

SYLLABUS

Office Hours : Hour before class and by appointment

Pre-requisites : None

Teaching asst : Akash Raut and Abhishek Pancholi (Details on Canvas)

Resources : Visual Studio Code running on a Windows Or Macintosh. Download here:
<https://code.visualstudio.com/download>

Textbooks : We will only use a few chapters from each book, but cover-to-cover walkthrough is recommended

1. The HTML and CSS Workshop [PDF] / ISBN: 978-1-83882-453-2, L. Coulson et. al., 2020, Packt Publishing, e-book available from the USF library
2. Beginning JavaScript [e-book] : Jeremy McPeak, 2015, John Wiley & Sons, Inc., e-book available from the USF library - <https://ebookcentral.proquest.com/lib/usf/detail.action?docID=1895134>
3. Foundation Dynamic Web Pages with Python: Create Dynamic Web Pages with Django and Flask [PDF], David Ashley, ISBN-13 (pbk): 978-1-4842-6338-9, 2020, Apress, e-book available from the USF library

Optional books (used for the OSI model section, power point slides are available on Canvas)

1. (AD) Business data communications and IT infrastructures (3rd Edition) / Manish Agrawal & Clinton Daniel

Course Objectives

This course will introduce distributed information systems including presentation technologies such as HTML, CSS, JavaScript, as well as data visualization frameworks. We will introduce students to popular web application development frameworks and the network stack so students can analyze, design, implement, and manage distributed information systems. In this process the student will develop skill in applying the principles of telecommunications and networks and explore how to bring their data science models to a wide audience.

Learning Outcomes¹²

1. Develop proficiency in using html and css for web user interfaces
2. Introduce Java Script (JS) and JS frameworks for client-side user interaction
3. Introduce data visualization technologies
4. Introduce web application development frameworks
5. Introduce networking stack (ex. TCP/IP)
6. Understand networking technologies used to architect distributed systems from application components

¹ <https://teaching.cornell.edu/teaching-resources/designing-your-course/setting-learning-outcomes>

² https://www.depts.ttu.edu/opa/resources/docs/Writing_Learning_Outcomes_Handbook3.pdf

Logistics

1. All students should have access to an installation of Visual Studio Code. If needed, please seek an appointment with the TA in the first week of class to complete the required setup.
2. Faculty teaching this class (in particular, Prof. Clinton Daniel) are creating video walk-throughs to help students with the hands-on components. These videos are designed to be viewed and followed before class meetings so that class time can be used to help students overcome any technical challenges with implementing the concepts covered. Links to these videos are available on Canvas.
3. Students will form groups to complete projects. Follow instructions on Canvas for group size. All students should sign up on the groups pre-created for the class, do not create new group sets. In case of group dysfunction, students may fire disruptive members, or sub-groups may create their own group at any time.
4. Please use the term “ISM 6225” in the subject line of your email to help me filter emails.
5. Readings and assignment deliverables are specified on the course site on Canvas.
6. Deliverables are due by the end of day on the due date (usually this means 11:55pm). The default due days are Sundays, but adaptations are made to accommodate calendar and scheduling issues.
7. Make up opportunities are not likely to be necessary in this class. In case they do, they will only be provided for job-related situations and for medical emergencies in the immediate family.
8. The instructors conduct all sections of the course with the same calendar tightly in sync. Accordingly, students can reach out to any instructor of the course to expand the availability of office hours.

Business Continuity

In the event of an emergency, USF may opt to continue delivery of instruction through methods that include but are not limited to: Canvas, Teams, and email messaging and/or an alternate schedule. It's the responsibility of the student to monitor Canvas for each class for course specific communication, and the main USF, College, and department websites, emails, and MoBull messages for important general information.

Presentation

To help build your communication skills, each group will be required to present their application to the class. Please use the instructions in the presentation assignment for details.

Grading

Activity	Default Type	Unit weight	Total weight
Exam	Individual	12%	12%
Assignments	Group	10%, 14%, 14%	38%
Project Development	Group	25%	25%
Project Slide Deck	Group	10%	10%
Project Presentation	Group	10%	10%
Feed forward	Individual	2%, 2%, 1%	5%

Grading Policy

Total%	Grade	Total%	Grade	Total%	Grade	Total%	Grade
>=95	A+(max 10% of class) ¹	>=84	B+	>=74	C+	>=63	D+
>=90	A	>=80	B	>=70	C	>=60	D
>=87	A-	>=77	B-	>=67	C-	<60	F

Useful Links

Interviewing: <https://twitter.com/siddharthm83/status/1447220066043318285?s=20>

Flask: <https://blog.miguelgrinberg.com/post/the-flask-mega-tutorial-part-i-hello-world>

¹ At instructor's discretion, among the top students in the class

ISM 6225: Tentative course outline¹

Week	Lecture topic	Class activities	Deadlines
1	Syllabus, OSI Model	Course overview, OSI Model Lecture	Attendance
2	OSI Model	OSI Model Lecture`	Group formation
3	OSI Model, Wireshark	Wireshark Tutorial	
4	Support services, Cybersecurity	Lecture	
5	IDE, Github introduction	Visual Studio Code walk-through	Assignment 1 – Wireshark (10)
6	HTML Introduction	Online HTML Tutorial	Exam 1 (60 minutes)
7	CSS Introduction	Online CSS Tutorial	
8	MyWeb Deployment	MyWeb setup and walkthrough	
9	Flask	Flask Tutorial	
10	Flask	Flask Tutorial	Assignment 2 – HTML/ CSS (14)
11	Flask database integration	Flask Tutorial	
12	JavaScript Introduction	Online JavaScript Tutorial	
13	JavaScript Introduction	Online JavaScript Tutorial	
14	Chart.js	Chart.js Tutorial	Assignment 3 – CSS, JavaScript (14)
15	Flask Application Presentation		Project Presentation Slide deck Feed Forward

¹ In the interests of the class, deviations may be made in the coverage of topics as outlined in the tentative course calendar. However, to help plan your calendars for the rest of the semester, assessment and deadline dates will be non-negotiable after the first day of class. Some deadlines may be clubbed together to accommodate schedules.