

Department of Computer Science
CS 1310 – Introduction to Computational Thinking
Fall 2022
CRN: 20141

Computational thinking is the process of converting a real-world problem into a software-based approach for solving it. This course focuses on introduction to computers and problem-solving aspects. In this course, students learn analytical skills involving computer programming and software tools that are transferrable to multiple disciplines.

Meeting Times: Tuesdays and Thursdays 9:00 am - 10:20 am

Location: College of Business Admin Building, Room: 326

Prerequisites: None. Any student from any UTEP department can enroll.

Instructor: Dr. Mahmud Shahriar Hossain

Email: mhossain [at] utep [dot] edu

Office Hours: Tuesdays and Thursdays 10:45 AM – 12 PM.

Office location: Chemistry and Computer Sci Bldg 3.0504

Teaching Assistant: Moqsadur Rahman

Email: mrahman20 [at] miners [dot] utep [dot] edu

Office Hours: Mondays and Wednesdays 11:30 am to 1 pm

Office location: TBA

Grading:

Your semester grade will be based on a combination of classwork/homework, assignments, in-class activities, quizzes, and midterm and exams. The approximate percentages are as follows:

25%	Homework/Assignments
25%	Quizzes (in-class and out-of-class)
25%	Midterms
20%	Final exam
5%	Attendance

The instructor may decide to penalize a student's grade, in all or a subset of grading components, if the student excessively misses classes or arrives late.

The nominal percentage-score to letter-grade conversion is as follows:

- 90% or higher is an A
- 80-less than 90% is a B
- 70-less than 80% is a C
- 60-less than 70% is a D
- below 60% is an F

Textbook: The instructor will provide reading materials and slides via Blackboard. There is no specific textbook for this course.

Tentative topics to be covered:

- Pillars of computational thinking
- Computer hardware, OS types
- How computers store data, number system, binary to decimal conversion
- Intro to R Programming -- Installation, printing a message, basic data types, use of variables
- Arithmetic and logical expressions, intro to conditional statements
- Practice on conditional statements
- Iteration, iteration with selection
- Modularization/Functions
- Testing and debugging
- I/O operations, reading from files, reading data files
- Processing data
- Data visualization
- Data analytics

CLASS POLICIES:

You must have a laptop in the classroom.

Standards of Conduct: In the classroom and in all academic activities, students are expected to uphold the highest standards of academic integrity. Any form of scholastic dishonesty is an affront to the pursuit of knowledge and jeopardizes the quality of the degree awarded to all graduates of UTEP.

Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but is not limited to, cheating, plagiarism, uploading course materials or assignment questions to public forums or websites like chegg, the submission for credit of any work or any materials that are attributable in whole or in part to another person, taking an examination for another person, an act designed to give unfair advantage to a student or the attempt to commit such acts. Proven violations of the detailed regulations, as printed in the Handbook of Operating Procedures may result in sanctions ranging from disciplinary probation to a failing grade in the course, to suspension or dismissal, among others. The Handbook of Operating Procedures: Student Conduct and Discipline can be accessed at the following link: <https://www.utep.edu/hoop/section-2/student-conduct-and-discipline.html> .

DISABILITIES:

The University is committed to providing reasonable accommodations and auxiliary services to students, staff, faculty, job applicants, applicants for admissions, and other beneficiaries of University programs, services and activities with documented disabilities in order to provide them with equal opportunities to participate in programs, services, and activities in compliance with sections 503 and 504 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act (ADA) of 1990 and the Americans with Disabilities Act Amendments Act (ADAAA) of 2008. Reasonable accommodations will be made unless it is determined that doing

so would cause undue hardship on the University. Students requesting an accommodation based on a disability must register with the [UTEP Center for Accommodations and Support Services](#) (CASS). Contact the Center for Accommodations and Support Services at 915-747-5148, or email them at cass@utep.edu, or apply for accommodations online via the [CASS portal](#).

The instructor reserves the right to make necessary changes to this syllabus and to the delivery of the course.