

# ELEMENTS OF COMPUTERS & PROGRAMMING

CS 303E

FALL 2019, 50080

MW 3:30-5:00

PAI 2.48

## PROFESSOR

Angie Beasley  
angie.beasley@utexas.edu  
GDC 6.314

Office Hours  
by appointment:  
[bit.ly/beasleycal](https://bit.ly/beasleycal)

## TAs

Ravi Teja Ailavarapu  
avteja@gmail.com

Matthew Hoffman  
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Mert Hizli  
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## COURSE DESCRIPTION

This course is an introduction to programming. You will learn to write programs in Python that include branching, looping, functions, and/or recursion. You will be able to apply object-oriented principles to your program design and make use of data structures, including lists, sets, tuples, and dictionaries. You will practice identifying programming errors and debugging them.

Only one of the following may be counted: Computer Science 303E, 305J, 312, 312H. Credit for Computer Science 303E may not be earned after you have received credit for Computer Science 307, 314, or 314H. May not be counted toward a degree in computer science.

## OFFICE HOURS

GDC 2.902

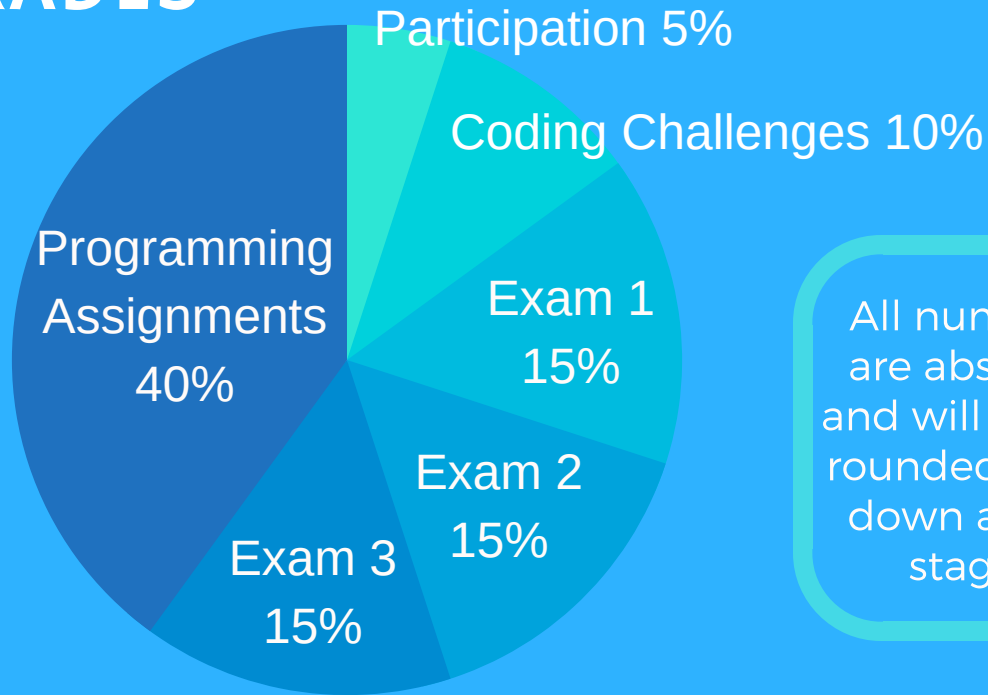
Tues 9:30 - 10:30  
Wed 1:30 - 3:30  
Thurs 11:00 - 1:00  
Fri 3:00 - 5:00

If you would like to meet in a computer lab, email us.

## TEXTBOOK

Introduction to Programming Using Python, by Y. Daniel Liang

# GRADES



All numbers are absolute and will not be rounded up or down at any stage.

A	94-100
A-	90-93
B+	87-89
B	84-86
B-	80-83
C+	77-79
C	74-76
C-	70-73
D+	67-69
D	64-66
D-	60-63
F	0-59

## PARTICIPATION

Questions to gauge your understanding of the material will be asked during class, using Canvas.

Your 2 lowest of these grades will be dropped.

You must bring a working, charged, wi-fi connected electronic device to every class in order to earn your participation grades.

Electronic devices should be used for CLASS PURPOSES ONLY. Please check your text messages, email, social media, etc. AFTER class!

## CODING CHALLENGES

There will be six in-class coding challenges. These will be completed during class time with an assigned partner or group.

You will earn 70% of your grade on the coding challenges through participation and level of effort, which will be evaluated by myself, the TAs, and your partner/group.

You will earn the other 30% of your coding challenge grade by completing the challenges correctly.

**If you are not present, you will receive a zero. There are no make-ups for coding challenges.**

Contact me if there are extenuating circumstances.

## PROGRAMMING ASSIGNMENTS

There will be a programming assignment due every week on Friday at 11:59pm.

Programming assignments must be completed using Python 3.

**All programming assignments must be worked individually.**

Please read the Academic Integrity section of the syllabus for more details.

## GRADE DISPUTES

All grades will be posted on Canvas. You have one week from the date the grade is posted to dispute your grade. The TAs will be grading the assignments. First contact the TAs and see if you can resolve your differences. If you can not resolve your differences, you may contact me to explain the situation. We will not entertain any grade disputes after one week.

## LATE ASSIGNMENTS

You will have 3 late days in 1-day units (that is, 1 minute to 24 hours late = 1 late day) to use throughout the semester. You may divide your late days across the programming assignments in any way you wish. Once you have used all of your late days, late assignments will no longer be accepted.

To use late days, you only need to submit the assignment. You do not need to email the professor or the TA, you do not need to indicate that you are using late days. Your late days will be deducted according to when your assignment is submitted. If you submit a late assignment without enough late days to support it, you will receive a zero for that assignment.

Contact me if there are extenuating circumstances.

# ACADEMIC INTEGRITY

The work you submit on exams and assignments must be entirely your own. While you are free to discuss the course material with your classmates, and are encouraged to form study groups for exams, **collaboration on programming assignments is not permitted.**

Things that are permitted:

- Helping someone understand the intent of a programming assignment.
- Discussing course content and helping others understand general concepts.
- Helping others with setup/configuration issues (i.e. installing Python).
- Getting coding help from TAs and the professor.
- Posting 2 lines or less of code that is giving you a syntax error to Piazza in order to get help on fixing the syntax error.

Things that are **NOT PERMITTED:**

- Looking at others' code or showing your code to others.
- Copying code from ANYWHERE (other students, online, etc.).
- Working to design coding solutions together.
- Posting code online (Piazza, Facebook, or ANYWHERE else).
- Employing someone else to write your code for you.

We will be running a sophisticated program on all submitted assignments to detect plagiarism. If we do detect any cases of academic dishonesty, we will assign a course grade of F to all students involved and refer the case to the Dean of Students. Further penalties, including suspension or expulsion from the university may be imposed by that office.

This policy is not intended to discourage students from learning from each other, nor is it unmindful of the fact that most significant work in computer science and the computing industry is done by teams of people working together. But, because of our need to assign individual grades, we must impose a requirement for individual work.

You are encouraged to study for exams together, to discuss general concepts covered in class and on assignments, to help each other in using the software, and to discuss methods for debugging code. If you talk about an assignment with someone else, you are okay, but the moment you start looking at someone else's code, or showing someone else your code, or describing code line-by-line, you have crossed the line into cheating. Similarly, you should not discuss your algorithmic strategies to such an extent that you and your collaborators end up turning in exactly the same code. Discuss high level approaches together, but do the coding on your own.

You may not look on the internet for code to solve your assignments and you may not post your solution code to any publicly accessible web site. You may not make use of code you find from other sources, including the internet. Materials from the web should be used for educational purposes only. Thus, you can read about loops and look at examples of loop code, but you must not copy any code from the web or be looking at any of this code from the web when writing anything you turn in.

If you have any doubts about what is allowed, ask the professor or a TA.

## UNIVERSITY RESOURCES

The Counseling and Mental Health Center (CMHC) provides counseling, psychiatric, consultation, and prevention services: <http://cmhc.utexas.edu/>

Student Emergency Services  
<http://deanofstudents.utexas.edu/emergency/>

Need help with technology?  
<http://www.utexas.edu/its/>

Canvas help is available 24/7 at  
<https://utexas.instructure.com/courses/633028/pages/student-tutorials>

If you have concerns about the safety or behavior of fellow students, TAs or Professors, call BCAL (the Behavior Concerns Advice Line): 512-232-5050.

Your call can be anonymous. If something doesn't feel right – it probably isn't. Trust your instincts and share your concerns.

## RELIGIOUS HOLY DAYS

By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, I will give you an opportunity to complete the missed work within a reasonable time after the absence.

## Q DROP POLICY

If you want to drop a class after the 12th class day, you'll need to execute a Q drop before the Q-drop deadline, which typically occurs near the middle of the semester. Under Texas law, you are only allowed six Q drops while you are in college at any public Texas institution.

For more information, see:  
<http://www.utexas.edu/ugs/csacc/academic/adddrop/qdrop>

## STUDENT ACCOMODATIONS

Students with a documented disability may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 512-471-6259 (voice) or 1-866-329-3986 (video phone). <http://ddce.utexas.edu/disability/about/>

Please meet with me as soon as possible to discuss any accommodations you may need. Please notify me as soon as possible if the material being presented in class is not accessible to you. Please notify me as soon as possible if any of the physical space is difficult for you.

# COURSE SCHEDULE

**MON**

**WED**

**FRI**

8/28: HelloWorld!

8/30: HW 0 due

9/2: Labor Day Holiday

9/4: Hardware, NumericTypes,  
Variables, User Input

9/6: HW 1 due

9/9: Binary, Math, Random

9/11: Formatting, Errors, Turtle

9/13: HW 2 due

9/16: Conditionals

9/18: Coding Challenge

9/20: HW 3 due

9/23: Loops

9/25: Loops

9/27: HW 4 due

9/30: Coding Challenge

10/2: Exam 1

10/7: Functions

10/9: Functions

10/11: HW 5 due

10/14: Lists

10/16: Multi-dimensional Lists

10/18: HW 6 due

10/21: Coding Challenge

10/23: OOP, Classes

10/25: HW 7 due

10/28: OOP, Classes

10/30: OOP, Classes

11/1: HW 8 due

11/4: Coding Challenge

11/6: Exam 2

11/11: Tuples, Sets, Dictionaries

11/13: Files, Modules, Exceptions

11/15: HW 9 due

11/18: Inheritance & Polymorphism

11/20: Inheritance & Polymorphism

11/22: HW 10 due

11/25: Coding Challenge

11/27: Thanksgiving Holiday

12/2: Recursion

12/4: Sorting and Searching

12/6: HW 11 due

12/9: Coding Challenge

12/13: Exam 3  
7-10 pm