The University of Texas at El Paso
Department of Computer Science
CS 1101 – Intro to Computer Science Labs
Spring 2021 Syllabus

1. General Information

Instructor:
Daniel Mejia
Email: dmmejia2@utep.edu
Dates: January 19, 2021 – May 14, 2021
Meeting location: Zoom
Office Hours: TR 3-4pm
Office: Microsoft Teams

TR 9:00am		
CRN	29512	(CS 1301 – 29511)
Time	TR 9:00-10:20am	MS Teams
TA	Alireza P. Nouri/Erik Macik	apashamoham@miners.utep.edu/ esmacik@miners.utep.edu
IA	Melina Salazar-Perez	misalazar@miners.utep.edu
IA	Joshua Ramos	jaramos13@miners.utep.edu
PL	Lorelyne Chavez	lchavez22@miners.utep.edu

TR 10:30am		
CRN	25196	(CS 1301 – 25191)
Time	TR 10:30-11:50am	MS Teams
TA	Erik Macik	esmacik@miners.utep.edu
IA	Montserrat Molina	mgmolina3@miners.utep.edu
IA	Ana Arellano	akarellano2@miners.utep.edu
PL	Manuel Gutierrez	mgutierrez44@miners.utep.edu

TR 1:30pm		
CRN	25265	(CS 1301 –25194)
Time	TR 1:30-2:50pm	MS Teams
TA	Alireza P. Nouri	apashamoham@miners.utep.edu
IA	Ericka Najera	ejnajera@miners.utep.edu
IA	Diana Licon	dlicon2@miners.utep.edu
PL	Lorelyne Chavez	lchavez22@miners.utep.edu

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 we may help you succeed.

You should be enrolled in **one lab section**. **Your lab and class should have the same instructor.** Do not drop in on a lab or lecture section other than yours, without prior approval from your instructor.

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

Textbook (Required):
1. Access through Blackboard – Zybooks
2. Subscription is **$58**. Subscriptions will last until May 20, 2021

2. Objectives & Outcomes

Lab Objectives: Students will learn the foundations of algorithmic thinking and algorithm development and learn how to implement them in a variety of languages. They will also learn to be active learners. They will develop problem-solving skills 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.

Software: Software used in this course will be available on the Windows computers in the main computer lab and in the two instructional labs on the first floor of the CCSB building. For those who wish to use the course software on your home computer, instructions will be given in the labs and will be available in Blackboard.

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. Computer representation of simple data types and operations, including operations with binary numbers
2. Technical aspects of computing, including memory, operating systems, editors, interpreters, compilers, debuggers, and virtual machine
3. Differences among programming languages
4. The purpose and use of exceptions
5. Pseudocode and implementation in a programming language of the use of Multi-D arrays
6. Pseudocode and implementation in a programming language of the use of Linked lists

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:

1. To analyze problems and express solution algorithms in pseudocode
2. To implement pseudocode algorithms in a high-level language, including the correct use of:
    a. Arithmetic and logical expressions

  b. Simple I/O operations

  c. User-defined subprograms, including recursive methods

  d. User-defined types

3. To use testing and debugging strategies, including black-box and white-box testing, test drivers, stubs and test suites, to identify software faults

4. Use teamwork roles and methods in the classroom

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 higher-level language to express solutions to programming problems, including the correct use of:

1. Basic variable types such as integer, real number, character, string, 1-D array

2. Assignment, arithmetic, and logical operations

3. Basic control structures: if-then, for-loop, while-loop

3. Policies & Other Information

Grading:
- Comprehensive Labs – 60%
- Homework – 30%
- Lab Participation/Attendance – 8%
- Student Engagement in CS – 2%

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

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.

Lab Assignments:
Lab assignments are designed to allow you to practice the topics that constitute the outcomes of this course. Assignments will be a mix of:

- Problems to be solved without computers to practice problem solving and algorithm design.
- Programming assignments.

Deadlines for lab assignments will be clearly specified in the description of each assignment. Assignments turned in up to three days late will have scores reduced by 10% for each day of lateness.

When assessing labs, TAs will spend 5 to 10 minutes with each student asking probing questions about the topics covered in the assignments: these questions will be asked regardless of whether you completed the assignment or not. This allows you flexibility, in case something happened, and you were not able to complete an assignment, to make up for some points.

Comprehensive Labs:
Typically, there would be 3 comprehensive labs. These labs require more time to complete. The deadline for comprehensive lab is usually longer than the usual labs.

Lab Participation:
Attendance at and participation in all lab sessions are mandatory and critical factors of your success in this lab course.

Students should be **on time** for all scheduled sessions and **attend the entire session**. Attendance will be taken at every session and will count towards your class participation grade. Programming activities assigned by the TA will count towards homework grade.

Students should **notify the TA prior to missing a session** if at all possible, and certainly right after if earlier was not possible. The TA will allow two unexcused absences per semester before having the option to deduct points from the final grade (5 points per subsequent unexcused absence).

It is the student's responsibility to obtain the content covered during missed labs. Participation points may also include completing post-labs online quizzes (when applicable) that are administered as surveys to monitor students' overall progress and potential struggles.

Student Engagement in Computer Science:

During the course of the semester, you must engage as a computer scientist in activities as shown below, in a way that you cumulate at least 2 points (towards your final grade).

Possible activities (along with the number of points each yields) include (but are not limited to – check with Diego if you'd like to do something that is not on the list):

- **1 point** for each of the following:
    - Write a summary of a seminar you attended (proof of attendance needs to be provided as well)
    - Attend two review sessions provided by your undergraduate TAs or peer leaders before exams
    - Participate in a Department's open house as a volunteer student
    - Design a video about a specific career in Computer Science
    - Design a video "explaining to a first grader" a topic relating to this course (seek instructor approval for topic)
    - Other CS engagement suggestions will be determined and announced
- **2 points** for each of the following:
    - Be an active participant in a CS student organization / club (provide proof from faculty advisor)
    - Be an active undergraduate researcher in one of the CS Research labs and present to the class your work
    - Other CS engagement suggestions will be determined and announced

Note: These points should be acquired **by the end of week 12** of the semester. No submission will be accepted past this deadline.

Technology:
Course content is delivered via the Internet through the Blackboard learning management system (LMS), supplemented by Microsoft. Teams. Ensure your UTEP MINERS account is working and that you have access to the Internet. You may use any of the primary Web browsers—Edge, Google Chrome, Firefox, Safari, etc. When having technical difficulties, try switching to another browser.

The use of laptops, cell phones, or tablets of any kind, will be necessary for this course. It may be necessary to have a cell phone with a PDF Scanning App (Adobe Scanner, Notes (iPhone), CamScanner, etc.) to scan homework assignments. You may use a tablet (iPad, Surface Pro, etc.) to handwrite certain homework assignments and submit as PDF documents.

You will need to have access to a computer/laptop, printer, scanner, a webcam, and a microphone. You will need to download or update the following software: Microsoft Office, Adobe, Flash player, Windows Media Player, QuickTime, and Java. Check that your computer hardware and software are up-to-date and able to access all parts of the course. If you encounter technical difficulties of any kind, contact the Help Desk.

Drop Policy:
To drop this class, please contact the Registrar's Office to initiate the drop process. If you cannot complete this course for whatever reason, please contact me. If you do not, you are at risk of receiving an "F" for the course.

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 and Academic Dishonesty

Netiquette:
Always consider audience. Remember that members of the class and the instructor will be reading any postings. Respect and courtesy must be provided to classmates and to instructor at all times. No harassment or inappropriate postings will be tolerated. When reacting to someone else's message, address the ideas, not the person. Post only what anyone would comfortably state in a F2F situation. Blackboard is not a public internet venue; all postings to it should be considered private and confidential. Whatever is posted on in these online spaces is intended for classmates and professor only. Please do not copy documents and paste them to a publicly accessible website, blog, or other space. If

students wish to do so, they have the ethical obligation to first request the permission of the writer(s).

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

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.
- **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 (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:
Collaboration among students is strongly encouraged.
It is acceptable to:

- Talk with other students about approaches and ideas.
- Get ideas and extra information from the internet, books, etc.

However, it is not acceptable to:
- Share code with another student (if a piece of code is submitted by two or more students, both students are guilty of cheating, regardless of who wrote the original code).
- Use code acquired from an outside source (the internet, a friend, etc.)
- Look at another student's code
- Debug another student's code

Software to detect plagiarized programs are used; appropriate disciplinary actions will be taken as necessary.

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.