

Introduction to Computing I

COSC 101 Section C

Instructor Info —



Forrest Davis (he/him)



T: 3:30-5:00PM, W: 9:00-10:00AM, R: 12:30-1:30PM



322 Bernstein



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Course Info —



T, R



8:30-9:45AM



214 Bernstein

Overview

Welcome to Introduction to Computing I! In this course, we will learn introductory topics in computer science, ranging from basic programming constructs (variables and types, conditionals, iteration), input and output, basic data structures, and recursion. We will apply these concepts in our programming practice utilizing the programming language Python. No prior experience in computer science or programming is required.

Material

Required Text: Foundations of Python Programming: Functions First

Moodle Site: The course Moodle can be found here. We will also use Gradescope, which can be found here.

Course Site: The course site can be found here. It includes links to course materials and slides.

Schedule of Topics: A dynamic schedule of topics for this course can be found here.

Coursework

Textbook readings, videos, and pre-class quizzes

The course is primarily complemented with readings from our free, online, interactive course textbook linked above. **Before each class meeting you should read the textbook sections listed on the calendar** to prepare for active engagement.

The textbook includes interactive materials which I recommend you complete, as it will help you synthesize materials. I will draw from the textbook materials (and supplemental resources) to create **pre-class quizzes** that will be posted on Moodle. Pre-class questions must be completed before the start of each class period, unless something unpredictable happens (e.g., you become ill, a personal/family emergency occurs). Answering these questions will help you check on your understanding of course materials and help prepare you for class.

Class

Each class meeting will feature a mix of lectures, demonstrations, open question and answer, and active problem solving (on your own and in small groups). You are expected to attend class, respond to questions, solve problems, and respect and support your classmates. If there is someone you **do not** want to work with, please complete this form anytime during the semester (no reason needs to be provided).

Homework Assignments

Homework assignments apply the concepts discussed/practice in class (and lab) to more challenging problems. There will be 9 homework assignments throughout the semester. Homeworks will be due **Thursdays at 11:59pm** and will be posted on the course website the week before.

Exams

There will be three midterm exams plus a final exam. The concepts in this course build on one another, so all exams will be cumulative, although they will emphasize concepts discussed and practiced since the last exam. The exams occur during the regularly scheduled class time.

- **Midterm Exam 1:** Tuesday, Oct 1
- **Midterm Exam 2:** Thursday, Oct 24
- **Midterm Exam 3:** Thursday, Nov 21
- **Final Exam:** Thursday, Dec 19 9:00-11:00AM

Please let me know in advance if you will be unable to take one of the exams on the scheduled date.

Grading Scheme

Principles

This course uses an **alternative grading system** that is different from the traditional points/percentages systems used in many courses. The grading system in this course is designed to be **equitable** and **encourage learning and growth** by incorporating:

- Specifications that clearly define how your learning will be assessed
- Constructive feedback that you can and should use to improve your work
- Opportunities to revise and reattempt work without penalty

Levels of Achievement

Instead of receiving some number of points on homeworks and exams, every homework task and exam question will receive a mark that summarizes your current level of achievement:

- **Excellent** means your work is correct and well structured
- **Meets expectations** means your work is mostly correct and mostly well structured
- **Significant gaps** means your work is only partially correct and/or partially well structured.
- **Insufficient attempt** means your work is incomplete, mostly incorrect, and/or poorly structured

Marks of *significant gaps* or *insufficient attempt* will always be accompanied by constructive feedback that you can and should use to learn and improve. Pre-class quizzes will be categorized as either meets expectations (roughly a grade of 66% on the quiz) or insufficient attempt.

In determining your level of achievement, you might be asked to orally explain your solution to me. Marks are contingent on your ability to do so and may be raised or lowered based on your demonstrated level of understanding.

Revise/Reattempt

If your work on a homework task or exam question has significant gaps or is an insufficient attempt, you will have an opportunity to revise or reattempt your work. On Thursdays when no homework is due, you may submit revisions for up to two recent homework tasks. Roughly one and a half weeks after each midterm exam, you may reattempt up to two exam questions during the designated in-class retake period. Pre-class quizzes **cannot** be revised/reattempted.

Course Grade

Your course grade is based on the extent to which your work on homeworks, exams, and pre-class preparation meets expectations. According to the university's academic regulations, "A means excellent, B means good, C means satisfactory, D means poor but passing, F means failing."¹ In the context of this course:

- **A** means you can fully interpret and explain programs that use the control and data structures covered in this course; you can create correct and well-structured programs for a variety of specifications; and you are well prepared for subsequent courses.
- **B** means you can fully interpret and explain *most* programs that use the control and data structures covered in this course, you can create *mostly* correct and *mostly* well-structured programs for a variety of specifications; and you are sufficiently prepared for subsequent courses.
- **C** means you can *partially* interpret and *partially* explain *some* programs that use the control and data structures covered in this course; you can create *partially* correct and *partially* well-structured programs for *some* specifications; and you should independently practice interpreting and creating programs prior to taking subsequent courses.
- **D** means you can *partially* interpret and *partially* explain *some* programs that use *some* of the control and data structures covered in this course; you can create *partially* correct and *partially* well-structured programs for a *limited* variety of specifications; and you should consider retaking this course before taking subsequent courses.

The table below defines specific criteria for each letter grade. You must **satisfy the homework, midterm exam, and final exam requirements** to earn the corresponding grade; if any of the requirements at a given grade level are not satisfied, then a lower grade will be assigned. A plus (+) or minus (-) will be added to your grade based on your completion of pre-class quizzes, attendance, and completion of the DEI reflection. You must achieve *meets expectations* for at least 80% of the available pre-class quizzes, regularly attend class (see the attendance policies below), and turn in your DEI reflection in order to qualify for a plus (+). A minus (-) will be added to your grade if you fail to achieve all three of these.

¹<https://catalog.colgate.edu/content.php?catoid=13&navoid=626#grading-policies>

Grade	Homeworks (26 tasks over 9 homeworks)	Midterm exams (3)	Final exam
A	<input type="checkbox"/> ≥ 13 tasks are excellent <input type="checkbox"/> Remaining tasks meet expectations	<input type="checkbox"/> ≥ 1 excellent answer <input type="checkbox"/> Remaining answers meet expectations	<input type="checkbox"/> At least one-third of answers are excellent <input type="checkbox"/> Remaining answers meet expectations
B	<input type="checkbox"/> ≥ 5 tasks are excellent <input type="checkbox"/> ≥ 21 tasks are excellent or meet expectations <input type="checkbox"/> ≤ 1 task is an insufficient attempt	<input type="checkbox"/> ≤ 2 answers have significant gaps <input type="checkbox"/> Remaining answers are excellent or meet expectations	<input type="checkbox"/> At least half of answers are excellent or meet expectations <input type="checkbox"/> Remaining answers have significant gaps
C	<input type="checkbox"/> ≥ 16 tasks are excellent or meet expectations <input type="checkbox"/> ≤ 2 tasks are insufficient attempts	<input type="checkbox"/> At least half of answers are excellent or meet expectations <input type="checkbox"/> Remaining answers have significant gaps	<input type="checkbox"/> At least one-third of answers are excellent or meet expectations <input type="checkbox"/> Remaining answers have significant gaps
D	<input type="checkbox"/> ≥ 11 tasks are excellent or meet expectations <input type="checkbox"/> ≤ 4 tasks are insufficient attempts	<input type="checkbox"/> At least half of answers are excellent or meet expectations <input type="checkbox"/> ≤ 1 answer is insufficient attempt <input type="checkbox"/> Remaining answers have significant gaps	<input type="checkbox"/> At least one-third of answers are excellent or meet expectations <input type="checkbox"/> Fewer than one-third of answers are insufficient attempts <input type="checkbox"/> Remaining answers have significant gaps

Policies

Attendance, Engagement, Reflections

Attendance to class is expected and contributes in a small way to your final grade. However, I do not expect you to attend if you are feeling unwell. Additionally, if you have athletics events, scheduled commitments, or other issues please let me know. If you miss a class, you can make up the credit by performing a **check-in** email. For a check-in, consult with a classmate and/or review the materials, and **within 48 hours** of the class send me an email containing:

1. a brief summary (2-4 sentences) of what was covered
2. any thoughts/questions you have

Check-ins are not a substitute for attending class regularly. If you accrue > 2 unapproved and/or unannounced absences, you will not receive attendance credit.

While in the class, you are expected to engage with the material and the other students in the course. You should aim to be a **good participant**: raising your hand, respecting others, actively listening, and making sure to leave space for others to speak. There are no bad questions, and I would always rather you contribute than avoid doing so. Mid-semester and end-of-semester evaluations will be administered with the intention to help me improve your experience in the course.

Finally, computer science is playing an increasingly active role in diverse areas of our lives – personal, professional, and political. You are expected to reflect on diversity, equity, and inclusion (DEI) in relation to computer science (at least) once during the semester by attending a talk, participating in a discussion, listening to a podcast, watching a documentary, and/or reading an article. **DEI reflections** take the form of a written reflection (≈ 200 words) on Moodle. The activity and reflection must be completed by **Thursday, December 12 at 11pm**. Suggested talks/discussions, podcasts, documentaries, and articles will be posted on the Moodle.

Time Management and Deadlines

Plan to give yourself time to step away from your work and return to it later. Programming in this way works better than sitting down and trying to complete programs in one shot right before the deadline. I will be reasonably flexible on deadlines. If you need some extra time due to illness, your workload in other classes, and/or personal matters, please let me know. As long as you have made a good faith effort to complete learning activities by the original deadline, I am willing to offer a reasonable extension. I will be less willing to grant an extension if you wait to start a homework assignment until the day before it is due (when you've had a week to work on it), repeatedly ask for extensions, etc.

Any homework that is turned in late without prior approval will be marked as an *insufficient attempt*.

Academic Honesty & Collaboration

You are expected to abide by Colgate's academic honor code. Discussing concepts or asking for a clarification of homework goals with your peers is allowed. New concepts can be tricky and everyone learns in different ways. Be sure to reach out to me, TAs, or even fellow classmates for clarification. However, you are responsible for your **own work** for homework assignments. You should not discuss your assignment code or pseudo-code with anyone besides the TAs and the course instructors. For example:

- Can ask a classmate to explain a topic mentioned in class
- Can work on ungraded material together
- Can ask the instructors or TAs for help with specific code
- **Cannot** work on homework assignments together
- **Cannot** copy code (or pseudo-code) from a friend or classmate
- **Cannot** discuss assignment code (or pseudo-code) with a friend or classmate

Further, I strongly discourage the use of Stack Overflow and similar sources for finding “answers” to problems. Even if cited properly, “answers” found through these sources tend to mislead more often than not.

Using generative AI tools

Generative AI systems (e.g., ChatGPT), if used correctly, can serve as powerful tools for learning and idea refinement. In this course, you can use generative AI systems to learn about concepts iteratively through a interaction. However, you cannot ask these systems to directly give you answers or write code for you. That is, you should submit your **own work**. Here are some concrete rules that exemplify this (but are not intended to be comprehensive):

Do NOT:

- Give the model a problem description and ask it to sketch an algorithm for you or write you pseudo code.
- Give the model the homework description and ask it to organize the code for you (e.g., generate the necessary function headers, write the main functions etc).
- Give the model a function description and ask it to generate code for you.
- Interact with the model and have your assignment open at the same time. Use your interaction with the AI as a learning experience, then close the interaction down, open your assignment, and let your assignment reflect your revised knowledge

Using the AI system in ways as described above will count as **cheating** even if you cite the AI system as a source.

You CAN:

- Ask clarification questions about the fundamentals of programming (e.g., “When should I use a for loop or a while loop?”)
- Ask for conceptual clarifications (e.g., “What is the mutability in Python?”)
- Try to work through the logic of something you don't understand (e.g., “How does a for loop in Python update the loop variable?”)
- Given a problem description and your proposed algorithm and ‘talk’ through the potential fallacies.

Remember: Policies around the use of Generative AI tools, like any other course policies, vary across different courses both within and outside the department.

Anonymous Feedback

Your feedback on this course is important for helping me improve the learning environment. You can provide anonymous feedback at any point in the semester via this form. I will also conduct a midterm survey to gather feedback.

Getting Help

A key to your success at Colgate is figuring out what resources are available and using them to help you achieve your goals. There are several options for getting help with this course:

1. Drop in during my office hours (noted at the top of the syllabus) or if no office hours times work, arrange an appointment with me – just send me an email with a few times you are available, and we will find a time that works well for both of us.
2. Form a study group with other students in the class and work together on a regular basis (note the Academic Honesty & Collaboration policy above).
3. Attend Open Lab hours Sundays through Thursdays 7:00-10:00pm in 333 Bernstein. CS tutors are available to provide hands-on help with coursework.

I also encourage you to reach out to many great resources at Colgate that can assist you with academic, personal, or other needs, including:

- **Administrative Deans** (<https://www.colgate.edu/about/offices-centers-institutes/dean-college/administrative-advising>) help you understand policies and procedures, navigate personal challenges, work with faculty, and engage with parents.
- **Counseling Center** (<https://colgate.edu/counseling>) staff are trained to help students manage a wide array of emotions. The counseling center meets with over half the student body for clinical services at some point during their four years at Colgate. You can arrange an appointment online or by phone (315-228-7385). For emergencies, a counselor is available 24/7 by calling campus safety at 315-228-7333 and asking for the counselor on call.
- **Haven** (<https://colgate.edu/haven>) is a sexual violence response center that provides confidential care, support, advocacy, and trauma-informed clinical services for survivors of sexual assault, intimate partner violence, child/family abuse, stalking, and/or harassment. You can call (315-228-7385) or visit during business hours. You can also contact the Help Restore Hope Center (855-966-9723).
- **Student Health Services** (<https://colgate.edu/offices-and-services/studenthealthservice>) provides accessible, convenient, cost-effective, non-judgmental, and confidential care for all students.
- **Information Technology Services** (<https://colgate.edu/its>) help desk consultants assist all students with problems concerning email, Portal, Moodle, or your personal laptop. Contact me if problems with your personal computer are affecting your ability to get your work done.
- **Chaplains** (<https://colgate.edu/campus-life/religious-life/officeofthechaplains>) provide the community with a dynamic and friendly support.