# COSC101 Introduction to Programming Syllabus

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Fall 2022

## 1 Catalog Description

**3 Credit Hours, Instruction Mode: Face to Face**

An introduction to computational thinking and structured programming. Topics include problem solving and algorithm development with emphasis on conditional if/else statements, loop based iteration, and function calls. Students will also be given an overview of commonly used data structures such as arrays. Skills learned include designing a program to solving a problem, developing the algorithms needed, writing code to implement them, testing the code and correcting errors, as well as documenting how the code works.
**Items or topics not covered in this syllabus are per UT policy or instructor's discretion.**

**Programming Language for Course: Java.** java.com/en

## 2 Topics and Learning Objectives

At the end of this course, students should be able to understand and/or perform the following.

### 2.1 Programming

- Understand how a program "flows" from beginning to end.
- Understand how source code is compiled.
- Understand the limitations of a programming language.

### 2.2 Input and Output

- Be able to receive data from the user.
- Be able to output data to the user.
- Be able to open files for reading and/or writing.

### 2.3 Data Types and Operators

- Understand and be able to perform arithmetic.
- Understand and be able to use methods.
- Understand and be able to use fields.

### 2.4 Problem Solving

- Be able to take a word problem and write a program to solve it.
- Understand the elements of problem solving.
- Be able to use a semi-formal approach to designing a solution to a problem.

### 2.5 Debugging Techniques

- Be able to understand why certain errors occur.
- Understand compiler errors, run-time errors, and logic errors.
- Be able to "debug" and fix certain errors.

### 2.6 Comments and Documentation

- Understand what constitutes a "good" comment.
- Understand how and why we document functions and classes.

## 3 Prerequisites

1. Be able to use Canvas.
2. Have a NetID and email address assigned by UT.

## 4 Textbook

**You will not need to buy a textbook for this course.** A free, online textbook will be provided. This free text, lecture notes, and other links provided will contain the information a student will need for this course. Textbooks are expensive, and the realm of computer science oftentimes embraces "open source" (i.e. free to use and to learn from).
Here is a list of recommended optional readings if you'd like supplemental instruction.

1. "Learn Java in one day, and learn it well" by Jamie Chan.
2. "Java: Programming Basics for Absolute Beginners" by Nathan Clark.
3. "Beginner Programming with Java" by Barry Burd.

Many books about Java will assume you already have a background in programming and just need to know Java specifically. However, the ones recommended above are "learn to program" books using Java.

## 5 Equipment

For this class, you must own

- a personal laptop meeting Tickle College of Engineering (TCE) requirements

TCE requires laptops that operate on Windows 10 or MacOS. Chromebooks/ChromeOS, iPads, and iPhones do not meet hardware requirements. The Tickle College of Engineering has computing requirements listed here (note - I personally disagree about Windows being preferred): tickle.utk.edu/ithelp/computers

If you do not already own a laptop, you can buy one through VolShop with a university discount: utvolshop.com/shop-voltech. You can also order Apple products directly with education pricing here: apple.com/us-edu/store

**Laptops are expensive and I do not want cost to prohibit you from pursuing computer science.** If you are experiencing financial hardship, please seek out the Dean of Students emergency funding. See the URL linked to apply and view other uses of the funds: dos.utk.edu/student-emergency-fund/

# 6 Assignment Categories

Students will be evaluated on the following assignment categories. The weight of each category will be listed on Canvas. Information about assignments, including due dates, will be listed on Canvas.

- **Participation** - used to ensure students participate in class.
- **Homework** - used to reiterate concepts learned in class.
- **Programs** - used to help students solve problems by developing programs.
- **Midterm Exams** - exams are used to ensure students understand and can demonstrate concepts regarding the course material.
- **Final Exam** - exams are used to ensure students understand and can demonstrate concepts regarding the course material.

# 7 Student Expectations

1. Students must come to class prepared by reviewing the lecture slides, lecture notes, and/or lecture videos.
2. Students can expect to cover topics in class and work examples of programming. I generally will teach a topic, and then we will program something adjacent to the example in-class. Students should expect to write programs in class!
3. Students must use the discussion system (Discord) to ask questions. **Do not email the professor or TAs directly.** Doing so could slow responses. We use a discussion system so that everyone that can help you can see your messages and the responses. This ensures you get the most accurate and timely information. The discussion system being used and associated links will be on Canvas.
4. Students should attend class and submit all assignments. Students who cannot attend class are still responsible for the material they missed. Students may request a recorded version of the class. Not all classes can be recorded, so it is the responsibility of the student to coordinate with the instructor. Students who have COVID-19 must not attend class. Students must follow the guidance listed here: utk.edu/coronavirus.
5. Students who require a disability accommodation for class or for exams must be approved by the Office of Student Disability Services (SDS): sds.utk.edu. Without an accommodation, students will not be provided with additional services or additional time on exams. Every exam must be coordinated with SDS. All exams with accommodations must be taken at the SDS testing center.
6. Students are expected to spend at least double the number of credit hours outside of class studying, doing homework, or other work for this course every week. For more information, please see catalog.utk.edu (Academic Policies and Procedures) for more information.

# 8 Grading

1. Grades are not rounded and are not curved.
2. Some assignments may be submitted late for a **15% per day penalty**. Students must check Canvas for due dates as well as closing dates. Students may submit past the due date but not past the closing date.

3. Students who score **less than 70% in any assignment category** (average of all assignments under the category), such as midterm exams, projects, homework, or final exam, will be assigned the next letter grade down. For example, a student who earns a C, but scores a 69% on the homework category will be assigned a C-.

4. If extra credit is offered, it will be available to the entire class, not individual students. Thus, it is futile to ask instructors or TAs if they can have extra credit.

### 8.1 Grading Appeals

On rare occasions, graders can make a mistake grading. Students can appeal an assignment grade provided

- the appeal is made within 7 days of the grade being revealed.
- the student writes his or her intentions in the discussion system to all professors and TAs.
- students must document their grievances and why the grade should be changed in a professional manner.

### 8.2 Letter Grades

| Letter Grade Conversion Chart | |
|---|---|
| Letter | Score |
| A | 94.00 and above |
| A- | 90.00 - 93.99 |
| B+ | 87.00 - 89.99 |
| B | 84.00 - 86.99 |
| B- | 80.00 - 83.99 |
| C+ | 77.00 - 79.99 |
| C | 74.00 - 76.99 |
| C- | 70.00 - 73.99 |
| D+ | 67.00 - 69.99 |
| D | 64.00 - 66.99 |
| D- | 60.00 - 63.99 |
| F | 59.99 and below |

## 9 Tips to Succeed

1. **Try different forms of instruction.** If you can't learn from the textbook, try the lecture notes, or lecture. There are several forms that present the material. It may seem repetitive to you, but it is to offer you different avenues to learning the material.

2. **Review and update your lecture notes.** Your notes should be an evolving process. You need to write them over in your own words after you understand them. Just like learning anything else, repetition is important to the learning process!

3. **Get help early.** The instructors and TAs will hold regular office hours. The time goes by much easier when we have students to talk to. Even if you don't have specific questions, come over to office hours and introduce yourself. You will see where we're coming from and we can see where you're coming from.

4. **Start early.** For most (I'd dare say all) cases, if you're late submitting an assignment, it will either suffer a penalty or not be accepted at all. This is the item where most students who struggle can get ahead. You reduce access to the TAs and instructors when you wait until the last minute to start your assignments.

5. **Do NOT cheat.** No matter how many office hour sessions, discussion boards, and so forth that we make, we still get students who think they need to go to stackoverflow or Chegg and download "their" solution. Nothing will kill your grade faster than cheating. We have sophisticated tools that help us find and accuse cheating. **Cheating will result in your permanent student record being flagged!**

6. **Try outside help.** The Student Success Center has tutoring and supplemental instruction. Their schedule changes every semester (and even sometimes during a semester). Here at EECS, the Systers group might be able to offer you help.

7. **Know what is required.** I've seen several students earn a terrible score due to either not reading the assignment or not asking for clarification if a question arises. This essentially means the student is doing a different assignment. You will not be graded on what assignment you do, but instead, the assignment that is given to you. In many cases, this course provides a narrative, hints/tips, and a rubric. Students must read and understand all different forms. If anything seemingly contradicts, a student should ask for clarification.

# 10 Code of Conduct

## 10.1 Cheating and Plagiarism

Students who are accused of cheating or plagiarism on any single assignment worth 5 points or more towards their final grade will receive an F for the course. Otherwise, students will receive a 0 for the assignment and a 10 point drop to their final grade.

The instructor and/or TAs are not investigation units. If there is contention about a cheating case, it will be investigated by the Office of Student Conduct: studentconduct.utk.edu. At that point, they will determine the outcome and sentence.

## 10.2 Examples of Cheating

- Plagiarism and cheating may result from a student copying an assignment or sections of an assignment from another student, from an online source, or from the student's own previous assignment (from a previous attempt at the course). Students may not use a tool to produce their lab submission, including but not limited to external sources, a disassembler, or a compiler.

- **SECTION 10.4 FROM HILLTOPICS.** Plagiarism is using the intellectual property or product of someone else without giving proper credit. The undocumented use of someone else's words or ideas in any medium of communication (unless such information is recognized as common knowledge) is a serious offense, subject to disciplinary action that may include failure in a course and/or dismissal from the University. Specific examples of plagiarism include, but are not limited to:

1. Using without proper documentation (quotation marks and citation) written or spoken words, phrases, or sentences from any source.
2. Summarizing without proper documentation (usually a citation) ideas from another source (unless such information is recognized as common knowledge).
3. Borrowing facts, statistics, graphs, pictorial representations, or phrases without acknowledging the source (unless such information is recognized as common knowledge).
4. Collaborating on a graded assignment without the instructor's approval.
5. Collaborating on a graded assignment without citing all collaborators.
6. Submitting work, either in whole or partially created by a professional service or used without attribution (e.g., paper, speech, bibliography, or photograph).

- **SECTION 10.5 FROM HILLTOPICS.** Specific examples of other types of academic dishonesty include, but are not limited to:

1. Providing or receiving unauthorized information during an examination or academic assignment, or the possession and/or use of unauthorized materials during an examination or academic assignment.
2. Providing or receiving unauthorized assistance in connection with laboratory work, field work, scholarship, or another academic assignment.
3. Falsifying, fabricating, or misrepresenting data, laboratory results, research results, citations, or other information in connection with an academic assignment.
4. Serving as, or enlisting the assistance of, a substitute for a student in the taking of an examination or the performance of an academic assignment.
5. Altering grades, answers, or marks in an effort to change the earned grade or credit.
6. Submitting without authorization the same assignment for credit in more than one course, including if that student is repeating the same course.
7. Forging the signature of another or allowing forgery by another on any class or University-related document such as a class roll or drop/add sheet.
8. Gaining an objectively unfair academic advantage by failing to observe the expressed procedures or instructions relating to an exam or academic assignment.
9. Engaging in an activity that unfairly places another student at a disadvantage, such as taking, hiding, or altering resource material, or manipulating a grading system.

## 10.3 Tips to Avoid Cheating

- Do not allow students to even peek at your code. If a student gets their hands on your code, both will be in violation of the plagiarism policy regardless of who actually wrote the code.
- Students are encouraged to work together provided the students cannot see each other's code.
- Students should work where their laptop screens are back-to-back. You can talk algorithms and logic, but not code.
- Google is a great tool; however, it is the primary way students cheat. They will find code on the internet and copy it as their own. Try using the lectures, notes, and videos given in the class.
- ALWAYS cite who you worked with and where you got help, including any TA or instructor.

# 11 Illness, Extreme Circumstances, and COVID-19

## 11.1 Missed Exams

Students must coordinate before missing an exam.

If a student misses an exam, it will be considered **unexcused** until the student submits an absence request with the Dean of Students, and it is approved. Unexcused exams will not be eligible to be taken at a later time and will be graded 0.

If you observe any religious holiday that could potentially interfere with a Tuesday/Thursday this semester, you must submit these observances in writing via the discussion system to all TAs and instructors within the first 10 days of the semester. Otherwise, the absence will be unexcused.

If you have an illness or an extreme circumstance (ex. car accident), privately post to the discussion system and have all TAs and instructors as the recipient. **YOU STILL MUST SUBMIT AN ABSENCE REQUEST WITH THE DEAN OF STUDENTS.** The Dean of Students will also help notify all of your instructors and generally sends someone to check-in on your care at the hospital.

Excused exams must be made up within 7 days (or earlier) of the original exam date.

## 11.2 Missed Clicker Questions

Clicker questions (graded as Participation) will be asked throughout the semester. Students who are forced to miss class for ANY reason, including quarantine, broken car, hospitalization, religious observances, and so forth will receive a 0 for the clicker questions they miss.

However, **all** students will have their 5 lowest participation sessions dropped to accommodate anyone who needs to miss class for any reason, including COVID. These drops are **no-questions-asked** and will be granted to all students even if no clicker sessions were missed. Students must check Canvas - Assignments for any exceptions to this policy. The instructor may negotiate a different policy should a case not handled in this section be encountered.

## 11.3 Covid-19 Guidelines

### 11.3.1 Masking

According to public health authorities, in areas where there is substantial or high COVID transmission, wearing masks in indoor spaces can help reduce transmission of the virus and keep communities healthy. Any individual can choose to wear a mask anywhere on campus, even when it is not required. The university expects everyone to protect others from the spread of COVID-19 and recommends wearing masks in academic and administrative spaces.

For the most current information on masks, please check the COVID-19 website at utk.edu/coronavirus.

### 11.3.2 Vaccines

The university recommends that all members of the campus community be vaccinated for their own protection, to prevent disruption to the semester, and to prevent the spread of COVID-19. Vaccination information and appointment signups are available at tiny.utk.edu/vaccine. The Student Health Center medical staff is available to students to answer questions or discuss concerns about vaccines, and the center provides vaccines free of charge for anyone 18 years or older who would like one.

#### 11.3.3 Sickness or Exposure

If students think they are sick or have been exposed to COVID-19, they should contact the Student Health Center or their preferred health care provider. Students can also contact the university's COVID-19 support team for guidance by filling out the COVID-19 self-isolation form at covidform.utk.edu.

You are advised not to attend class in-person if you are sick or need to isolate or quarantine. The university has more detailed guidance on quarantine and isolation. The university recommends that students and employees stay home anytime they do not feel well.

## 12 List of Changes

This syllabus is subject to change before, during, or after the semester. Any changes will be listed below sorted by descending date.

- (23-Aug-2022) Initial release