



**NORTHWEST**  
MISSOURI STATE UNIVERSITY  
MARYVILLE | KANSAS CITY

**School of Computer Science and Information Systems**  
**44-563-01/02/03 Web Apps and Services (3 hours)**  
**Spring 2024**

**Instructor:** Dr. Charles Hoot                      **Email:** hoot@nwmissouri.edu  
**Phone:** 660-562-1801                      **Office:** Colden Hall 2163  
**Section 2**                      MWF 11:00-11:50 CH1150  
**Section 3**                      MWF 12:00-12:50 CH3600  
**Section 1**                      MWF 2:00-2:50 CH3650

**Office Hrs:**

**MWF 1-2pm**  
**TTh 10-11**  
**TTh 2-3**

**GAs:** Machanavazzala, Trinadh                      [s559254@nwmissouri.edu](mailto:s559254@nwmissouri.edu)  
Gollapalli, Jagadish                      [S550018@nwmissouri.edu](mailto:S550018@nwmissouri.edu)  
Gurijala, Anusha                      [s565439@nwmissouri.edu](mailto:s565439@nwmissouri.edu)

**Prerequisites:** A minimum grade of C in CS44141 and in any of the following: MATH 17117 or MATH 17118 or MATH 17120.

**Textbook (required):** There is no formal text book, but you will be required to use formal documentation on websites and other on-line sources.

**Course description:** Technologies and protocols supporting web applications and web services. Students gain experience in client-side and server-side programming. The objective of this course is to introduce students to the concepts and tools for building interactive web-based applications and services.

**Student learning outcomes:**

Upon completion of this course, each student should be able to:

1. Use GIT for version control
2. Create static web pages using HTML/CSS
3. Use responsive design
4. Understand the difference between client side and server side
5. Use JavaScript for client side computation.
6. Use Node/Express
7. Understand MVC
8. Create object models
9. Use CRUD operations with a RESTful service.
10. Authenticate users

## 11. Create and host a web based app

**Assessment methods:** Desired Student outcomes will be assessed via quizzes, midterms, and a final exam.

**Instructional methods:** Instructional methods include lectures, individual work, and quizzes.

**Graded course requirements:**

| Category                 | Weight |
|--------------------------|--------|
| Homework                 | 30%    |
| Quizzes                  | 5%     |
| Midterm Exams 2          | 40%    |
| Final                    | 20%    |
| Attendance/Participation | 5%     |
| Total                    | 100%   |

**Grading scale:**

| Undergraduate Credit     |       |
|--------------------------|-------|
| Percent Range            | Grade |
| 90-100%                  | A     |
| $\geq 80\%$ and $< 90\%$ | B     |
| $\geq 70\%$ and $< 80\%$ | C     |
| $\geq 60\%$ and $< 70\%$ | D     |
| below 60%                | F     |

**Course outline/major topics studied:**

This is a tentative schedule and is subject to change. For exact information, including important dates, check the course website.

## Tentative Spring 2024 Schedule

|                  | MON                           | WED   | FRI   |
|------------------|-------------------------------|---|---|
| Week 1 – Jan 8   | Introduction/GIT              | GIT   | Lab time<br><b>Lab 1 due (End of Lab)</b>   |
| Week 2 – Jan 15  | MLK day<br>No class           | Markdown<br><b>Assignment 1 (Git)</b>   | Lab time<br><b>Lab 2 due (End of Lab)</b>   |
| Week 3 – Jan 22  | History/HTML                  | HTML<br><b>Assignment 2 (MD)<br/>due (EOD)</b>  | Lab time<br><b>Lab 3 due (End of Lab)</b>   |
| Week 4 – Jan 29  | HTML/CSS                      | CSS/Selector<br><b>Assignment 3 (HTML)<br/>due (EOD)</b>  | Lab time<br><b>Lab 4 due (End of Lab)</b>   |
| Week 5 – Feb 5   | Responsive Design/Flex        | Bootstrap<br>Material Design<br><b>Assignment 4 (CSS)<br/>due (EOD)</b>   | Lab time<br><b>Lab 5 due (End of Lab)</b>   |
| Week 6 – Feb 12  | Responsive Design/            | Java Script Basics<br><b>Assignment 5 (Flex/Bootstrap)<br/>due (EOD)</b><br><br><b><u>Midterm 1 – Thursday<br/>February 15, 6pm</u></b> | Lab time<br><b>Lab 6 due (End of Lab)</b><br><br>PAT no longer affects<br>this day. |
| Week 7 – Feb 19  | Java Script                   | Java Script<br><b>Assignment 6 (JS/DOM)<br/>due (EOD)</b>   | Lab time<br><b>Lab 7 due (End of Lab)</b>   |
| Week 8 – Feb 26  | Async/Promises<br>Fetch/Axios | JSON, NodeJS<br><b>Assignment 7<br/>(JS/Callbacks/Arrays<br/>due (EOD)</b>  | Programming<br>contest<br><b>Lab 8 due (End of<br/>DAY)</b>                         |
| Week 9 – Mar 4   | Express                       | Hosting<br><b>Assignment 8 (NodeJS)<br/>due (EOD)</b>   | Lab time<br><b>Lab 9 due (End of Lab)</b>   |
| Week 10 – Mar 11 | Spring Break<br>No class      | Spring Break<br>No class  | Spring Break<br>No class  |
| Week 11 – Mar 18 | MVC<br>ORMs                   | View Engines<br><b>Assignment 9<br/>(Express/Render)<br/>due (EOD)</b>  | Lab time<br><b>Lab 10 due (End of<br/>Lab)</b>                                      |
| Week 12 – Mar 25 | PUG                           | Mongo/Atlas<br><b>Assignment 10 (PUG)<br/>due (EOD)</b><br><br><b><u>Midterm 2 – Thursday<br/>March 28, 6pm</u></b>                     | Lab time<br><b>Lab 11 due (End of<br/>Lab)</b>                                      |

|                                 |  |   |   |
|---------------------------------|--|---|---|
| Week 13 – Apr 1                 | Mongo/Atlas<br>Restful Services  | Restful Services<br><b>Assignment 11 (Mongo)<br/>due (EOD)</b>            | CCSC Conference<br><b>Lab 12 due (End of<br/>DAY)</b> |
| Week 14 – Apr 8                 | Security   | Security/Media<br><b>Assignment 12 (RESTful API)<br/>due (EOD)</b>        | Lab time<br><b>Lab 13 due (End of<br/>Lab)</b>        |
| Week 15 – Apr 15                | User Interface   | User Interface<br><b>Assignment 13<br/>(Authentication)<br/>due (EOD)</b> | User Interface  |
|                                 |  | <b><u>Final Part 1 – Thursday<br/>April 18, 6pm</u></b>                   |   |
| Week 16 – Apr 22<br>Finals Week | <b>Final Part 2:</b><br><br>Sec1 – Wed Apr 24<br>2:00-4:00 PM<br><br>Sec2 – Tues Apr 23<br>9:40-11:40 AM<br><br>Sec3 – Wed Apr 24<br>11:50-1:50 PM |   |   |

**Note:** Course schedule is subject to change with instructor notification and students will be responsible for abiding by these changes.

**Academic Calendar:** <http://www.nwmissouri.edu/academics/calendar.htm>

**Final Exam Schedule:** <http://www.nwmissouri.edu/registrar/finals.htm>

### Programming Assignments

Assignments will be released on Wednesday and come in two parts. A portion of the assignment (the lab portion) will be due and submitted electronically on canvas at the *end of the lab period on Friday*. The Friday class period will be in class and the instructor and GAs will be available to provide consultation. *Late lab submissions will not be accepted.*

The remainder of the assignment will be due on Wednesday at 11:59pm. These assignments can be submitted late up to 24 hours, but will be assessed a penalty of 10% of the maximum possible score on the assignment. Any work submitted after the late period will receive **NO** credit. The number of points for an assignment may vary depending on the difficulty of the assignment.

### Quizzes/Exams

Quizzes will be announced the day before and you will have 24 hours to complete them through the Canvas Website. At the end of the quiz time, submissions will be closed and late submissions will not be accepted. You will be allowed to take the quiz multiple times retaining the best score.

The midterms and final will be held on the dates specified. If you must miss an exam, it is your responsibility to notify the instructor in person prior to the exam and to provide the instructor with written verification of the reason for your absence. Failure to follow these instructions may result in a grade of zero on the exam.

The midterm exams will be held in the evening starting at 6pm on **Thursday** evenings February 15 and March 28. They will be paper based exams and will last for 50 minutes.

The first portion of final exam will be held in **Thursday** evening April 18 starting at 6pm. It will be paper based and will last for 50 minutes. The second portion of the final will be held during the scheduled time during finals week. Check out the time and date for your particular section.

#### Finalized Timings

6pm to 6:50pm

Section 1 – Valk 111

Section 2 – Garrett Strong 2550

Section 3 – Garrett Strong 2560

All exams are open for one **personally hand written** page (**one side** of one standard 8 ½ by 11 in sheet of paper). Electronic resources are **not** allowed.

### Attendance

You are expected to attend class each day AND BE ON TIME. Attendance will be a factor in your grade. If you must miss class due to a university sponsored event (documented with an excuse signed by the university sponsor prior to the event) or by circumstances considered extenuating by the course instructor, it is your responsibility to inform the instructor class time via email. If the instructor was not notified before class time, the absence will be unexcused. Please refer to the general university policy on attendance at <https://www.nwmissouri.edu/policies/academics/Attendance.pdf>

### Classroom Decorum

Students are required to come to class prepared for the day's activities. That means be in your seat before the class starts, with the textbook, notepaper or notebook and writing instrument. We will start class promptly at the designated time.

Cell phones and pagers must be turned off during class time and are not allowed during exams. Laptop computers and handhelds may be used during class time if they are being used for a class activity, such as taking notes. Students are not to read or send e-mails, text messages, or surf the web during class time. Anyone using an electronic device to give or receive assistance during exams will be in violation of the "Academic Integrity" section of the catalog.

**Refer to Syllabus Addendum for additional information.**