# Syllabus for COMP130-01, Introduction to Computing

Fall 2023

Dickinson College

Instructor: John MacCormick

### Learning goals

* understand elementary concepts of computer programming (including recursion, dictionaries, libraries and objects) and software development (including testing and debugging)
* use scientific reasoning to evaluate hypotheses about computer program outputs
* gain an appreciation of the social, legal and ethical issues raised by computing and computing for the greater good
* [college-wide quantitative reasoning goal] comprehend and create basic numerical and/or logical arguments. (For COMP 130, this means that students will use abstraction and logical thinking as problem-solving techniques.)
* [college-wide laboratory science goal] develop the ability to use scientific methods as a way of understanding the world
* [college-wide laboratory science goal] gain knowledge of content and principles within the natural sciences
* [college-wide laboratory science goal] develop the ability to critically evaluate claims from a scientific perspective

### Inclusivity

Everyone in the course belongs equally to our classroom community. The instructor aims to create an atmosphere where everyone feels a sense of belonging and feels free to ask questions.

Teaching methods

* Required reading in advance of most lectures
* Lectures and class discussions
* Laboratory sessions for in-depth investigations and practice
* Homework and exams to reinforce understanding of concepts

When and where

* Lectures: Monday, Wednesday and Friday 8:30–9:20am in Tome 118
* Labs: Wednesday 3:00-5:00pm in Tome 120
* Office hours: see the instructor's [office hour webpage](http://users.dickinson.edu/~jmac/office-hours.html).

### Books

The required textbook is available for free as an electronic resource:

* [Think Python 2e](https://greenteapress.com/wp/think-python-2e/)) by Allen B. Downey, Green Tree Press

Printed copies may be purchased if desired. The printed version is published by O'Reilly Media; 2nd edition (2016); ISBN-13: 978-1491939369.

### Assessment and grading

* Final grade will comprise:

|  |  |
| --- | --- |
| Homework assignments (about 12 x 1.7% each) | 20% |
| Lab assignments (about 9 x 2.2% each) | 20% |
| Written in-class exams (2 x 10% each) | 20% |
| Lab exams (2 x 10% each) | 20% |
| Final written exam | 20% |

* **Homework assignments:** There will be approximately 12 homework assignments, due at the start of class on the dates specified on the class schedule. All homework assignments must be submitted in hard copy. Handwritten solutions are acceptable. Computer code must use correct formatting as described in the assignments. Only a random subset of homework questions will be graded for correctness; the remainder of questions will be graded on completeness only. The weighting of homework assignments is not equal. The weight of a homework assignment will be proportional to the total number of points of the questions graded on that assignment, plus a completeness component. In all cases, it is the responsibility of the student to consult the provided solutions and understand the correct approach to every question, whether or not it was graded.
* **Lab assignments:** There will be approximately nine lab assignments, due at the start of class on the dates specified on the class schedule. Lab assignments will be submitted electronically; they typically require a combination of computer programming and typed responses. Most labs will be completed in pairs.
* **Written in-class exams:** There will be two 50-minute written exams, taking place in class on **Friday, October 6** and **Friday, November 17**. These will be handwritten in-class exams. Written exams will be “closed-book” meaning that you cannot consult any materials. Exception: one page of handwritten notes will be permitted. The course webpages provide detailed exam rules and instructions.
* **Lab exams:** There will be two 120-minute lab exams, taking place during the class lab period on **Wednesday, October 11** and **Wednesday, November 29**. Lab exams will require students to write and submit computer programs electronically. Lab exams will be “open-book” meaning that students can consult course materials and their own notes, but not external materials. The course webpages provide detailed exam rules and instructions.
* **Final written exam:** The final exam will be on **Monday, December 11 from 9:00am-12:00pm**. Exam conditions are similar to the written in-class exams: closed-book except for two pages of handwritten notes.
* Final scores will be converted to grades according to the following thresholds (or possibly more generous thresholds): 93%=A; 90%=A-; 87%=B+; 83%=B; ...; 60%=D-.

### What will be on the exam?

Technically speaking, any material covered in any lecture, reading, lab, or homework assignment is eligible to appear in the written exams and lab exams. In practice, a strong majority of exam questions will be similar to a homework question, lab assignment, an example done in class, or other assigned practice questions.

### Amount of work

College policy recommends approximately 3 hours of independent work for every hour of class time. Our class meets for 2.5 hours of lectures and 2 hours of lab per week. Therefore, based on the lecture times alone, you should expect to spend 7-9 hours per week (outside of class time) on this course. Completing labs may typically require another 1-2 hours per week outside of class time.

### Plagiarism, copying, and collaborating

The College's standard policy on plagiarism applies and you should be familiar with it, but here are some key points that apply particularly to this course:

* All work must be your own. Exception: most labs will be completed in pairs.
* Never copy work from someone else or allow your own work to be copied.
* You may not copy or consult assignment solutions from any source, including online repositories or solutions provided for previous instances of the course. Exception: after submitting a given homework assignment, you may consult the solutions to that assignment provided for this instance of the course, after they have been posted to Moodle.
* If you use exact words or code taken from any source, you must use quotation marks (or similar indicators in code) and cite the source. **Note that this applies to material generated by AI systems, such as online chat bots.**
* If you use ideas from any source without using the exact words or code of the source, you must cite the source. **Note that this applies to material generated by AI systems, such as online chat bots.**
* Students are encouraged to help each other understand concepts, including concepts that apply to homework and lab assignments. However, all work must still be your own. **So if you discuss a problem with any person or generative AI system, you must destroy any written or electronic material that results from the discussion, and re-create it later on your own.**
* Be especially careful not to copy computer code from another student, or from the Internet (unless an assignment question specifically states that it is permitted—and even then, state the origin of any copied code clearly using a comment in your source code). Sharing or copying computer code is easy and often tempting, but it is not permitted and will suffer the same penalties as any other form of cheating.

### Accommodations

The instructor will follow college policy on [Accommodating Students with Disabilities](http://users.dickinson.edu/~jmac/accommodations.html).

Late Work Policy

Each student is permitted a total of four no-penalty days of lateness for submitted work over the entire semester; every subsequent day of lateness incurs up to a 25% penalty for the late assignment. Late days can be used only in whole day units. Accounting for late days is mostly via an honor system: students should keep count of their late day usage. To use one or more late days on a given assignment, state clearly at the start of your submission how many days you are using, and the total used so far in the semester.

Recording and posting of class content

Typically, class meetings will not be recorded. If a class meeting is recorded, the content will be made available only to members of the class. Do not share or repost class recordings or other content; doing so would be a breach of Dickinson’s [Community Standards](https://www.dickinson.edu/info/20273/dean_of_students/867/community_standards). Classes may also be recorded for accommodation purposes.