

**The University of Texas at El Paso
Department of Computer Science
CS 1310: Intro to Computational Thinking**

COURSE INFORMATION

CS 1310: Intro-Computational Thinking

CRN: 13547

Term: Fall 2023

Delivery Method: In-person

Meeting Day and Time: Mondays and Wednesday, 3:00pm – 4:20pm MT

Location: Physical Science Building, Room 208

INSTRUCTOR INFORMATION

Instructor: Kuldeep Singh, Dr.

Written Communication: Email (ksingh2@utep.edu)

Phone Number: (915)747-6648

Office Location: Chemistry Computer Science Building (CCSB), Room 3.0602

Office Hours:

- Face-to-Face: Monday at 4:30pm-5:30pm MT.
- Virtual: Wednesday at 4:30pm-5:30pm MT (appointment only), through Zoom, please use following link (<https://utep-edu.zoom.us/j/5530994011>)

TEACHING ASSISTANT INFORMATION

Teaching assistant (TA) office hours will be conducted in **room CCSB:1.0706**. Other details are as follows:

Name: Sabrina Saika

Email: ssaika@miners.utep.edu

Offline Office Hours:

- Tuesday 4:30pm – 5:30pm MT
- Wednesday 1:00pm – 2:00pm MT
- Thursday 12:30pm – 1:30pm MT

Online Office Hours:

- Friday 11:00am – 12:00pm MT

***COURSE DESCRIPTION**

In the era of technology, Computational Thinking is an essential skill for students not only in computer science, but many other areas. Computing and information technologies permeate all aspects of our lives. They inspire how we connect with each other online through social networks and how we find information through search engines. Technologies also drive our physical world in how we navigate transportation systems and how we manage money on banking applications. Everyone should have the ability to not only use and interact with computing, but to also create and express themselves with computing. CT provides a systematic approach for solving real-work problems. This course is a hands-on introduction to create, invent, and build with computer programming.

No programming experience is necessary, and all backgrounds are welcome. Students will become exposed to high-level computational concepts and practices that include algorithms, data, parallelism, abstraction, and debugging. Assignments will involve learning to program using Python programming language. The creative and problem-solving strategies introduced in this course are applicable across many domains beyond information and computer sciences. There are no prerequisites.

***COURSE OBJECTIVES AND UNIVERSITY LEARNING OUTCOMES**

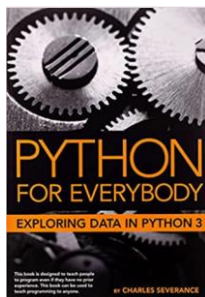
By the end of the course, students will be able to:

Objectives	Outcomes
Computer Fundamentals	Basic computer hardware organization and high-level understanding of operating systems, editors, compilers, interpreters, programming generation, different methods of representing data, including binary, conversion binary to decimal and vice versa.
Understanding Computational Thinking	Students will Comprehend the fundamental concepts of computational thinking, including abstraction, decomposition, pattern recognition, and algorithmic design.
Apply Problem-Solving Techniques	Students will be able to analyze real-world problems, design algorithms, flowcharts and implement solutions using appropriate techniques
Integrated Computational Tools	Gain exposure to programming languages and tools to implement and test algorithms, fostering practical programming skills.
Understanding Large dataset	Apply basic data science techniques, using a combination of predefined functions as well as their own data and instructions, in order to create and analyze visual representations of data gathered on a topic.

***REQUIRED MATERIALS**

All materials readings, homework, assignments for class will be posted on the Blackboard learning management system (LMS). All students should have regular access to a computer and ensure your UTEP email account is working and that you have access to the Web and a stable web browser. All students need to carry their laptops in the classroom for the practice and development of code. Students will be required to install python on their computers. If you encounter technical difficulties beyond your scope of troubleshooting, please contact the Help Desk. The following book will be used to cover course syllabus.

Recommended book:



Title: “Python for Everybody”
 Author: Dr. Charles R. Severance

***ASSIGNMENTS AND GRADING**

Your semester grade will be assessed based on a combination of exams, reading, homework, assignments, and quizzes. The percentages are as follows:

- Exams: 50%
- Assignments: 25%
- Reading and Homework: 10%
- Quizzes: 15%

Exam: Exam will help to evaluate the individual learning in the class. Two comprehensive exams will be administered to gauge students' progress and performance. Exam 1 will contribute to 20% of the final grade, while Exam 2 will hold a weightage of 30%.

Reading and Homework: A fundamental component of the course involves weekly readings and homework assigned. This practice is designed to facilitate the comprehension of concepts prevalent across various programming languages and nurture the development of practical programming skills.

Assignments: Students will engage in 4-5 substantial assignments. These assignments are thoughtfully crafted to enhance proficiency in the application of theoretical concepts taught in the classroom, fostering a deeper grasp of programming concepts.

Quizzes: Quizzes administered without prior notice serve as spontaneous assessments to stimulate active participation in classroom activities and facilitate the continuous acquisition of new skills.

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

- 90% or higher is an 'A'
- 80-89% is a 'B'
- 70-79% is a 'C'
- 60-69% is a 'D'
- below 60% is an 'F'

***TECHNOLOGY REQUIREMENTS**

Some course content is delivered via the Internet through the Blackboard learning management system. Ensure your UTEP e-mail account is working and that you have access to the Web and a stable web browser. Google Chrome and Mozilla Firefox are the best browsers for Blackboard; other browsers may cause complications. When having technical difficulties, update your browser, clear your cache, or try switching to another browser.

You will need to have access to a laptop/tablet in the classroom to complete the classroom task and practice programs. You will need to download or update the following software: Microsoft Office, Adobe Acrobat Reader, Python 3. Check that your computer hardware and software are up-to-date and able to access all parts of the course.

If you do not have word-processing software, you can download Word and other Microsoft Office programs (including Excel, PowerPoint, Outlook and more) for free via UTEP's Microsoft Office Portal. Click the following link for more information about [Microsoft Office 365](#) and follow the instructions.

IMPORTANT: If you encounter technical difficulties beyond your scope of troubleshooting, please contact the UTEP [Help Desk](#) as they are trained specifically in assisting with technological needs of students. Please do not contact me for this type of assistance. The Help Desk is much better equipped than I am to assist you!

COURSE COMMUNICATION:

I encourage students to ask questions and share reflections and feedback about the course. There are multiple ways to reach your instructor and TAs for help and questions:

- Office Hours: I will have office hours for your questions and comments about the course. My office hours are in-person; however, you can request a virtual meeting and I will send you a Zoom link. Please see the days and times at the top of this syllabus.
- Email: UTEP e-mail is the best way to contact me. I will make every attempt to respond to your e-mail within 24 hours of receipt. When e-mailing me, be sure to email from your UTEP student e-mail account and please put the course number in the subject line. In the body of your e-mail, clearly state your question. At the end of your e-mail, be sure to put your first and last name, and your university identification number.
- Announcements: Check the Blackboard announcements frequently for any updates, deadlines, or other important messages.

ATTENDANCE AND PARTICIPATION

Our class meetings are in-person at PSCI, room 208, every Monday from 3:00pm to 4:20pm, beginning August 28 through December 4.

Attendance in the course is determined by participation in the learning activities of the course. Your participation in the course is important not only for your learning and success but also to creating a community of learners. Participation is determined by the completion of the following activities:

- Reading/Viewing all course materials to ensure understanding of assignment requirements.
- Participating in engaging discussions with your peers
- Other activities as indicated in the weekly modules.

Because these activities are designed to contribute to your learning each week, they cannot be made up after their due date has passed.

ILLNESS PRECAUTIONS

Please stay home if you have symptoms of a communicable illness. If you are feeling unwell, please let me know as soon as possible, so that we can work on appropriate accommodation.

***EXCUSED ABSENCES AND/OR COURSE DROP POLICY**

According to UTEP Catalog, “At the discretion of the instructor, a student can be dropped from a course because of excessive absences or lack of effort. A grade of “W” will be assigned before the course drop deadline and a grade of “F” after the course drop deadline.” See Policies and Regulations in the UTEP Undergraduate Catalog for a list of excuse absences. Therefore, if I find that, due to non-performance in the course, you are at risk of failing, I will drop you from the course. I will provide 24 hours advance notice via email.

OR

I will not drop you from the course. However, if you feel that you are unable to complete the course successfully, please let me know and then contact the [Registrar's Office](#) to initiate the drop process. If you do not, you are at risk of receiving an “F” for the course.

DEADLINES, LATE WORK, AND ABSENCE POLICY

All the homework and assignments are due at midnight (11:59 PM) of the provided date, unless otherwise stated. There will be a penalty of 25% points for each day after the deadline. No assignment will be accepted after the 4th day of the deadline.

No extensions will be granted without a compelling reason due to circumstances beyond your control which must be documented by a healthcare provider letter, military activation order, obituary/memorial service notice, police/fire report, etc. If there is a campus emergency (e.g., weather, closure, etc.), I will send a message to the class with directions about assignments, deadlines, etc.

MAKE-UP WORK

Make-up work will be given *only* in the case of a *documented* emergency. Note that make-up work may be in a different format than the original work, may require more intensive preparation, and may be graded with penalty points. If you miss an assignment and the reason is not considered excusable, you will receive a zero. It is therefore important to reach out to me—in advance if possible—and explain with proper documentation why you missed a given course requirement. Once a deadline has been established for make-up work, no further extensions or exceptions will be granted.

ALTERNATIVE MEANS OF SUBMITTING WORK IN CASE OF TECHNICAL ISSUES

I strongly suggest that you submit your work with plenty of time to spare in the event that you have a technical issue with the course website, network, and/or your computer. I also suggest you save all your work in a separate Word document as a backup. This way, you will have evidence that you completed the work and will not lose credit. If you are experiencing difficulties submitting your work through Blackboard, please contact the UTEP Help Desk. You can email me your backup document as a last resort.

INCOMPLETE GRADE POLICY

Incomplete grades may be requested only in exceptional circumstances after you have completed at least half of the course requirements. Talk to me immediately if you believe an incomplete is warranted. If granted, we will establish a contract of work to be completed with deadlines.

***ACCOMMODATIONS POLICY**

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 accommodation 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, email them at cass@utep.edu, or apply for accommodation online via the CASS portal.

***SCHOLASTIC INTEGRITY**

Academic dishonesty is prohibited and is considered a violation of the UTEP Handbook of Operating Procedures. It includes, but is not limited to, cheating, plagiarism, and collusion. Cheating may involve copying from or providing information to another student, possessing unauthorized materials during a test, or falsifying research data on laboratory reports. Plagiarism occurs when someone intentionally or knowingly represents the words or ideas of another as ones' own. Collusion involves collaborating with another person to commit any academically dishonest act. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. All suspected violations of academic integrity at The University of Texas at El Paso must be reported to the [Office of Student Conduct and Conflict Resolution \(OSCCR\)](#) for possible disciplinary action. To learn more, please visit [HOOP: Student Conduct and Discipline](#).

***GUIDANCE ON ARTIFICIAL INTELLIGENCE**

The use of generative AI tools such as Chat GPT is permitted in this course only for reading and learning purposes, which must be noted or cited as and whenever needed.

However, you may not use AI tools to complete the following activities:

- Assignment
- Homework

Students must cite any borrowed content sources to comply with all applicable citation guidelines, copyright law, and avoid plagiarism. Instances that violate these guidelines will be referred to the Office of Student Conduct and Conflict Resolution.

PLAGIARISM DETECTING SOFTWARE

Some of your course work and assessments may be submitted to SafeAssign, a plagiarism detecting software. SafeAssign is used to review assignment submissions for originality and will help you learn how to properly attribute sources rather than paraphrase.

***SYLLABUS REVISIONS**

I reserve the right to change the syllabus at any time. If I do change the syllabus, I will let you know via the Blackboard announcement or during the class session.

***COURSE RESOURCES:**

UTEP provides a variety of student services and support:

Technology Resources

- [Help Desk](#): Students experiencing technological challenges (email, Blackboard, software, etc.) can submit a ticket to the UTEP Helpdesk for assistance. Contact the Helpdesk via phone, email, chat, website, or in person if on campus.

Academic Resources

- [UTEP Library](#): Access a wide range of resources including online full-text access to thousands of journals and eBooks plus reference service and librarian assistance for enrolled students.
- [University Writing Center \(UWC\)](#): Submit papers here for assistance with writing style and formatting, ask a tutor for help and explore other writing resources.
- [Math Tutoring Center \(MaRCS\)](#): Ask a tutor for help and explore other available math resources.
- [History Tutoring Center \(HTC\)](#): Receive assistance with writing history papers, get help from a tutor and explore other history resources.
- [RefWorks](#): A bibliographic citation tool; check out the RefWorks tutorial and Fact Sheet and Quick-Start Guide.
- [The Miner Learning Center](#): Join peer-led study sessions in person or online to review content and discover study strategies in core curriculum courses.
- [UTEP Edge](#): UTEP's cross-campus framework for student success and empowerment – develops students' assets through high-impact experiences made possible by the expertise and dedication of faculty, staff, alumni, and community partners.

Individual Resources

- [Student Success Help Desk \(SSHD\)](#): Students experiencing challenges or obstacles to academic success including registration, financial, food, housing, and transportation resources may submit a ticket request assistance to studentsuccess@utep.edu
- [Military Student Success Center](#): Assists personnel in any branch of service to reach their educational goals.
- [Center for Accommodations and Support Services](#): Assists students with ADA-related accommodations for coursework, housing, and internships.

- [Counseling and Psychological Services](#): Provides a variety of counseling services including individual, couples, and group sessions as well as career and disability assessments.
- [UTEP Food Pantry](#): Non-perishable food items are available to students who are currently enrolled in classes. Bring a Miner Gold Card to Memorial Gym, Room 105, Monday through Friday, 10 a.m. to 2 p.m.