

Syllabus

Course Information

Department: Applied Engineering and Sciences

Course: COMP 630.M1 Systems Software

Credits: 4

Semester: Fall 2023

Room: P126

Instructor

Ken Gitlitz

Office: P145

Office Hours: See Canvas

Contact: ken.gitlitz@unh.edu

Discord: <https://discord.gg/MgMHv63h92>

Modality

- In-person, scheduled weekly class meetings
 - Location: Room P126
 - Day/Time: Wednesday, 5:40 – 8:30
- In-person and online engaged time and learning activities outside class.

Course Description

Today's organizations need to deliver applications and services by automating processes that develop and deploy software and manage scalable computing infrastructures. Students will learn how to integrate development, operations, and cloud computing and gain experience with design approaches, version control, continuous integration, cloud-based APIs, and monitoring metrics. Key to systems software tools and automation processes are increased communication and collaboration practiced in the course team projects. Students who took COMP 698 Sp/Topic Systems Software cannot repeat for credit.

Learning Goals

Describe elements of software development.

Configure and use system software, including AWS, Git and Docker.

Design and implement a systems software project.

Format

Lecture

- Take written notes
- Ask questions
- Compare notes after class
- Listen

Coding / Configuration

- Ask questions
- Seek help from peers

Exams

- Final
- Closed everything

Prerequisite Knowledge

Some exposure to computer programming.

Evaluation

Homework 35%

You may hand in ONE late homework assignment. Otherwise, no late homework accepted.

Final Exam 20%

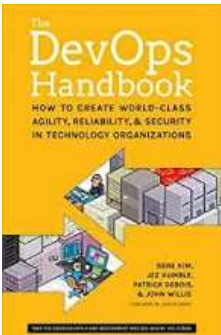
Project 35%

Attendance / Participation 10%

Email the instructor before you miss class.

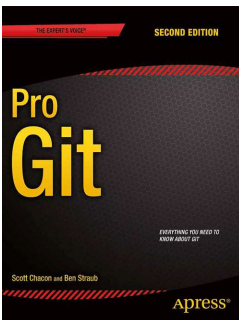
Learning Resources

DevOps Handbook:



1. Go to the UNH Library Web page: <https://library.unh.edu/>
2. Click on Databases
3. Click on 'O' (oh)
4. Click on O'Reilly
5. Log in with your UNH credentials
6. Search for the DevOps Handbook

Git Pro:



Free at: <https://git-scm.com/book/en/v2>

Internet Reading, as assigned.

Development Tools

Your personal laptop (or the laptop loaned from the department) is the development platform for all the learning activities in this class. You can use the operating system you are more comfortable with: Mac OSX, Ubuntu or other Linux distribution, or Windows.

The **development tools** you need to have on your machine installed at the global/system level are:

- **bash shell** available in the **terminal** command line utility (CLI) on MacOS or Linux, or available in the **Windows Linux Subsystem (WSL)** on Windows 11. If you have Windows 10, you need to use **git-bash**.
- **git**
- **Python 3**
- **Visual Studio Code** Python integrated development environment (IDE) and other Python tools:
 - **Python debugger**
 - **Static analysis tools** such as **flake8**, **pylint**, **pycodestyle**
- **Docker**
- **AWS Emulators & CLI**
 - **You may choose to sign up for an AWS account.**
- **Other software packages, as required**

Students must have the ability to download and install software.

Students must be proficient learners of computer technology and programming languages.

Students must have the ability to meet remotely over Zoom should this be required.

See the instructor if you have any questions regarding the technology required for this course.

Policies

Academic Integrity

Individual products of your learning in this class (design documents, code, reflections) or individual contributions to collaborative work (e.g., lab, team project) must be entirely done by you. You cannot submit as yours something done by others or obtained from external sources.

Collaborative work has clear requirements regarding the nature of collaboration. Grading is based on your individual contribution to the collaborative work. If unclear, you must consult with the course instructor on what is allowed. It is your responsibility to get such clarification.

Whether done individually or in collaboration, submitted coursework must ALWAYS give clear attribution to the source(s) of content included or integrated in your work.

- Annotate the content that originates or has been modified and integrated in your work.
- Reference the source(s) you used, whether articles, forum or blog posts, public GitHub repos, tutorial videos, or individual help.
- Give credit to individuals who have helped you, whether peers, tutors, lab/tech assistants, course instructor, or any other person (friend, relative, etc.)

Do not work on behalf of someone else and do not provide your work products to others. If you do, you commit an act of academic dishonesty. There is no way to know whether those who get your work products intend to submit them as their. Equally important, this is NOT how you help someone learn.

There are very serious repercussions if you deviate from the course and university academic integrity policy. The penalty for the first occurrence of academic misconduct is no credit for the graded work in question. The second occurrence of academic misconduct results in failing the course. You will receive notice of the academic misconduct allegation from the course instructor. The course instructor will meet with you and give you the opportunity to respond. If the violation stands, the course instructor will report it to the Office of Community Standards.

Bottom line, do not cheat, plagiarize, or facilitate academic dishonesty. It is very important that you review the University's [Academic Integrity policy](#).

Attendance

Class attendance is important for your learning. You are responsible for all course assignments and meeting all deadlines unless exceptions are agreed upon with the instructor ahead of time. Attendance in this course is required. If you need to miss class for a planned activity, email the instructor ahead of time; you are not required to include why you will be absent. Missing class does not excuse you from homework due dates.

See the [Attendance and Class Requirements](#) policy in the undergraduate catalog.

In the event that a student needs accommodation for a religious or cultural holiday/observance, that student is encouraged to make that request as early in the semester as possible.

Long Term Absence

If you are dealing with an unexpected, extenuating circumstance that will keep you out of class or affect your performance for more than a day or two, reach out to the Dean of Students (dean.students@unh.edu) to request a letter be sent to all your faculty.

If you are required to miss a significant number of classes, you will be provided temporary academic supports so that you can continue to make satisfactory progress in this course. Please contact your course instructor to discuss the specific types of supports that will be implemented during your absence. For example, if you are home because of illness, the instructor will conduct remote office hours via Zoom.

Accommodations for Disability

According to the Americans with Disabilities Act (as amended, 2008), each student with a disability has the right to request services from UNH to accommodate his/her/their disability. If you are a student with a documented disability or believe you may have a disability that requires accommodations, please contact Student Accessibility Services (SAS) located on the Manchester campus in the Student Services Suite (Office 405A).

Accommodation letters are created by SAS with the student. Please follow-up with your instructor as soon as possible to ensure timely implementation of the identified accommodations in the letter. Faculty have an obligation to respond once they receive official notice of accommodations from SAS but are under no obligation to provide retroactive accommodations.

For more information refer to www.unh.edu/sas or contact SAS at 603.862.2607, 711 (Relay NH) or sas.office@unh.edu.

Confidentiality and Mandatory Reporting

The University of New Hampshire at Manchester and its community are committed to assuring a safe and productive educational environment for all students. Title IX makes it clear that violence, harassment, and discrimination based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, and ability.

If you or someone you know has experienced sexual or relationship violence, and/or stalking and harassment, you can find the appropriate resources below:

Reporting On Campus:

- Title IX Deputy Intake Coordinator: Lisa Enright 603-641-4336. Lisa's office is located on the fourth floor in Room 439.
- UNH Manchester Security: 603-641-4124 or located in the second floor foyer

Reporting Off Campus:

- Manchester Police Department - 603-668-8711, 405 Valley St. Manchester, NH
- or your local police department

For emergencies dial 911.

Confidential Support Resources:

- YWCA, NH – 603-668-2299(24hour), 72 Concord St. Manchester, NH
- Sexual Harassment and Rape Prevention Program (SHARPP): 603-862-7233(24hour), 8 Ballard Street, Wolff House, Durham NH 03824
- The Mental Health Center of Greater Manchester: See contact information and hours above
- 24 Hour NH Sexual Violence Hotline: 1-800-277-5570
- 24 Hour NH Domestic Violence Hotline: 1-866-644-3574

Credit Hour Policy

This syllabus reflects the federal definition of 1 credit hour, that is:

1 credit hour = 3 clock hours of engaged time per week per 1 credit over a 15-week semester.

This means that this course requires **12 clock hours of student academic work each week.**

Student academic work (or engaged time) means all your work in this class:

- Attend class meetings and participate in learning activities
- Do weekly labs, readings, and assignments
- Participate in collaborative learning experiences, such as working with peers on labs or the course team project
- Participate in scheduled study groups
- Seek and get tutoring help and other academic supports from the Library and CAE
- Consult with and get assistance from the course instructor and classroom assistants
- Attend one-on-one check-ins with class instructor to evaluate your progress.

For more information, please see: [Pp111 Policy On Credits-And-Degrees.pdf \(neche.org\)](#)

Incompletes

An incomplete will be considered only in the event of compelling, non-academic circumstances beyond a student's control, and towards the end of the semester when the student has but a few assignments left to finish the course, and only if the student requests an incomplete. An administrative failure (AF) is the appropriate grade for a student who has missed substantial portions and assignments of a class.

Curtailed Operation

If the university curtails operations due to weather, we will not hold in-person activities for our safety and the safety of others. As soon as possible, I will post an announcement on Canvas about due dates, any make-up work, and (*if applicable*) any online options that may make sense depending on where we are in the course. Please make sure you have access to the UNH Alert RAVE system. If needed, sign up for RAVE Alerts [here](#).

Center for Academic Enrichment:

The Center for Academic Enrichment (CAE) professionals and peers are available to support all UNH Manchester students in maximizing their learning potential through individual in-person and online tutoring, in-class workshops, and study groups in math, writing, course content, study skills, time management, and personal statements. All students registered for UNH Manchester courses are entitled to one hour of individual tutoring, per course, per week. Appointments are available at <https://caetutor.unh.edu>; for more information, contact the CAE at (603) 641-4113, or unhm.cae@unh.edu.

Use of Other Tools

No phone use is permitted in class, unless directed to do so. For example, you may need to use your phone to get access to the phone camera if your laptop does not have a camera and you are in a Zoom session that requires video on. Unless otherwise specified, the use of automated writing tools, such as chatGPT and similar artificial intelligence (AI) tools, is strictly prohibited in this course, even when properly attributed. The use of automated writing tools is considered plagiarism (as defined by SRRR 9.3) and will be handled in accordance with existing policy.

Early Alerts Report

The University is invested in your academic success. If a faculty member is concerned about your academic behavior or performance, they may submit an academic alert -- particularly around Week 5 (Sept. 22-Oct 1). Academic alerts are not punitive. The goal is to provide you with support and resources to support your success. They act as an important check-in point and, if you receive an academic alert, you will receive an email to your UNH email address. It is strongly recommended that you meet with a professional advisor and connect with your instructor to discuss the reason for the alert.

RESOURCES

Resources for Students

Key Links to collective Web Sites: [Student Life Supports](#)
[Academic Success Supports](#)

Financial Literacy Resources

All students benefit from understanding their mindset about money, how to build and use a personal budget, as well as understanding interest rates, loans, insurance, investing, and more. UNH has wonderful free resources for students in [Library Resource Guides](#), and every student (and faculty!) can access [CA\\$H COURSE](#) by creating a free account. Find more information on the [Financial Wellness](#) site of Health & Wellness.

Emotional or mental health distress

In partnership with The Mental Health Center of Greater Manchester, UNH Manchester offers consultation visits on a walk-in basis and through telehealth appointments. Services include:

- Free confidential screening & consultation with a licensed mental health therapist.
- Referrals to mental health or substance misuse treatment. And assistance in understanding how to afford additional treatment (with or without insurance!) or find free services.

You may email: unhm.wellness@unh.edu **to make an appointment to meet with a counselor by clicking [here](#) or by using the QR codes below.**

For in person appointments please scan this code



For remote appointments please scan this code



If you would like to connect to counseling services directly, you may do so by contacting The Greater Manchester Mental Health Center at (603) 668 - 4111.

The National Suicide Prevention Lifeline provides 24/7, free and confidential support via phone or chat for people in distress, resources for you or your loved ones, and best practices for professionals. Call (800) 273-TALK (8255).

Sexual Harassment and Rape Prevention Program (SHARPP)

Provides free and confidential advocacy and direct services to survivors. UNH Manchester's SHARPP Office Hours during Fall & Spring Semesters are Mondays 9am-4pm in Room 471. Zoom Appointment Availability year round is Mon-Fri 9am-4pm

24/7 Crisis Line: 603-862-SAFE (7233)

Main Office: 603-862-3494

<https://www.unh.edu/sharpp/> (<https://www.unh.edu/sharpp/>)

UNH Manchester students can also contact the YWCA of New Hampshire – 603-668-2299 (24hour), 72 Concord St. Manchester, NH, for crisis or emergency services.

Food Pantry

The UNH Manchester Food Pantry, located in room 437 is open Monday through Friday from 8:00am- 9:30pm. Any UNH Manchester community member can take what they need. If you have any questions please

email UNHM.Foodpantry@unh.edu

Basic Needs Support: Food, Housing, Financial. <https://www.unh.edu/dean-of-students/getting-help/housing-food-financial-basic-needs-support>

Library: The UNH Manchester librarians are available to assist you with your research. You can contact a librarian by calling 603-641-4173 or by emailing unhm.library@unh.edu.

The following online resources provide information about library resources and services:

UNH Manchester Library webpage: <https://cps.unh.edu/library>

Online Research Guides: <https://libraryguides.unh.edu/index.php?b=s>

Access Library Resources Remotely: <https://libraryguides.unh.edu/remotearchive>

Reserve a study room for Zoom classes: <https://libraryguides.unh.edu/remotearchive/studyrooms>