Computer Science, California State University, Northridge

Web Development and Hosting and Lab

CIT 384/L

Fall Semester 2021

Dr. Steven Fitzgerald (steve@my.csun.edu) & Prof. Lisa Smith (lisa.smith.597@my.csun.edu)
https://academics.csun.edu/faculty/steven.fitzgerald
https://academics.csun.edu/faculty/lisa.smith

General Information:

Zoom Links:	https://csun.zoom.us/my/smf.steve
	https://csun.zoom.us/j/88695255776 (for COMP 384L: 21815)
Slack Link:	https://cit-384.slack.com
Slack Channel:	#general
GitHub Organization:	https://github.com/orgs/CIT384/dashboard
Office Hours:	Fitzgerald: Monday @ 2:00-2:45 & Tuesday @ 11:00-11:45
	Smith: By Appointment

Class Information for: CIT 384 (17293) and COMP 384L (17294)

Meeting Times: Monday & Wednesday @ 9:30 AM - 10:25 AM & 10:30 AM - 11:45 AM

Class Information for: CIT 384 (21814)

Meeting Times: Monday & Wednesday @ 3:30 PM - 4:20 PM

Class Information for: COMP 384L (21815)

Meeting Times: Monday & Wednesday @ 4:30 PM - 5:45 PM
Prof. Lisa Smith is the instruction of record for COMP 384L (21815)

Class Schedule (subject to change)

This content of this class is under total redesign to improve the relevance of this class to CIT students. In the past, all CIT students were required to take COMP 484, which was geared towards COMP students. Consequently, the initial offerings of CIT 384 mirrored COMP 484.

Section 0:	Getting Started
Section 1:	Anatomy of a Webserver
Section 2:	Client-Side Dynamic Content
Section 3:	Server-Side Dynamic Content
Section 4:	Web Environment Administration

Our GitHub Organization will be updated to reflect changes to the class schedule.

1. Things to Note:

- My goal is NOT to make this an easy class, but to maximize the amount of learning.
- I provide a lot information to provide context.
- Don't get overwhelmed with the information flow, don't focus on details but concepts.
- The best way to be successful in this class is to be engaged!

Revised: 8/30/21

- The more you put into the class, the more you will benefit.
- All class-related questions, comments, etc., are to be posted on Slack.

2. Course Material:

- This class requires you to have direct and continual access to a computer. In short, it is a *de facto* requirement to own your own laptop/desktop computer.
- You should be familiar with the Linux CLI (command line interface)
- You are required to access several online resources.

3. Course Description (from the Catalog):

Prerequisites: CIT 270/L, CIT 360/L. High-level understanding of TCP/IP protocol stack as it exists in practice, including example protocols. Packet capture and traffic analysis. System and software architectures for web applications, including hosting and horizontal scaling of web and database servers. Principles of website design at front-end, back-end and database tiers. Web service technology using AJAX and JSON. Security, privacy and reliability issues. Two hours of lecture and three hours of laboratory per week. Credit not allowed for both CIT 384/L and COMP 484/L.

In this course, we will learn the fundamentals of developing a web site and web applications. This will provide us with a better understanding of the needs of our users and of our software developers that we serve. We then turn our attention to developing the necessary tool set to configure, to deploy, and to maintain IT systems that hosts such web applications. We also examine other tools and techniques to ensure seamless and continuous delivery of the associated services to users. Knowledge and expertise in both pieces will prepare us to be effective members of a DevOps team.

While the best-practices and the technology tool-sets *de jour* are constantly changing and evolving (and you will be expected to learn these new practices and technologies, again, again, and again *throughout* your career), there are some widely accepted concepts and universally adopted technologies.

As such, this class is designed to reinforce your knowledge of these prevalent technologies, but with an emphasis on the core concepts and best-practices:

- effective team-based communication --- using https://www.slack.com
- source and version control --- using https://git-scm.com/
- container, containerization --- using https://docker.com
- automation, automation, automation --- it's a mindset, not a tool!

5. Course Evaluation:

The course evaluation for both CIT 384 and CIT 384L are unified. The instructor/s does not make a distinction between the lecture and lab meetings and utilizes the entire time as appropriate to cover the material and projects as necessary. Each student will be evaluated and will assigned the same letter grade[1] for both CIT 384 and CIT 384L. This grade should reflect the quality and quantity of knowledge that the student acquired via this course. (It is all about learning!)

[1] Plus/Minus grading will be used.

Note that there is 15% percentage associated with participation. A student may demonstrate in various ways their involvement in the class. Through this involvement, I gain a better understanding of what you, and the class as a whole, has learned and what material needs to be reinforced or reviewed to strengthen the learning process.

Students are expected to work diligently and consistently throughout the semester. Students that procrastinate till the end, in hopes that they can crunch and cram just prior to the final are sadly mistaken.

The table below provides the objective measures used to calculate a student's final grade.

Type	**Weight**
Laboratory Assignments	60%
Participation	10%
Quizzes, Exercises, Assignments, and other Activities	10%
Final Practicum Exam	20%

Regardless of the structure used to assign a quantitative number to each student, it is the Professor's goal to assign a final quantitative number that is closely aligned with the student's qualitative understanding of the course content. Your active participation in this class is central to demonstrating course knowledge.

6. Course Policies

I encourage everyone to collaborate, to work in teams, and to discuss course material with your colleagues. All student submissions, however, must be the work of the student who has submitted the material. Students should therefore be familiar with the University's rules on academic dishonesty, which can be found in the Undergraduate/Graduate Catalog. In particular, plagiarism will not be tolerated! Any student caught plagiarizing any work may automatically receive a grade of F for the course. If you are unsure as to what constitutes plagiarism, it is your responsibility to check with the instructor. Other forms of dishonesty will result in similar actions.

Note: Changes may be (will be) needed to this syllabus and the course plan. All such changes will be announced in class and posted on the class website. Students are responsible for this information.