Instructor Info

Zerksis D. Umrigar
Zoom Link: *<https://binghamton.zoom.us/my/umrigar>*
Zoom Office Hours: Mon, Wed: 3:35 - 4:35p.
Email: umrigar+cs544@binghamton.edu

- Do **not** use the generic `umrigar@bing...` email address; **always** use the course specific `umrigar+cs544@bing...` email address.
- I will always try to reply to email within 24 hours (often much sooner). To ensure prompt attention, alway used the +cs544 email address.

Zoom Office Hours

- Office hours will be set up with a waiting room; i.e. students can feel free to share their work with me.
- If I feel that what is being discussed is of general interest and there are students in the waiting room, I may go ahead and let them in.
- If there are no other students in the zoom meeting room, I may not notice your arrival right away. Please say something to grab my attention and give me a couple of minutes to respond.

Graders

- Graders responsible for **all** grading.
- All questions regarding the grading of an assignment should **first** be addressed to the grader.
- Usually, I will backup a grader's grading decision unless there is a clear mistake.

Project Grading

Vikas Magar
Zoom Link:
<https://binghamton.zoom.us/j/4160971613?pwd=aUwzK3N4L0xmL2tF
Office Hours: Wed: 1:00 - 2:00p
Email: vmagar1@binghamton.edu
Github ID: `vikasmagar512`
Grading Responsibilities: All projects.

Homework and Exam Grading

Sohini Mandal
Zoom Link:
<https://binghamton.zoom.us/j/76052132047?pwd=UFUvWTR3VXFKc
Office Hours: Fri: 2:00 - 3:00p
Email: smandal5@binghamton.edu
Grading Responsibilities: All homework, midterm + final.

Texts

No text, the course will make heavy use of online resources. However, the book *JavaScript: The Definitive Guide* by David Flanagan, 8th Edition is strongly recommended.

Evaluation

- Pop quizzes will test on material covered recently.
- 4-5 projects.
- 4 homeworks.
- Paper (544 only).
- Midterm: During regular class time at a time to be announced,
- Final: During last class.

Grading

Pop Quizzes (lowest dropped):	12%
Projects (lowest dropped)	35%
Homeworks (lowest dropped)	444: 25%; 544: 22%
Paper	544 only: 3%
Midterm:	13%
Final:	15%

- All exams and quizzes will be online and hence will be open-book, open-notes. You are allowed to use any material, but are not allowed to collaborate with any other people.
- A pop quiz will usually have 5 questions with 2 points per question + 2 points for attempting the quiz.

Assignment of Final Letter Grades

- Letter grades will be assigned strictly monotonically based on the numeric course grade.
- A letter grade of A will be given only for consistent superior work.
- You will get an F only if you miss turning in a lot of work or submit consistently very poor quality work.
- If you have an issue with the grading of a particular assignment, it is **imperative** that you see the grader before the final exam.
- All letter grades are final unless there is some kind of clerical error.
- TA *Grading Guidelines* are available.

Academic Honesty

Cheating of any type will be penalized heavily.

- Minimal penalty: zero on assignment and letter grade dropped by one slot: i.e. an A becomes an A-, a B- becomes a C+, etc. You will also need to sign a Watson college document which will be added to your file.
- Permissible to collaborate to understand course material, homework questions or project assignments. **Not permissible to discuss solutions.**
  - If you feel you may have inadvertently crossed the line, then let us know; will not be considered cheating.
  - If submitting an assignment late after the solution has been posted, you should obviously not be looking at the solution.
- All registered students must sign and complete an *Academic Honesty Statement.*

Mask Policy

The university requires masks when indoors:

- If you forget your face covering or it does not meet these requirements, you will be asked to leave the room immediately. You may not return until you meet the requirement. If there is a pop quiz during that class, you will miss the quiz.
- If a student does not comply with the requirements, the remainder of the class session will be canceled. The dean's office will be notified and will work with the Student Records office to issue a failing grade ("F") for the course regardless of when in the semester the incident occurs. The dean's office will also inform the Office of Student Conduct.

Projects

Usually 5 projects, some of which will build on each other.

1. Basic server side JavaScript.
2. Server side JavaScript using a database.
3. Expose server side code using web services.
4. Access web services in browser to display a simple app.
5. Access web services in browser to display a more complex app.

Homework

4 homework assignments:

- Some questions will be simple exercises based on what was covered in class.
- Some questions will require original thinking.
- Some questions will require using external resources like the web.

Quizzes and Exams

- Each student will be given a personalized exam/quiz with random variations of questions in a random order.
- Will be administered using a *personal home page* accessed using the **Login** link on the course web site (access details will be sent out shortly).
- Quizzes will be multiple choice, usually based on Exercises.
- Midterm and final will be "essay type" and will need to be submitted using mycourses.
- Difficult but not impossible to cheat.
- Basically on a honor system.
- If you successfully cheat you will really be cheating yourself and damaging your self worth.
- If cheating is detected, then action **will be taken**.

Paper

- 544 only.
- A brief 3-4 page description of some related topic which was not covered in the course.
- More detailed specs will be made available around mid-semester.

Late Submission Policy

- You are allowed to submit assignments late by up to 3 days.
- You may not use more than 7 late days over all assignments over the entire semester.
- A day will count as 24 hours, irrespective of holidays or weekends.
- Late submissions will not be accepted for some assignments, especially before an exam or towards the end of the semester.

Course Web Site

- All course material on course web site at *<http://zdu.binghamton.edu/cs544>*.
- Course web site mirrored at *<http://cs.binghamton.edu/~umrigar/cs544>*. Dynamic portions of the web site will not be mirror'd.
- Website password protected against bots. You will be provided the user-id and password in an email.
- Slides usually available an hour before class. PDF's look better and will be used in class, but links from PDF version of slides do not always work. Slides may be updated up to one week after class to fix mistakes or make enhancements.
- Course web site available via `git` repository at `ssh://`*`user`*`@remote.cs.binghamton.edu/~umrigar/git-repos/cs544.git`. Useful for tracking changes.

Course Mailing List

- All students registered for the course should have been subscribed to the CS544 mailing list.
- To change the email address via which you are subscribed to the list or would like to edit your subscription options, please visit *<https://www.cs.binghamton.edu/mailman/listinfo/cs544>*.

Catalog Description

An in-depth understanding of programming for the World Wide Web: detailed coverage of widely used language(s) for web programming, asynchronous programming, principles of web architecture, web protocols, web design patterns, client-side programming, templating, server-side programming, a technical history of the web, web security. Students are expected to have experience with a modern programming language and will be assigned programming projects using current state-of-the-art web technologies.

Prerequisite CS 444: CS 320 or CS 350 or CS 375.
Proficiency in programming, with at least some exposure to object-oriented programming.

Objectives

After successful completitons of this course, students should expect to:

- Have had exposure to some of the intricacies of JavaScript.
- Understand asynchronous programming.
- Have a solid grasp of the basic technology powering the World Wide Web.
- Have experience developing RESTful web services.
- Use modern client side technologies for consuming the web services.
- Experience in implementing programming projects of medium complexity.

Some Topics

- Javascript: 4-5 weeks.
- Asynchronous programming.
- Technical history of the web.
- HTTP protocol.
- Web architecture, Representational State Transfer (REST).
- Web services.
- Browser technologies.

Will build out from server to browser.

Less Emphasis

- HTML
- CSS
- Particular web frameworks (we will cover some frameworks relatively superficially).

No Coverage

- Portable code which runs across multiple browsers/platforms. We will simply target stable versions of `nodejs` and `chrome`.
- Device-specific capabilities.

Virtual Machines

- Each student will be assigned a Linux-based virtual machine which can be used for course projects and other related work.
- Each VM comes preinstalled with all the software needed for the course. List of installed software is available if you prefer to use your own computing environment. **However, it is your responsibility to ensure that submitted code runs within your VM environment**.
- Each student has `sudo` access to their VM. This makes it possible for the student to install any other required software.
- Imperative that students set up GUI access to their VM as that will be needed for subsequent projects. The recommended software is x2go.

ABET Accreditation Outcomes

For ABET *Networking & Communications*, this course will cover:

- The HTTP protocol.
- HTTP caching.
- Handling of HTTP errors.

This will be measured using project 3.

Problems

- If you are having problems, please see me ASAP; **do not wait till the end of the semester**.
- Flexible regarding deadlines under exceptional circumstances.
- If you are experiencing undue personal or academic stress at any time during the semester or need to talk with someone about a personal problem or situation, I encourage you to seek support as soon as possible. I am available to talk with you about stresses related to your work in my class.

Contact Info for Help

Dean of Students Office 607-777-2804

Decker Student Health Services Center 607-777-2221

University Police On campus emergency, 911

University Counseling Center 607-777-2772

Interpersonal Violence Prevention 607-777-3062

Harpur Advising 607-777-6305

Office of International Student & Scholar Services 607-777-2510

University Ombudsman Main campus: 607-777-2388; University Downtown Center office 607-777-2388

Services for Students with Disabilities 607-777-2686 (Voice, TTY)