	77-79.99	74-76.99

Grading Chart

Probation occurs when a graduate student's GPA falls below 3.0 (University [policy](#))

Removal of assistantship if GPA falls below 3.0 ([Department policy](#))

This is not an easy "A" class. If you are not ready, please consider taking the course later.

ACADEMIC INTEGRITY

- Individual assignments must be completed independently. Students are strongly encouraged to form study groups and to learn from their peers. However, discussion on final proposal writing and presentation in the study group should be limited to general approaches to solutions. **Specific answers should never be discussed**.
  - **Cheating**
  - **Plagiarism**
  - **Fabrication**
  - **Facilitation**

CHEATING CONSEQUENCES

- Cheating results in a score of zero for your entire milestone. This includes but not limited to
  - Inter-group collaboration
  - Sharing code
  - Passing off open-source code as your own
  - Failing to cite your code "inspiration"
  - Copying other students' report content

(OCS) OFFICE OF COUNSELING SERVICES OF THE UNIVERSITY

- ODU's Office of Counseling Services (OCS) is a university agency with competent, diverse, and multidisciplinary professional staff. We are committed to supporting the emotional well-being, social development, and academic progress of all students at Old Dominion University.

- College life can be a wonderful time of self-discovery, but for many, it is also a time when the awareness of mental health conditions increases. OCS services are available to assist with addressing mental health concerns that a student may be experiencing. You can learn more about the broad range of confidential mental health services available on campus via our website at http://www.odu.edu/counselingservices. All services are free to ODU students.

SOS (STUDENT OUTREACH & SUPPORT) OFFICE OF COLLEGE OF SCIENCES

- Any student problems and SOS will connect them to the right place, including homelessness and food insecurity.

- Look at the SOS website to see the list of signs of student distress and other resources.

- Email: oducares@odu.edu.

- Available student resources on the College of Sciences web page at: https://www.odu.edu/sci/student-success

- The site includes all university resources broken down into tabs for Academic Resources, Tutoring and Mentoring, Counseling and Wellness Services, and Other Success Resources.