CSE 1010 Introduction to Computing
Fall 2022 Information and Syllabus

In CSE 1010, you will learn how to solve computing problems using algorithmic thinking, programming, computing logic, processes, and environments. The course follows a flipped design: recorded lectures and an interactive textbook are used to teach materials outside of class, while class-time is reserved for solving challenging problems along-side peers and instructors. Lab assignments were developed from problems in mathematics, science, and engineering.

Prerequisites: Not open for credit to students who have passed CSE 1100 or 1729.

Logistics: The course instructors are:

- David Strimple (Storrs), david.strimple@uconn.edu, office is ITE 260
- Chris Kmiecik, (Hartford, Avery Point campus), chris.kmiecik@uconn.edu

Table 1: Course staff. TBD

Class times and locations are listed on your course schedule. All the labs are in- person. Lectures will be posted on HuskyCT

Online office hours: Instructor office hours will be available in Husky CT soon.

The course website: is hosted on HuskyCT which is used for course material distribution, announcements, exams, and grades. The title of the course in HuskyCT is CSE-1010-Storrs-Hartford-AveryPoint Lab Sections-1228. The online textbook zyBooks will be used to disseminate readings and homework assignments. Discussion forums are hosted by Piazza and can be reached through HuskyCT. **Do not publicly post code and partial solutions to problems, mark these private to professors and lab instructors only.** Also, please spend time thinking about your question – the best questions are clear, concise, and ask about concepts. These types of questions can be made public and benefit the entire class. Questions that, for example, ask lab instructors to debug code are of minimal use. Changes to the course syllabus, schedule, or assignments will be announced in HuskyCT.

Learning Objectives and Outcomes:

After completion, you will be able to:
- LO1: Develop computational programs to analyze data and solve computing problems in Python.
- LO2: Translate science and engineering problems to mathematical models using algebra, probability, statistics, and domain knowledge.
- LO3: Compute statistics and visualizations of various types of data using Python visualization libraries and pandas to clearly communicate information.

Assessment and Evaluation:

Grades are administered in HuskyCT. Students are responsible for tracking their progress through the HuskyCT grade center.

CSE 1010 includes both formative and summative assessments.
• Participation questions (LO1,LO3) – 5%:Participation questions are activities completed while reading the textbook.
• Homework (LO1,LO2,LO3) – 25%: Homework assignments consist of lab assignments. Several special homework assignments are inspired by real-world problems in one of UConn's seven engineering disciplines and science more broadly. The lowest two homework grades will be dropped (with the exception of the chapter 10 assignment and the final homework assignment).
• Lab assignments (LO1,LO2,LO3) – 15%:Lab assignments consist of problem formalization and programming problems.
• Participation (LO1,LO2) – 5%: Participation at your lab section is required. It is expected that you attend and participate in all your weekly lab sections. If you cannot attend your lab section for whatever reason you must contact your TA.
• Exams (LO1,LO2,LO3) – 50%: A midterm (25%) and cumulative final (25%).

We strongly encourage high-level discussion of ideas and concepts with peers and instructors, but all assignments must be completed and submitted individually.

Course Design:

CSE 1010 is a flipped course, so all lecture and reading materials will be available to you out- side of class on HuskyCT (asynchronous).   Lectures are broken into short video segments.   It is essential that you finish the assigned reading, participation exercises, and lectures prior to the lab section to ensure that you are able to participate in discussions and complete the lab assignments.
Additionally:
• All work must be submitted on time. Late submissions will be marked as a zero for that assignment.
• All work will either be tracked in zyBooks or handed into HuskyCT.

Required Book:
This course uses a custom zyBook that is accessed online. The book can be bought directly from the zyBook's websiteor the UConn bookstore. ==Purchasing the book directly through zyBook's website is usually less expensive. In short, visit zyBook's website, make a new account or sign into an existing account, and enter in the book ID: UCONNCSE1010Fall2022and make sure to select your lab section.==

Online textbooks have several advantages over traditional printed textbooks. Many difficult concepts have interactive animations to help build intuition, participation activities that encourage you to engage with the material, and challenge questions to give you immediate feedback. zyBooks can be accessed through your specific lab from your course schedule. If students are learning remotely and do not have regular access to the internet, please contact your instructor ASAP. It is not recommended for learning, but zyBooks chapters can be downloaded as PDFs for offline study.

Extra Help & Resources:
1. Office hours will be offered online and in-person. Please see the schedule on Husky CT for office hour times.
2. Online discussion forums are available across lab sections. See HuskyCT announcement for more details.
3. If you are having difficulty with writing, the writing center is a great resource.
4. Tutoring services (on the Storrs campus) for CSE 1010 are available through the Engineering Tutoring Center or Upsilon Pi Epsilon.

Schedule of Topics:
In CSE 1010 we cover the following topics throughout the semester.
0.   Course Overview, Scientific Computing, Python Basics
1.   Variables and Expressions
2.   Functions
3.   Control Flow
4.   Iteration and definite loops
5.   Indefinite Loops
6.   Classes and Basic Data Structures
7.   Advanced Data Structures and Functions
8.   Input, Output, and Modules
9.   Data Science: Data and Visualization
10.   Data Science: Probability and Statistics
11.   Data Science: Random Variables and Distributions

The latest schedule of topics can be found in the schedule on Husky CT: Course Content > meta > Course Schedule.

Policies

Academic Integrity:

Formally, we follow the university policy on academic integrity to discourage and penalize academic misconduct.

> Academic misconduct is dishonest or unethical academic behavior that includes, but is not limited to, misrepresenting mastery in an academic area (e.g., cheating), failing to properly credit information, research, or ideas to their rightful originators or representing such information, research, or ideas as your own (e.g., plagiarism). – UConn Community Standards, Academic Misconduct.

Students found in violation of academic integrity may be subject to failing the assignment, the course, and/or review by the academic integrity hearing board. See the student code and references therein for more information.

Informally, all academic work you submit must be your own or in collaboration with explicitly specified peers (where permitted). Discuss classwork, exercises, and problems with peers in a manner that helps all parties understand a problem or possible paths towards its solution. Do not copy solutions from other students or from any other resource. You will put your future self in the best position to succeed in academia or industry if you dedicate yourself to learning and retaining the material.

Disabilities:
The University offers many services to its students with disabilities through the Center for Students with Disabilities. Eligibility for these services is determined individually based ones when needed. If you have a diagnosed disability (physical, learning, or psychological) that will make it difficult for you to carry out the course work as outlined, or that requires accommodations such as recruiting note-takers, readers, or extended time on exams or assignments, please advise the instructor during the first two weeks of the course so that we may review possible arrangements for reasonable accommodations.