

CS 1301 Introduction to Computer Science

Fall 2020 Syllabus

<p>Time: MW 9:00 am -10:20 am</p> <p>Location: <i>Virtually</i> in Blackboard</p> <p>Textbook: Programming in Java, by Zybooks.</p> <ol style="list-style-type: none"> 1. Sign in or create an account at learn.zybooks.com 2. Enter zyBook code: UTEPCS1301AkbarFall2020 3. Subscribe <p>A subscription is \$58. Subscriptions will last until Jun 1, 2021.</p>	<p>Instructor: Monika Akbar (makbar@utep.edu)</p> <p>Office: CCSB 3.0422</p> <p style="text-align: center;">Office Hours</p> <p>MW 2:00 pm – 3:00 pm or by appointment</p> <p>Location: MS Teams</p>
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Instructional Team:

Name	Email	Role
Erik Macik	esmacik@miners.utep.edu	Teaching Assistant (TA)
Ruth Trejo	rtrejo9@miners.utep.edu	Instructional Assistant (IA)
William Croslen	wdcroslen@miners.utep.edu	Instructional Assistant (IA)
Joshua Ramos	jramos13@miners.utep.edu	Peer Leader (PL)

Note: When emailing the instructor or TA/IA, please use **[CS1301]** in the subject.

Note: 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.

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.

Prerequisite: MATH 1508 or MATH 1411 with a grade of C or better.

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 (Bb)**. Please check Bb regularly to stay updated with the class.

Software: We will need the following two software:

1. Java Development Kit (JDK)
2. Any text editor, such as notepad. We recommend *Sublime text* as a text editor.

Instructions will be given in the labs and in Blackboard on how to install and use **JDK**.

Please talk to the instructor or the TA/IA anytime you have questions, concerns, or want to discuss anything. Reach out as often and as frequently as you need, so that we can help you succeed.

Final Exam
Wednesday, December 9th - 10:00 am

GRADING

Grades are communicated to students in a timely manner. *It is the students' responsibility to keep track of their grades by compiling the grades they receive.* Your semester grade will be based on a combination of homework assignments, quizzes, class participation, 3 mid-term exams, CS engagement points, and a final exam.

The approximate percentages are as follows:

- 15% Homework
- 25% Quizzes
- 50% Exams (3 mid-term exams and 1 final exam)
- 8% Class participation (includes on-time lecture attendance, active participation in class, completion of any quizzes for attendance and survey purposes).
- 2% Student Engagement in Computer Science

The nominal percentage-score-to-letter-grade conversion for CS 1301 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.

EXPECTATIONS

Class Participation: Attendance at and participation in all lecture sessions are **mandatory** and critical factors of your success in this course. Students should be **on time** for all scheduled sessions and **attend the entire session**. *Students should notify the instructor before missing a session if at all possible, and certainly right after if earlier was not possible.*

It is the student's responsibility to obtain the content covered during missed class(es). Participation points include completing post-lecture study materials (quiz, homework) that are administered as surveys to monitor students' overall progress and potential struggles.

Points lost due to an unexcused absence may not be made up. Any points lost due to an excused absence will need to be made up by arrangement with the instructor.

Quizzes: The purpose of each **quiz** is to ensure that you are staying current with the class content, weekly reading, and to verify that you have acquired the skills developed in class. Quizzes will be online on Blackboard or other platform(s) as mentioned in the class. **There will be no make-up on missed quizzes.**

Homework: Reading and homework assignments will be announced in class and/or posted on Blackboard. If you miss a lecture session, it is your responsibility to find out what you missed. You should expect to spend **at least four hours per week outside of lecture on reading and homework (more hours are better)**. Most of your homework will be assigned on your online **zybook**: completing the assigned activities on time will be crucial for your success in the class (since these activities prepare you for classwork) and to getting a good grade (since late completion will be penalized). Any assignments due on the date of the absence will be considered late if not turned in as specified by the assignment guidelines unless an exception is granted by the instructor.

Exams: There will be **3 midterm exams** and **one final exam**. All four exams together will weigh 50% of your overall final grade for CS1301. Because the exams contribute so heavily to your total grade, it is vital that you do well on them. If you have test-taking difficulties in general, or if you have difficulties with our tests in particular, please let me know as soon as possible and/or request appropriate accommodation from UTEP's Center for Accommodation and Students' Services (CASS, see below).

The purpose of the **midterm exams** is to allow you to demonstrate mastery of course concepts covered thus far during the semester. Mid-term exams will take place during the regular lecture session and are *tentatively* scheduled to be held around week 5, week 10, and week 14. Make-up exams will be given only in extremely unusual circumstances. **If you must miss an exam, please contact the instructor as soon as possible, preferably BEFORE the exam.**

The **final exam** will be comprehensive. You **must score 65% or better on the final exam** to pass this course. You must take the final exam during the time shown in the schedule for the lecture section that you attend. If you have a scheduling conflict (e.g., if you are taking a final at EPCC) or if you are scheduled for three final exams in one day, see your instructor in advance for accommodation.

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 Dr. Akbar 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 CS webinar you attended (we will share links in class).
 - Attend two review sessions provided by your undergraduate TAs (known as IAs) or peer leaders before exams.
 - Participate in a Department's virtual events.
 - Design a video about a specific career in Computer Science.
- **2 points** for each of the following:
 - Be an active participant in Google IgniteCS program (or equivalent) or any other CS student organization;
 - Be an active undergraduate researcher in one of the Computer Science Research labs and present to the class your work.

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

TENTATIVE TOPICS COVERED

Following is a list of tentative topics that will be covered in this course:

- History of computing and introduction to problem solving
- Abstraction
- Algorithm and pseudo-code
- Variables
- Conditionals
- Repetitions
- Array
- Decomposition (Method)
- Testing
- Object
- Linked list

VIRTUAL CLASS AND HOW TO BE SUCCESSFUL

BLACKBOARD COLLABORATE SESSIONS

This class requires that you participate in scheduled Blackboard Collaborate sessions (aka **Virtual Class** on Blackboard). The purpose of these sessions are for you to view live demonstrations of the course material and/or to participate in small discussion groups with your classmates.

Students are expected to, at least occasionally, participate in Virtual Class sessions with a *webcam and microphone*. The sessions will be recorded and provided so that they can be reviewed by classmates at a later time. **Students should not record the sessions and post them to any sites outside of Blackboard.** If you are unable to attend a Virtual Class session, please let me know as soon as possible so that accommodations can be made when appropriate.

ATTENDANCE AND PARTICIPATION

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 create a community of learners. Participation is determined by completion of the following activities:

- Reading/Viewing all course materials to ensure understanding of assignment requirements
- Participating in engaging discussion with your peers on the discussion boards
- Participating in scheduled Blackboard **Virtual Class** sessions
- Other activities as indicated in the class.

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

CLASS RECORDINGS

The use of recordings will enable you to have access to class lectures, group discussions, and so on in the event you miss a synchronous or in-person class meeting due to illness or other extenuating circumstance. Our use of such technology is governed by the Federal Educational Rights and Privacy Act (FERPA) and UTEP's acceptable-use policy. A recording of class sessions will be kept and stored by UTEP, in accordance with FERPA and UTEP policies.

Your instructor will not share the recordings of your class activities outside of course participants, which include your fellow students, teaching assistants, or graduate assistants, and any guest faculty or community-based learning partners with whom we may engage during a class session. **You may not share recordings outside of this course.** Doing so may result in disciplinary action.

COMMUNICATION

Because this is an online class, we won't see each other in the ways you may be accustomed to: during class time, small group meetings, and office hours. However, there are a number of ways we can keep the communication channels open:

- **Office Hours:** We will not be able to meet on campus, but I will still have office hours for your questions and comments about the course. My office hours will be held on [MS Teams](#) during the these times: **Monday and Wednesday: 2:00 - 3:00 p.m.**
The TA/IA/PLs will post their office hours and virtual locations on Blackboard.
- **Email:** When e-mailing us, be sure to email from your UTEP student 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.

- **Discussion Board:** If you have a question that you believe other students may also have, please post it in the discussion boards inside of Blackboard. Please respond to other students' questions if you have a helpful response.
- **Announcements:** Check the Blackboard announcements frequently for any updates, deadlines, or other important messages.

NETIQUETTE

As we know, sometimes communication online can be challenging. It's possible to miscommunicate what we mean or to misunderstand what our classmates mean given the lack of body language and immediate feedback. Therefore, please keep these netiquette (network etiquette) guidelines in mind. Failure to observe them may result in disciplinary action.

- Always consider the audience. This is a college-level course; therefore, all communication should reflect polite consideration of other's ideas.
- Respect and courtesy must be provided to classmates and to the 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 face-to-face 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.

RESOURCES

Special Accommodations: If you have a disability and need classroom accommodations, please contact the Center for Accommodations and Support Services (CASS) at 747-5148 or by email to cass@utep.edu, or visit [Center for Accommodations and Support Services](#). CASS assists students with ADA-related accommodations for coursework, housing, and internships. CASS' staff are the only individuals who can validate and authorize accommodations for students with disabilities.

Help Desk: Please contact UTEP [Help Desk](#) if you are experiencing technological challenges (email, Blackboard, software, etc.), and submit a digital ticket for assistance. Contact the Helpdesk via phone, email, chat, website, or in person if on campus.

Individual Resources

- [Military Student Success Center](#): Assists personnel in any branch of service.
- [Counseling and Psychological Services](#): Provides a variety of counseling services including individual, couples, and group sessions as well as career and disability assessments.

Scholastic Dishonesty: Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but not limited to cheating, plagiarism, collusion, submission for credit of any work or materials that are attributable to another person.

Cheating is:

- Copying from the test paper of another student
- Communicating with another student during a test to be taken individually
- Giving or seeking aid from another student during a test to be taken individually
- 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 is:

- 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

To avoid plagiarism, see: https://www.utep.edu/student-affairs/osccr/_Files/docs/Avoiding-Plagiarism.pdf

Collusion is: Unauthorized collaboration with another person in preparing academic assignments

NOTE: When in doubt on any of the above, please contact your instructor to check if you are following authorized procedure.

DETAILED 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 history of computing
2. The relation between computing and society, including social, ethical, and legal issues
3. Computing as a profession, from required knowledge and skills to major career options
4. Computer representation of simple data types and operations, including operations with binary numbers
5. Differences among programming languages
6. Pseudocode of the use of Multi-D arrays
7. Pseudocode 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, 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
2. To use testing and debugging strategies, including black-box and white-box testing, test drivers, stubs and test suites, to identify software faults
3. 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 pseudocode 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