



MMC6278: Advanced Web Topics 2: Programming and Specialized Topics

Academic Term: Fall 2022

4 Credit Hours

Instructor Name: Lee Warrick

Email Address: mynar7@ufl.edu

Phone Number: Please email first to make an appointment.

Virtual Office Hours: By appointment only, please email to set up a time.

Course Description and Prerequisites

Course Description: COM6278: Advanced Web Topics 2 builds upon the skills learned in COM6338 Advanced Web Topics I and teaches students about server-side applications through the Node.js JavaScript runtime. Students will learn to build server applications using Node that both serve and communicate with front-end applications and websites. This course will explore database technology, user authentication, serving static files, Model View Controller (MVC) architecture, and server application deployment. By the end of the course, students will be able to build monolithic server-side web applications that dynamically render front-end web views and manage user data.

Course Prerequisites / Co-Requisites: COM6338 Advanced Web Topics 1

Course Expectations

This is a fully online course, and you must log in to Canvas with your Gatorlink username and password to access the materials and assignments. The course is organized into modules with due dates. Unless otherwise specified, each module begins on Monday at 12:00 AM, ET, and ends on Sunday at 11:59 PM, ET.

Time Commitment & Student Workload Expectations

Expect to spend between 10 to 20 hours per week, per course, watching or attending lectures, reading, working on assignments and projects, and engaging in discussions.

Attendance Policy

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies. [Click here to read the university attendance policies](#) for information on absences, religious holidays, illness, and the twelve-day rule. Excused absences must be consistent with university policies in the [Graduate Catalog](#) and require appropriate documentation.

Late Assignment Policy

Late assignments will not be accepted unless it is a [University excused absence](#) as stated in the attendance policies. **No late work will be accepted for final projects or work due in the final week of class due to the university grading deadlines.** If potential issues arise concerning submitting final work, students should contact their instructors before the assignment deadline.

1. Late Assignment Grade Reductions
 - a. 0-24 Hours Late: 10% reduction in grade.

- b. Over 24 Hours (24 hours and 1 minute) to 7 Calendar Days Late: 20% reduction in grade.
 - c. After the 7th Calendar Day: Work will not be accepted.
2. Late Discussions will not be accepted.

Student Guidelines for Course Challenges

A student with questions regarding course content such as assignments, assessments, instructional materials, lectures, meetings, course objectives, course module objectives, or other areas of the course, please adhere to the following guidelines: first, *approach the faculty member who is teaching the course* to ask for clarifications regarding the course assignments, assessments, materials, lectures, meetings, etc. Use the instructor's contact information to request an appointment where you can address any concerns and/or questions. If after meeting with *the faculty member teaching the course* you are still not clear on the course assignments, assessments, materials, lectures, meetings, etc., then the next step would be to contact online advising (onlineadvising@jou.ufl.edu) for additional guidance.

Accessibility/Students with Disabilities Information

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the [Disability Resource Center](#). It is important for students to share their accommodation letters with their instructors and discuss their access needs, as early as possible in the semester.

Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback professionally and respectfully is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens and can complete evaluations through the email, they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

Course-Level Objectives

Upon successful completion of this course, students will be able to:

1. Use Node.js. (CO: 1)
2. Use external packages from Node Package Manager (NPM). (CO: 2)
3. Describe containerization. (CO: 3)
4. Use Docker containers in an application. (CO: 4)
5. Create a server using Node.js (CO: 5)
6. Describe server-side rendering. (CO: 6)
7. Use Structured Query Language (SQL). (CO: 7)
8. Use a relational database. (CO: 8)
9. Use a Non-SQL (NoSQL) database. (CO: 9)
10. Describe monolith applications and Model View Controller (MVC) architecture. (CO: 10)
11. Use web security best practices. (CO: 11)
12. Implement user authentication and authorization. (CO: 12)
13. Implement Session Management. (CO: 13)
14. Describe Object-Relational Mapping. (CO: 14)

(CO = Course-Level Objective)

Textbooks and Materials

Required Course Current and Seminal (Older Than 5 Years Old) Textbooks

- N/A

Recommended Textbook(s)

American Psychological Association. (2020). *Publication manual of the American Psychological Association: The official guide to APA style*. (7th ed.).

- ISBN-13: 978-1433832161
- ISBN-10: 143383216X

Required Software

Please refer to the document in your course website for specific directions on each of the following required tools:

- VS Code
- Git
- Github.

University and Course Grading Policies

University Honor Code

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Conduct Code specifies the number of behaviors that violate this code and the possible sanctions. Click here to read the Conduct Code. If you have any questions or concerns, please consult with the instructor in this class.

Plagiarism

Plagiarism is unacceptable; especially, in academic communities. All academic work must be an original work of your own thought, research, or self-expression. Plagiarism includes, but is not limited to, prohibited collaboration, consultation, submission of academic work that has been purchased or obtained (see the [UF Policy: Student Conduct Violation](#)). In addition, self-plagiarism is also unacceptable. Self-plagiarism is defined as recycling or reusing one’s own specific words from previously submitted assignments or published texts. Remember that plagiarism is not acceptable in any of your work including all discussion board posts, journal entries, wikis, and other written and oral presentation assignments. It's important to always cite your sources in your assignments.

Grading Criterion

Your grade will be calculated based on the following:

Assignments/Assessments	Weight (%)
Course Orientation: These assignments are required; however, they not count towards the final grade. <ul style="list-style-type: none">• Student Introduction• Course Evaluation	0%
9 Assignments <ul style="list-style-type: none">• Worth up to 100 points each	90%
1 Group Project <ul style="list-style-type: none">• Worth up to 100 points	10%
TOTAL	100%

Grade	Percentage
A	92.5-100%
A-	89.5-92.4%
B+	86.5-89.4%

B	82.5-86.4%
B-	79.5-82.4%
C+	76.5-79.4%
C	72.5-76.4%
C-	69.5-72.4%
D+	66.5-69.4%
D	62.5-66.4%
D-	59.5-62.4%
E	0 – 59.4%

The only passing grades for graduate students are A, A-, B+, B, B-, C+, and C. Letter grades of C-, D+, D, D- or E are not considered passing at the graduate level, although the grade points associated with these letter grades are included in grade point average calculations. See the [Graduate Catalog](#) and [UF graduate school grading policy](#) for more information.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see the [Notification to Students of FERPA Rights](#).

Technology Requirements

Software Use

All faculty, staff, and students at the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Software

- [Microsoft Office 365](#).
- [UF Apps](#) – access UF software applications from any device from any location, at any time.
- [Adobe Reader](#)
- [Zoom](#)

Technical Support

If you have technical difficulties with your course, please contact the [UF Computing Help Desk](#) either by filling out an [online request form](#) or calling 352-392-4357 (HELP).

If your technical difficulties cause you to miss a due date, you must report the problem to the Help Desk and then email your instructor. Include the ticket number that you are given from the Help Desk in an email to the instructor to explain the late assignment/quiz/test.

IT Support

For all Technical assistance questions please contact the UF Computing Help Desk.

Phone: 352-392-HELP (4357)

Email: helpdesk@ufl.edu

Communication Policies

Student Expectations

In a graduate level course, you are expected to research and troubleshoot creatively if you run into any coding scenarios that you don't understand. JavaScript can be a difficult topic for students without any programming experience; It is not a fair expectation to learn all of JavaScript in one semester. Please feel free to use MDN, W3 Schools, Stack Overflow, and any other resources you can find via Google search if you run into any issues before contacting me.

As a "coder" you will be expected to troubleshoot on your own, so this is great practice!

Asking for Help

If you run into issues while working on any activities or assignments involving programming, please do NOT send screenshots of the code. Please push your code to GitHub and include the GitHub URL and live site URL with a description of the issue when writing your message. This will allow the instructor to debug the program quickly and include links in their response showing the location of errors within your code.

Announcements

You are responsible for reading all announcements posted in the course each time you log in.

Email

You are responsible for reading all your course emails and responding promptly (within 24 hours).

Video Conferencing

You are responsible for attending course video conferencing meetings. If you cannot attend the video conferencing meeting, please advise the instructor and/or your team at least 24 hours in advance (exceptions can be made for legitimate emergencies). You are expected to demonstrate netiquette and etiquette communication expectations during these meetings.

Instructor Communications

Email Policy

Except for weekends, holidays, and University breaks, the instructor will typically respond to emails within 48 hours. For course-related questions please post in the Canvas FAQ discussion board. If you have questions of a personal nature, please email me directly.

Assignment Feedback Policy

I will provide feedback/grades on submitted assignments in a timely manner. Some assignments may require a longer review period, which I will communicate to you, if necessary.

Course Policies

Video Recording

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A "class lecture" is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises

involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third-party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under [UF Regulation 4.040 Student Honor Code and Student Conduct Code](#).

Privacy

If your course includes live synchronous meetings, the class sessions will all be audio-visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. Please see UF's Information Technology [policies](#) for additional information.

Academic and Student Resources

Academic Resources

- E-learning Technical Support: Contact the UF Computing Help Desk at 352-392-4357 (HELP) or via e-mail at helpdesk@ufl.edu.
- [Career Connection Center](#): Career assistance and counseling. Reitz Union, Phone: 352-392-1601.
- [Library Support](#): Various ways to receive assistance concerning using the libraries or finding resources. [UF Library Services for Distance Students](#)
[Ask a Librarian](#) – chat with librarians online.
CJC Librarian - [April Hines](#), Phone: 352-273-2728, Email: aphine@uflib.ufl.edu.
- [Teaching Center](#): General study skills and tutoring. Broward Hall, Phone: 352-392-2010 or 352-392-6420.
- [Writing Studio](#): Provides one-on-one consultations and workshops tailored to specific classes (graduate and undergraduate). 302 Tigert Hall, Phone: 352-846-1138.
- [Online Student Complaints](#): This process is designed to make every attempt to resolve student complaints within its academic and administrative departments at the program level.

Health and Wellness

- *U Matter, We Care*: If you or someone you know is in distress, please contact umatter@ufl.edu, call 352-294-2273, or visit the website to refer or report a concern, and a team member will reach out to the student in distress.
- *Counseling and Wellness Center*: Visit the [Counseling and Wellness Center](#) website or call 352-392-1575 for information on crisis services as well as non-crisis services.

- Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need or visit the [Student Health Care Center website](#).
- University Police Department: Visit the [UF Police Department](#) website or call 352-392-1111 (or 9-1-1 for emergencies).
- UF Health Shand’s Emergency Room/ Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the [UF Health Emergency Room and Trauma Center website](#).
- GatorWell Health Promotion Services: For prevention services focused on optimal wellbeing, including wellness Coaching for Academic Success, visit the [GatorWell website](#) or call 352-273-4450.

Course Schedule

Week Number	Topics and Assignments
1	Containerization in Software Development
2	JavaScript outside of the Browser
3 & 4	Building Servers with Node
5	Relational Databases
6	Connecting to databases from Node
7 & 8	Server-side Rendering
9 & 10	Authentication and Authorization
11 & 12	NoSQL Databases
13 & 14	Model View Controller (MVC)
15 & 16	Testing Node Applications

The instructor reserves the right to adjust this syllabus, as necessary.