CS 170: Introduction to Computer Science I – Fall 2018

Calendar

Week	Start Date	Topics	Exams	Deadlines
1	August 27	No class on Monday, no lab on Friday Introduction, policies Turtle graphics		
2	September 3	Labor Day: no class on Monday Simple and nested “for” loops		
3	September 10	Methods with parameters Functional decomposition Errors and debugging	Quiz 1 on Friday	
4	September 17	Values, types, operators Variables, assignment Methods with return values	Quiz 2 on Friday	Homework 1 due by Wednesday 2:00 pm
5	September 24	Accumulation looping strategy Boolean expressions Conditionals	Quiz 3 on Friday	
6	October 1	“While” loops Strings and characters	Quiz 4 on Friday	
7	October 8	Fall break: no class on Monday Arrays	Quiz 5 on Friday	Homework 2 due by Wednesday 2:00 pm
8	October 15	Parameters: values vs references 2D arrays	Quiz 6 on Friday	
9	October 22	Recursion	Quiz 7 on Friday	Homework 3 due by Wednesday 2:00 pm
10	October 29	Fractals Random number generation	Quiz 8 on Friday	
11	November 5	Object-oriented programming	Quiz 9 on Friday	
12	November 12	Object-oriented programming	Quiz 10 on Friday	Homework 4 due by Wednesday 2:00 pm
13	November 19	Object-oriented programming File input/output Thanksgiving: no lab on Friday		
14	November 26	Searching and sorting	Quiz 11 on Friday	
15	December 3	Practice and review	Quiz 12 on Friday	Homework 5 due by Wednesday 2:00 pm
16	December 10	Practice and review No class on Wednesday		
17	December 17	Final exam schedule: http://registrar.emory.edu/faculty-staff/exam-schedule/fall-2018.html		

Course description

This course is an introduction to computer science for the student who expects to make serious use of the computer in course work or research. Topics include: fundamental computing concepts, general programming principles, the Unix Operating System, and the Java programming language. Emphasis will be on algorithm development with examples highlighting topics in data structures. This course is the first of a two semester sequence for computer science majors and is followed by CS171.

Activities

The course consists of several learning activities:

- **Lectures.** Each class period includes a mix of presentation of new material, interactive problem-solving activities, and individual or team-based exercises. Consistent participation in all classes is strongly recommended.
- **In-class assessment.** Quizzes and exams are important learning activities. Students are expected to review their tests, ask for clarifications, and learn from their mistakes.
- **Homework assignments.** In addition to the learning activities conducted in class, students are expected to complete homework assignments.
- **Peer evaluations**. Evaluating other students' work will reinforce your code interpretation and debugging skills.

Course website

This term we will be using the online system Piazza for class discussion, and as a main repository for class resources. **Students are expected to stay on top of everything that is posted on Piazza at all times**, including other students' questions, as well as answers and follow-ups to those questions. Student's questions about the course should be posted on Piazza, rather than emailed to the teaching staff.

Textbook and resources

The textbook for this course is "Think Java @ Emory" by Valerie Henderson Summet. The textbook is freely available as a PDF file on our course website. The textbook covers most (but not all) of the material presented in the course, although not necessarily in the same order. Students are expected to take notes and use them together with the examples and additional resources provided in class and/or posted on the course website. Additional online resources will be linked on the course website.

Assessment and grading

Some of the activities conducted in class or outside class will be graded, and students will receive points according to the quality of the material submitted and the type of activity.

- **Quizzes.** There are 12 quizzes worth 50 points each. The 2 lowest-scored (or missed) quizzes for each student will be dropped from his/her total score. **The drop-2 policy is not a bonus**. It is a mechanism to automatically account for all circumstances such as sickness, injuries, family emergencies, sporting events, religious holidays, etc. You don't need to provide any justification for missing up to 2 tests. No additional extensions or make up tests will be given for such circumstances. For extreme circumstances that impact your attendance for more than two **consecutive** weeks (e.g., long hospitalization), contact your instructor as soon as possible and your situation will be considered on a case-by-case basis.
- **Final exam.** The final exam is cumulative and is worth 150 points.

- **Homework assignments.** There are 5 homework assignments worth 40 points each.
- **Peer evaluations.** There are 150-200 peer evaluation problems, worth up to 150 points total.

The following table summarizes the point structure of this course:

Item	**Count**	**Points**	**Total**
Quizzes	10 (12 drop 2 lowest)	50	500
Final exam	1	150	150
Homework	5	40	200
Peer evaluations	150-200		150
Total			**1000**

At the end of the semester all the points earned will be added and a letter grade will be assigned according to this table:

Letter grade	**Minimum points**
A	933
A-	900
B+	866
B	833
B-	800
C+	766
C	733
C-	700
D+	666
D	600
F	0

Any request to change the score of a graded item should be submitted within **one week** after the graded item is returned to the student. **No change request will be considered after this deadline, no matter the justification**. A regrade may result in no change, a higher score, or a lower score, whichever reflects a more accurate grade for the item. Hint: double check your graded items right away, which is also a great opportunity to catch up with topics you might have misunderstood.

Bonuses and penalties

- **Homework early submission bonus.** If you submit an entire homework assignment no later than 48 hours before the deadline, and the total score on the rest of the homework assignment is at least 20 points, you will receive 2 bonus points.
- **Typo catcher bonus.** If you discover a typo or other mistake in a homework assignment, quiz, or exam, and you are the first person to report it, you will receive 1 bonus point.
- **Inappropriate regrade request penalty.** If you submit a regrade request which results in no score change, you will receive no penalty for the first occurrence, and -1 point penalty for each subsequent occurrence of inappropriate regrade requests.

Teamwork

The ability to work effectively in teams is an important skill. In this course, you will have ample opportunity to practice this skill.

- **In-class exercises** should be done in pairs or small teams, unless otherwise directed.
- **Homework assignments** can be done either individually or in pairs (teams of 2 students), as preferred. The members of each team must be different for every assignment, so you are encouraged to work with multiple people throughout the semester.
- **Quizzes, exams, and peer evaluations** should be done strictly individually.

Academic integrity

All students are expected to be familiar with and follow Emory's Honor Code, particularly Article 4: Academic Misconduct.
http://catalog.college.emory.edu/academic/policies-regulations/honor-code.html

The Math & Computer Science Department has also a specific policy regarding the submission of computer code.
http://www.mathcs.emory.edu/spca.php

If you are submitting code through the QTest system, the collaboration statement indicated in the link above can be omitted, with the expectation that the original authors of the code correspond to the login IDs associated with every submission.

Appropriate citation of all external sources is required. This also includes the acknowledgment of any collaboration or assistance.

The academic integrity violations most frequent in this course are **cheating** and **excessive collaboration**.

Cheating occurs when you take "shortcuts" to get a higher grade, or you help someone else take such "shortcuts." Some examples of cheating include (but are not limited to):

- Copying other students' work (either in class or outside of class).
- Copying computer code or an answer from the Internet (even if you modify it).
- Asking someone else to do your homework.
- Executing code that is supposed to be manually traced in quizzes and exam.

Notice that also giving your work to someone else is cheating. **In a cheating incident, both the provider and the recipient are equally accountable for their misbehavior**.

Excessive collaboration happens when you request or provide an amount of help that undermines the learning effectiveness of the activity you are supposed to perform. The boundaries of excessive collaboration may be subtle to identify. **If you are uncertain about whether a certain behavior is acceptable or not, ask your instructors for guidance as soon as possible**. Here are a few examples.

- Amy and Bob are working together as a team for this week's homework. They are struggling with a bug in one programming problem, and show their code to their friends Carol and Daniel. Carol and Daniel find the bug and tell Amy and Bob how to fix it.
  BAD: This is excessive collaboration.

- Eric and Flora are working together as a team for this week's homework. They are struggling with a bug in one programming problem, and show their code to their instructor. They are able to explain to the instructor what their code was supposed to do and what it is doing instead. With appropriate guidance and scaffolding questions, the instructor helps Eric and Flora find and fix the bug.
  GOOD: This is legitimate collaboration.

- Gregory and Heather are working on their homework individually. After writing some preliminary code independently, they get together and they review each other's code. Afterwards, they split up, complete the assignment, and submit it independently.
  BAD: This is excessive collaboration.

- Karen and Louis are are working on their homework individually. They meet up and discuss their general ideas about how to interpret the text of the assignment, and the strategies to solve it. Then, each student goes off and write their own solution.
  GOOD: This is legitimate collaboration.

Golden rule: Never show your code to other people, except your teammates, course instructors, and teaching assistants.

Also remember that deliberately **providing false information** for personal gain is a serious violation of academic integrity and will not be tolerated.

Violations of academic integrity will result in immediate referral to the Honors Council. Penalties will depend on the severity of the transgression and each individual student's history of transgressions. Penalties range from a negative score on an assignment or test, failing the course, or even more severe university-wide actions such as suspension or expulsion from the university.

Classroom behavior

The classroom is a shared learning environment. Be polite and respectful at all times.

- Arrive to class on time, and leave only after the class ends. If you arrive late, the instructor may refuse your admission to class. If you arrive late for a quiz or exam, you may lose the points for that exam.
- Turn off your cell phone and other devices not relevant to the class.
- Use computers only when allowed to do so, and only for class activities.
- Be respectful when other people are talking; do not interrupt them; ask for permission before talking.

Help and support

First of all, make sure you interact with the community using the Piazza system. Post your questions there, and also try to answer other students' questions if you can. For one-on-one help in person, you can consult the instructors and teaching assistants. Make sure you seek help early if needed, and try to keep up with the course material at all times. When you ask for help, make sure you don't cross the boundaries of cheating or excessive collaboration.

Accommodations

Emory University complies with the regulations of the Americans with Disabilities Act of 1990 and offers accommodations to students with disabilities. If you are in need of a classroom accommodation, please contact the Office of Accessibility Services (OAS) as soon as possible.