

The University of Texas at El Paso

Department of Computer Science

CS 1301 – Intro to Computer Science

Spring 2025 Syllabus

1. General Information

Instructor:

Daniel Mejía, Ph.D.

Email: dmmejia2@utep.edu

Office Hours: MTWR 2:30pm – 3:30pm, or by appointment

Office: CCSB 3.1018

| Instructional Team | | | |
|---------------------------|--------------------|-----------------|-------------------------------|
| CRN | 22660 | | January 21 - May 8, 2025 |
| Time | MW 10:30 - 11:50am | | UGLC 128 |
| TA | Airam | Flores | aflores91@miners.utep.edu |
| TA | Nicholas | Jara | najara1@miners.utep.edu |
| TA | Chelsea | Moreno | cjmoreno3@miners.utep.edu |
| TA | Rogelio | Valles Martinez | rvallesmar@miners.utep.edu |
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Important Dates:

- First Day of Class – January 21, 2025
- Census Day – February 5, 2025
- Spring Break – March 10-14, 2025
- Cesar Chavez (No Classes) – March 28, 2025
- Drop Deadline (Automatic W) – April 4, 2025
- Spring Study Day – April 18, 2025
- Last Day of Classes – May 8, 2025
- Dead Day – May 9, 2025

- Final Exam – May 16, 2025 (10:00 – 12:45pm) - <https://www.utep.edu/student-affairs/registrar/scheduling/final%20exams%20schedule/final-exam-schedule-spring-2025.pdf>

Please communicate with the instructor, TA, or IA anytime you have questions, concerns, or wish to discuss anything. Reach out as often and frequently as necessary so that you may succeed.

NOTE: When emailing the instructor, TA or IA, please use [CS 1301 SP25] in the subject.

You should be enrolled in **one lab section – CS 1101**. Do not visit a lab or lecture section other than yours, without prior approval from the instructor.

Prerequisites:

MATH 1508 or MATH 1411 with a grade of C or better

Textbook:

Introduction to Java Programming and Data Structures, 13th Edition

Y. Daniel Liang

Purchase/Rent the book through Pearson+: <https://www.pearson.com/en-us/subject-catalog/p/introduction-to-java-programming-and-data-structures/P200000010690/9780138092832>

You do not need to get the “Study & Exam Prep Pack”

2. Objectives & Outcomes

Course Objectives:

Students will learn to be active learners, understand the motivations for computing, basic concepts of algorithms, basic computer organization, and impacts of computing. They will develop problem-solving skills, implement solutions to computing problems in a high-level programming language, and build team skills, critical-thinking skills, and professionalism.

Knowledge and Abilities Required Before Entering the Course:

Students entering the course are not required to have a background in Computer Science or programming. They should be familiar with topics from Pre-calculus, including algebraic functions, proofs, and base representations of numbers.

Course materials:

All the course materials will be available through **Blackboard**. Please check Blackboard regularly to stay updated with the class.

Learning Outcomes

Level 1: Knowledge and Comprehension. Level-1 outcomes are those in which the student has been exposed to the terms and concepts at a basic level and can supply basic definitions. On successful completion of this course, students will be able to describe, at a high level:

1. The major advances in the history of computing
2. The relation between computing and society, including social, ethical, and legal issues

3. The importance of computing in a variety of professions: required knowledge and skill sets for major career options
4. Classes of programming languages, including:
 - a. Imperative,
 - b. Object oriented,
 - c. Declarative, and
 - d. Functional
5. The purpose of multi-dimensional arrays (dimension 3 and above)
6. The purpose of and relationship between classes and objects
7. The purpose of pre/post conditions, in particular as related to verification
8. Compilation and interpretation
9. Understand basic linked list representation and manipulation
10. Understand the use of hexadecimal and binary in problem solving and computer science in general

Level 2: Application and Analysis. Level-2 outcomes are those in which the student can apply the material in familiar situations, e.g., can work a problem of familiar structure with minor changes in the details. Upon successful completion of this course, students will be able to:

1. Analyze problems, design and implement solution algorithms, including correct use of:
 - a. User-defined types and their implementation as classes
 - b. Basic string manipulation techniques using language functions, including:
 - i. Traversing strings,
 - ii. Accessing characters,
 - iii. Comparing strings,
 - iv. Concatenating strings
2. Algorithm-tracing techniques to ensure solution correctness including method calls
3. Use testing and debugging strategies to identify software faults by creating test suites that include:
 - a. Black-box test cases
 - b. Basic white-box test cases
4. Use general software engineering principles, including abstraction and problem decomposition in problem and solution analysis
5. Use informal pseudocode to describe algorithms
6. Use 2D arrays
7. Use recursion for solving simple problems

Level 3: Synthesis and Evaluation. Level-3 outcomes are those in which the student can apply the material in new situations. This is the highest level of mastery. On successful completion of this course, students will be able to use the syntax and semantics of a high-level language to express solutions to programming problems, including the pseudocode correct use of:

1. Basic variable types including Booleans, integers, real numbers, characters, strings
2. 1-D arrays
3. Assignment and arithmetic
4. Logical propositions to define conditional and loop statements
5. For-loops

6. While-loops
7. Methods/functions, parameter passing, return values
8. Algorithmic building blocks including
 - a. Min
 - b. Max
 - c. Average
 - d. Summation
 - e. Linear search

3. Policies & General Information

Grading:

| Category | Weight (%) |
|--------------------------------|------------|
| Homework | 10% |
| Quizzes | 14% |
| Exam 1 | 15% |
| Exam 2 | 16% |
| Exam 3 | 17% |
| Final Exam | 25% |
| Class Participation/Attendance | 3% |

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

| Percentage Range | Letter Grade |
|------------------|--------------|
| 90% or higher | A |
| 80-89% | B |
| 70-79% | C |
| 60-69% | D |
| Below 60% | F |

Note: You **must earn a C or better** in each of these two courses, CS1301 and CS1101, to continue to the next course in this sequence, which is CS2401.

The instructor reserves the right to adjust these criteria downward, (e.g., so that 88% or higher represents an A) based on overall class performance. The criteria will not be adjusted upward, however.

Attendance:

Attendance and participation are essential for success in this course. Students must attend all scheduled sessions on time and remain for the entire duration. Attendance will primarily be recorded through iClicker but may also be tracked via Blackboard, sign-in sheets, roll call, or other methods at the instructor’s discretion. “Checking in and leaving” or checking in for another student is considered academic dishonesty and will be reported to the Office of Community Standards. Students may also be required to check in at the end of class.

Students must notify the instructor and TA in advance of absences whenever possible or immediately after if prior notice is not feasible. It is the student's responsibility to catch up on missed content. Participation includes completing post-lecture and post-lab quizzes (when applicable). Assignments due on the day of an absence will be marked late unless an exception is granted. Points lost for unexcused absences cannot be made up; points lost for excused absences must be coordinated with the instructor.

Attendance issues (e.g., iClicker or Blackboard discrepancies) must be reported to the TA via email (cc the instructor) within 48 hours of the attendance posting. Changes will not be made after this period.

Students arriving up to 10 minutes late will be marked tardy, with two tardies equaling one absence. Arrival after 10 minutes will be marked as an absence.

Drop Policy:

Students with only 50% attendance (including excessive tardiness) by the 4-week checkpoint will be dropped from the course and assigned a grade of "F." Additionally, students with 30% unexcused absences (including excessive tardiness) at the 8-, 10-, or 12-week checkpoints will also be dropped and assigned an "F." This grade is final and will not be changed to a "W."

Incomplete Policy:

Incomplete grades may be granted only in exceptional circumstances after completing at least half the course requirements. If you believe an incomplete is warranted, contact the instructor immediately to establish a contract outlining the work to be completed and deadlines.

Quizzes:

Quizzes ensure you stay current with course content and develop key skills. They will typically be administered through test proctoring tools such as Respondus Lockdown Browser and to ensure academic integrity, but may also be paper-based or use other platforms. Make-up quizzes are not allowed unless explicitly permitted by the instructor.

Homework:

Reading and homework assignments will be announced in class and/or posted on Blackboard. If you miss a session, it is your responsibility to determine what was missed. Plan to spend at least four hours per week outside of class on assignments.

Deadlines will be specified in each assignment description. Late assignments will be accepted up to 72 hours after the deadline, with a 10% penalty per day.

Course Schedule:

Course schedule is subject to change without notice. Exams are tentative and should not be considered to be final.

| Day | Topic |
|-----|------------------------------------|
| 1 | Syllabus |
| 1 | Computing, Society, and Profession |

| | |
|----|---------------------------------------|
| 1 | History of CS |
| 2 | Problem Solving |
| 2 | Algorithms, Pseudocode, Tracing |
| 2 | Abstraction |
| 3 | Variables/Data Types |
| 3 | Variables/Operators/User Input |
| 3 | Boolean Logic/Conditionals |
| 4 | Conditionals |
| 5 | Loops (Intro) |
| 6 | Loops (Cont.) |
| 7 | Variables/Conditionals/Loops Practice |
| 8 | Review |
| 9 | Exam 1 |
| 10 | Exam 1 Results |
| 10 | Compilation & Interpretation |
| 10 | Binary Arithmetic |
| 11 | Methods/Decomposition |
| 12 | Methods/Decomposition |
| 13 | Methods/Loops/Conditionals Practice |
| 14 | Recursion |
| 15 | Recursion (Cont.) |
| 16 | Recursion/Loops Practice |
| 16 | File IO/Exceptions |
| 17 | 1D Arrays and Loops |
| 18 | 1D Arrays and Loops (Cont) |
| 18 | String Manipulation |
| 19 | 2D Arrays and Loops |
| 20 | Arrays/Strings Practice |
| 21 | Review |
| 22 | Exam 2 |
| 23 | Exam 2 Results |
| 23 | Classes/Objects |
| 24 | Linked Lists |
| 25 | Testing |
| 25 | Programming Languages |
| 25 | Review |

| | |
|----|----------------|
| 26 | Exam 3 |
| 28 | Exam 3 Results |
| 28 | Review |

Exams:

There will be three midterm exams and one comprehensive final exam. If you experience general test-taking difficulties or require accommodations, notify the instructor promptly and contact UTEP’s Center for Accommodation and Students’ Services for assistance. You may be required to provide a photo ID (i.e., Miner Gold card, Driver’s License, etc.) to take the exam.

Midterm Exams:

Midterm exams will assess your understanding of course concepts covered up to that point. These exams are tentatively scheduled for weeks 5, 10, and 14 but may change. You will be notified at least one week in advance through in-class announcements, email, or Blackboard. Midterm exams will be held during regular lecture sessions. Make-up exams are only allowed in exceptional circumstances; if you must miss an exam, contact the instructor *before* the scheduled exam.

Final Exam:

The final exam will be comprehensive, and a minimum score of 65% is required to pass the course. The final must be taken during the time scheduled for your lecture section, as per University policy. If you have a scheduling conflict (e.g., another exam at EPCC or three finals in one day), contact the instructor in advance to arrange accommodations.

Proctoring Software:

Exams may utilize test proctoring tools such as Respondus Lockdown Browser and Respondus Monitor within Blackboard to ensure academic integrity. Familiarize yourself with these programs before the first exam.

Office Hours:

Students are encouraged to attend office hours with the instructor or TA/IA team as scheduled.

Review Sessions:

Review sessions will be offered periodically to help prepare for exams and provide additional practice on course topics. These sessions, primarily led by the TA/IA team, will typically be conducted in English. In some cases, additional sessions may be offered in Spanish, though all exams, assignments, and other course materials will be in English, and students are expected to submit their work in English.

Technology:

Course content will be delivered through Blackboard, with additional resources provided via Microsoft Teams and GitHub Classroom. Ensure your UTEP MINERS account is active and that you have reliable internet access. Supported web browsers include Edge, Chrome, Firefox, and Safari; if you encounter issues, try switching browsers.

You will need a computer or laptop with a webcam and microphone, as well as access to a tablet or smartphone for tasks such as scanning and submitting homework as PDFs. Certain assignments may require video submissions, which can be recorded using a phone, webcam, or other video-capable devices. Verify that your hardware and software are up-to-date and capable of accessing all course materials. For technical issues, contact the UTEP Help Desk.

Only UTEP-licensed platforms—Microsoft Teams, Microsoft Office (via your MINERS account), and Blackboard—may be used for course-related communication and collaboration. Unauthorized platforms such as Discord, Twitch, WhatsApp, or GroupMe are strictly prohibited. Laptops and tablets may be used for notetaking or coursework, but must not be used for unrelated activities such as browsing the internet or running non-course-related applications during class.

Cell Phone Policy:

The use of cell phones during class is strictly prohibited unless explicitly permitted for educational purposes. Phones must be silenced and put away to maintain focus and avoid distractions. Violations of this policy may result in being asked to leave the class.

Accommodations Policy:

UTEP 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); please contact the office at (915) 747-5148, or by email to cass@utep.edu. Students are required to discuss their accommodations with the instructor for a proper plan to be made.

4. Standards of Conduct, Academic Dishonesty, and Other Information

COVID-19/Illness Precautions:

If you are diagnosed with COVID-19, experiencing symptoms, or feeling unwell, please stay home and notify the instructor as soon as possible to discuss accommodations.

Students who test positive for COVID-19 are encouraged to report results to covidaction@utep.edu for support and assistance with communication to professors.

COVID-19 testing is available at the Student Health Center.

The CDC recommends wearing face masks indoors in areas with substantial or high COVID-19 transmission. Vaccination is strongly encouraged and widely available in the El Paso area. Visit epstrong.org for updates on COVID-19 transmission rates, testing, and vaccination sites.

In general, if you are ill, stay home and inform the instructor promptly.

Copyright Statement for Course Materials:

All materials used in this course are protected by copyright law. The course materials are only for the use of students currently enrolled in this course and only for the purpose of this course. It is not permitted to share, reproduce, or alter any assignment for any purpose. Students are not permitted from sharing code, uploading assignments online in any form, or viewing/receiving/modifying code written from anyone else. Assignments are part of an academic course at The University of Texas at El Paso and a grade will be assigned for the work produced individually by the student.

Class Recordings:

Lectures may be recorded by the instructor or department to facilitate access for students who miss class due to illness or other extenuating circumstances. Students are not permitted to record classes (video, audio, etc.) without the instructor's explicit permission.

Class recordings are governed by the Federal Educational Rights and Privacy Act (FERPA) and UTEP's acceptable-use policy. Recordings will be stored securely by UTEP and shared only with course participants, including fellow students, teaching assistants, or guest speakers as applicable. Sharing recordings outside of the course is prohibited and may result in disciplinary action.

Support Services:

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.

Individual Resources

- 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 provides a variety of student services and support. Please refer to the QR code below for a listing of campus resources.



Standards of Conduct:

You are expected to conduct yourself in a professional and courteous manner, as prescribed by the UTEP Standards of Conduct.

Generative AI:

The use of generative AI tools such as ChatGPT, Gemini, or similar is prohibited unless explicitly allowed for specific assignments. When permitted, this will be clearly stated in the assignment guidelines. Using generative AI tools without authorization is considered academic dishonesty and will be reported to the UTEP Office of Community Standards.

Etiquette:

Respect and professionalism are expected at all times. Harassment, inappropriate behavior, or disrespect toward classmates, teaching staff, or the instructor will not be tolerated. This course is a learning environment and should be treated as such.

When engaging in class discussions or online platforms like Blackboard, focus on addressing ideas, not individuals. Blackboard content is private and intended solely for course participants. Do not share materials, messages, or posts outside the course without explicit permission from the authors. Violations of this policy may result in disciplinary action.

Academic Integrity:

A fundamental principle for any educational institution, academic integrity is highly valued and seriously regarded at The University of Texas at El Paso. More specifically, students are expected to maintain absolute integrity and a high standard of individual honor in scholastic work undertaken at the University. At a minimum, you should complete any assignments, exams, and other scholastic endeavors with the utmost honesty, which requires you to:

- Acknowledge the contributions of other sources to your scholastic efforts.
- Complete your assignments independently unless expressly authorized to seek or obtain assistance in preparing them.

- Follow instructions for assignments and exams, and observe the standards of your academic discipline; and
- Avoid engaging in any form of academic dishonesty on behalf of yourself or another student.

Graded work, e.g., homework and tests, is to be completed independently and should be unmistakably your own work (or, in the case of group work, your team's work), although you may discuss your project with other students in a general way. You may not represent as your own work material that is transcribed or copied from another person, book, or any other source, e.g., a web page.

Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable to another person. The below information is not necessarily an exhaustive list of cheating, plagiarism, nor collusion.

- **Cheating**
 - Copying from the test paper of another student
 - Communicating with another student during a test
 - Giving or seeking aid from another student during a test
 - Possession and/or use of unauthorized materials during tests without authorization (i.e., Crib notes, class notes, books, etc.)
 - Substituting for another person to take a test
 - Falsifying research data, reports, academic work offered for credit
- **Plagiarism**
 - Using someone's work in your assignments without the proper citations
 - Submitting the same paper or assignment from a different course, without direct permission of instructors
- **Collusion**
 - Unauthorized collaboration with another person in preparing academic assignments

Collaboration:

The following are **not allowed**:

- Posting any assignment (or any of its parts) online in any form
- Sharing assignments outside of the course (i.e., to other students)
- Copy/pasting any code from anywhere other than from Instructor/TA/IA
 - This includes copy/pasting code snippets (or entire assignments) from online resources such as, but not limited to:
 - stackoverflow.com
 - Chegg
 - Course Hero
 - ChatGPT/Gemini, and all others
- Sharing your code with other students (unless otherwise specified).
- Reading code from other students (unless otherwise specified).
- Look at another student's code
- Debug another student's code

The following are **allowed**:

- Communicating with the instructor/TA/IA regarding homework, assignments, and labs
- Searching for basic syntax online
- Copy/pasting examples from any reference material (slides, practice problems, etc.) distributed by your instructor/TA/IA
- Use any small code snippets that instructor/TA/IA share with students.
- Using simple predefined libraries (ask the instructor/TA if you are not sure if it is allowed)

When in doubt, *ask*. It is better to ask if something is permitted, rather than doing something that is not permitted and causing issues later.

Plagiarism Detection:

All coursework and assignments are subject to be submitted to cheating and plagiarism detection software including, but not limited to SafeAssign and MOSS.

A full description of the University Standards of Conduct and Academic Dishonesty can be found in the [Handbook of Operating Procedures](#). Professors are required to -- and will -- report academic dishonesty and any other violation of the Standards of Conduct to the Dean of Students and OSCCR.

Subject to change:

The syllabus is subject to change.