# CS 1301 Introduction to Computer Science
## Fall 2022 Syllabus – CRN 15666

<table>
<thead>
<tr>
<th>Schedule:</th>
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<tbody>
<tr>
<td><strong>TR:</strong> 12:00 PM – 1:20 PM</td>
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<tr>
<td><strong>Classroom:</strong> CCSB G.0208</td>
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<table>
<thead>
<tr>
<th>Instructional Team</th>
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<tbody>
<tr>
<td><strong>Name:</strong> Maria G. Jimenez Velasco</td>
</tr>
<tr>
<td><strong>Email:</strong> <a href="mailto:mgjimenezvelasco@utep.edu">mgjimenezvelasco@utep.edu</a></td>
</tr>
<tr>
<td><strong>Office:</strong> CCSB 3.1202</td>
</tr>
<tr>
<td><strong>Office hours:</strong> TR 9:30 – 11:30 AM or by appointment. CCSB 3.1202, next to elevators and restrooms. Knock the door.</td>
</tr>
<tr>
<td><strong>TA:</strong> Farhan Ahnaf</td>
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<tr>
<td><strong>Office hours:</strong> TBA.</td>
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<tr>
<td><strong>IA 1:</strong> Gabriel Miki-Silva, <strong>Office hours:</strong> TBA.</td>
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<th>Catalog Description:</th>
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<tr>
<td><strong>You must take CS1101 – 16430 Lab.</strong> 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. <strong>Course Objectives:</strong> Students will learn to be active learners and 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.</td>
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<th>Prerequisites:</th>
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<td>MATH 1508 or MATH 1411 with a grade of C or better. <strong>Knowledge and Abilities Required Before Entering the Course:</strong> 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.</td>
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<tr>
<th>Textbook:</th>
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<td>Instructions to purchase the book will be given in the classroom and on Blackboard. <strong>Textbook/ebook:</strong> “Revel Introduction to JAVA Programming and Data Structures, 12 e”. 2020 Pearson, Daniel Lang. <strong>Platform:</strong> Revel.</td>
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<tr>
<th>Class Drop date:</th>
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<tr>
<td>The last day to drop the course with an automatic &quot;W&quot; is <strong>October 28, 2022</strong>. After this deadline, students will be dropped from a course with a grade of &quot;F&quot;. A grade of &quot;W&quot; can be assigned after the deadline only under exceptional circumstances and only with the approval of the instructor and the academic dean. In such a case, the student must petition for the &quot;W&quot; in writing and provide the necessary supporting documentation.</td>
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Technology requirements:

A device with Java Development Kit (JDK) and text editor installed, such as notepad. We recommend Visual Studio Code as a text editor. Instructions will be given in the labs and in Blackboard on how to install and use JDK. Instructions will be given in BB and the classroom.

Regular access to a computer or device with a camera and microphone, consistent internet, Blackboard, and your UTEP e-mail account is needed. **Your responsibility is to get this material and be ready for the course.**

Course content is delivered through the Blackboard learning management system. Ensure your UTEP e-mail account is working and you have access to the Web and a stable web browser. Google Chrome and Mozilla Firefox are the best browsers for Blackboard. When having technical difficulties, update your browser, clear your cache, or try switching to another browser. You will need access to a computer/laptop, scanner (or a mobile App that can scan a document), and a device with a webcam.

You will need to download or update software such as Microsoft Office on your device. 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 the 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.

Grading:

The material provided by the instructor will be used for the course. The Textbook’s chapters consist of readings and exercises to practice and expand your knowledge. Students must read the material before each class session. Your semester grade will be based on homework/assignments, quizzes, class participation, 3 mid-term exams, and a final exam. CS engagement participation will be considered as extra points.

Your performance is an indicator of your ability to master the topic. Decide to work NOW for the grade you want. Students who keep up with the materials, do all of the assignments, attend the class, and participate in the learning experiences typically do well. Your grade will be based on the total number of points that you earn for each assignment group. The weight associated with each of the graded areas, and the total points required to earn the various grades, are shown below.

Your grade will be calculated as shown below.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Weight</th>
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<tbody>
<tr>
<td>a. Exams: midterms</td>
<td>40%</td>
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<tr>
<td>b. Homework/assignments</td>
<td>20%</td>
</tr>
<tr>
<td>c. Quizzes</td>
<td>15%</td>
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<tr>
<td>d. Participation: attendance, active participation, surveys/feedback, exercises in the classroom, or any other indicated by the instructor.</td>
<td>25%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
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**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.
Your grade will be calculated using the following scale:

<table>
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<tr>
<th>Grade</th>
<th>Level of Work</th>
<th>Percentage Range</th>
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<tbody>
<tr>
<td>A</td>
<td>Excellent, distinguished</td>
<td>90% - 100%</td>
</tr>
<tr>
<td>B</td>
<td>Very good, above average</td>
<td>80 – 89%</td>
</tr>
<tr>
<td>C</td>
<td>Average, Normal</td>
<td>70 – 79%</td>
</tr>
<tr>
<td>D</td>
<td>Below Average</td>
<td>60 – 69%</td>
</tr>
<tr>
<td>F</td>
<td>Failing</td>
<td>&lt;60%</td>
</tr>
</tbody>
</table>

A grade of "I" (Incomplete) will be assigned only in circumstances in agreement with the current UTEP Undergraduate Catalog. 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 within deadlines.

If you are having issues with your computer, as mentioned above, ask for help at the help desk, try to get another computer from the library or the Computer Science Department, or use the computer from the labs. If you have issues and do not submit the assignment on time because completing the assignment at the last minute will not be a valid excuse for a deadline extension. A student unable to take an exam due to an emergency must inform me of that fact on or earlier than the day of the exam and arrange for a make-up exam. Any student requiring make-up will have to document his/her excuse. Any personal business, including work or travels that cause your absence in class, is not a valid excuse, and no deadline extension will be given. DO NOT ASK ME TO EXCUSE YOUR ABSENCES BECAUSE OF PERSONAL BUSINESS.

**Attendance and participation:** This is an in-person course. Attending the class will allow you to practice, participate, clarify doubts, and complete activities. To earn full credit for attendance, you should plan to show up on time, stay for the entire session, work on your assignments, NOT visit websites, email, text, or conduct other activities unrelated to class assignments in the classroom. As mentioned above, at least 70% of attendance is required to take the final exam and get a final grade. More than four unexcused absences may result in being dropped from the course or failing the course because of absences. Since this course is related to the 1301 course, attendance is relevant. If there is any reason for missing classes, email me as soon as possible and additional instructions are given by email. Depending on the case, your absences might be excused. Leaving class early or arriving late will be considered as half attendance. If you stay in class for less than 30 hours, it will be considered an absence. Also, consider that if you leave early or arrive late, you may miss the completion of activities, quizzes, or exercises in the classroom. In some cases, the attendance will be taken in different ways in the classroom, for instance, calling each student and/or submitting exercises. People who miss any class session are responsible to ask their peers about what they missed in the class. Also, they can find the lecture material on Blackboard.

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 the completion of the following activities:

- Participating in an engaging discussion with your peers (Work in pairs or teams),
- Sharing opinions, answers, or solutions to the class when the professor requires them. SHARE SOLUTIONS without the approval of the professor is considered cheating.
- Completing session activities (e.g., surveys) indicated in the Blackboard course shell.
Because these activities are designed to contribute to your learning each week, they cannot be made up after their due date has passed. Due to non-performance in the course or excessive non-excused absences (see UTEP Undergraduate Catalog for a list of excused absences), you may be dropped from the course with a grade of “W.” 72-hour advance notice will be provided to you via email.

**Blackboard Collaborate sessions:** The instructor will occasionally record lectures/lab sessions using Blackboard Collaborate. Using 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, graduate assistants, and any guest faculty or community-based learning partners with whom we may engage during a class session. **You may not share class session recordings outside of this course.** Doing so may result in disciplinary action.

**Assignments and hands-on in class:** Assignments and activities in class must be turned in on time. Assignments and activities will not be received via email or graded if turned in via email, at least the instructor indicates it. **Assignments for this course are assessed according to rubrics. Each assignment will be provided with the corresponding rubric.**

**Exams**

We will have an exam per month plus the final exam. Please, turn in your exam on time, and exams not turned in as indicated by the instructor will not be graded. **IT WILL BE NOT ALLOWED to students who arrive late after their peers have already completed the quiz or exam and leave the classroom to take the quiz or exam. Your responsibility is to arrive on time, submit the correct files, and turn them in on time.**

Students should **notify the TA by copying the instructor before missing a session** if possible, and certainly right after if earlier was not possible.

**NOTE:** Only people who attend the class session are ALLOWED to submit the corresponding assignment.

In addition, it is **NOT ALLOWED TO share any given PASSWORD (Blackboard, etc.) with anyone else. Students who violate these rules**, besides obtaining a zero in the corresponding assignment/quiz, will be penalized with -5 points out of overall per each incurrence.

<table>
<thead>
<tr>
<th>Communication with each other</th>
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<tbody>
<tr>
<td>We will communicate face-to-face during class and small group meetings and virtually during office hours. Also, we will communicate via email and Blackboard. There are several ways we can maintain communication:</td>
</tr>
<tr>
<td>• During class section: I strongly encourage you to attend the class and be punctual. Do not hesitate to ask questions to clarify doubts. We have a willingness to support you to succeed in the course.</td>
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<tr>
<td>• Office Hours: I will have office hours for your questions and comments about the course.</td>
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<tr>
<td>• Email: UTEP e-mail is the best way to contact me. I will attempt to respond to your e-mail within 24-48 hours of receipt. When emailing me, be sure to email from your UTEP student account, and please put the course number and your name in the subject line. For example: [CS1301-CRN15666-John_Doe] in the body of your e-mail, and 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. If you don't follow the instructions, I could don't reply in time.</td>
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</table>
| Expectations | Classroom Etiquette: If you are unavoidably late to class, please come in quietly so as not to disrupt other students. Cell phones, MP3 players, etc. should be out of sight in your backpack or another container. Please shut them off, or set them to silent mode before class starts. If you expect an important call, please inform the instructor or TA at the beginning of class. Violations of this policy may result in loss of access to your device for the rest of the class, an individual meeting with the instructor to discuss your misuse of electronic devices, and a reduced grade. Also, in some cases, the instructor could ask you to move from one computer to another. It is expected of your collaboration to respect and obey the given instructions in the classroom. It is not acceptable to be working on personal stuff in the classroom.

Keep an inclusive workplace: Remember that in the classroom, we have people of distinct cultures, customs, languages, genders, preferences, backgrounds, and physical conditions. Everyone is part of that diversity. Take advantage of that diversity to collaborate and learn from each other. Be respectful, patient, and helpful when interacting with peers and the teaching team. Practice good fellowship and manners: raise a hand if any question, respect turn, provide positive feedback to others respectfully, and be patient when others participate.

Be respectful and behave in the classroom: I will not allow any student to be rude and disrespectful in the classroom; this behavior may be reported to the CS office.

Working in teams: if working in teams, each team member MUST contribute to accomplishing the assignment. It is expected to help each other to succeed under honesty policies. Everyone must have the opportunity to collaborate, share ideas, and discuss the solution. It is NOT acceptable that only one member or a few team members take control of the entire task without allowing the participation and collaboration of the rest of the team. Everyone should be prepared to answer any questions and to give feedback to others. The final grade obtained must be analyzed by the team to make decisions about what should be improved in the future.

Keep your work area clean and orderly: Use your work equipment properly, tidy up your space, and place the chair properly before leaving the classroom. Don't forget to log out.

Be responsible for your learning: Be punctual, read the material previously and complete activities/projects/assignments on time, attend class sections, check the Blackboard announcements frequently for any updates, follow instructions, submit your assignments/exams on time, collaborate with your peers, do not hesitate to ask if any question (“There is no such thing as a stupid question.”), Furthermore, practice academic honesty.

Blackboard is not a public internet venue; all postings to it should be considered private and confidential. Whatever is posted in these online spaces is intended for classmates and the instructor only. Please do not copy documents and paste them to a publicly accessible website, blog, or other space. |
Check the Blackboard announcements frequently for updates, deadlines, or other important messages. It is recommended that you download the Blackboard Mobile App to receive notifications.

**Notify the professor if you plan to drop the course.**

**Collaborate with the course improvement by answering the surveys.**

| Need for Assistance or special accommodation: | 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 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 to the University. If you have any condition, such as a physical or learning disability, which will make it difficult for you to carry out the work as I have outlined, or which will require academic accommodations, please notify me as soon as possible. Also, please contact The Center for Accommodations and Support Services (CASS) at 747-5148, email cass@utep.edu, or visit their office in UTEP Union East, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass. Also, if you are struggling with something in your personal life and get distressed, I recommend contacting COUNSELING AND PSYCHOLOGICAL SERVICES ([https://www.utep.edu/student-affairs/counsel](https://www.utep.edu/student-affairs/counsel)). **Student 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.

**Individual Resources:**

- Military Student Success Center: Assists personnel in any branch of service to reach their educational goals.

**University Policies:** **Standards of Conduct:** You are expected to conduct yourself in a professional and courteous manner, as prescribed by the UTEP Standards of Conduct ([http://sa.utep.edu/osccr/student-conduct/](http://sa.utep.edu/osccr/student-conduct/)).
Academic Honesty:

Graded work 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 (for example, a web page).

Academic dishonesty 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 data (for example, program outputs) in laboratory reports. Removing or copying pages or problems from exams or quizzes, including those posted on the World Wide Web.
- **Plagiarism** occurs when someone represents the work or ideas of another person as his/her own.
- **Collusion** involves collaborating with another person to commit an academically dishonest act.
- Any other activity that jeopardizes the integrity of this course.

Professors are required to--and will--report academic dishonesty and any other violation of the Standards of Conduct to the Dean of Students (http://sa.utep.edu/dean/). Academic dishonesty in any form will not be tolerated. For a definition of academic dishonesty and its consequences, see your student handbook.

I expect all students to conduct themselves with the highest level of integrity. You have the opportunity throughout your business career to demonstrate your level of integrity. Similarly, in this class, you will have an opportunity to demonstrate academic integrity. The two are inextricably linked. And let’s not be naïve: integrity issues are rarely black and white – they are invariably some shade of gray. I encourage you to think about the standard you set for business integrity in your career and to implement that standard concerning your academic integrity in this class. In so doing, you might want to keep the following quote from Samuel Johnson: “The chains of habit are too weak to be felt until they are too strong to be broken.”

Course materials: The course materials are only for the use of students currently enrolled in this course and only for this course. They may not be further disseminated. Do not share or post any material, including slides, videos, word documents, etc., given/shared by the instructor. You cannot make copies or take pictures of quizzes or exams.

Class Schedule: The calendar and the assignments are all found on the Blackboard.

*I reserve the right to change any assignment, quiz, or exam if circumstances dictate. Students will be notified of such changes through an announcement. It is the student’s responsibility to be aware of such change.*

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, require more intensive preparation, and may be graded with penalty points. If you miss an assignment and the reason is not considered excusable, you
**Note:** Any exceptions to these rules will be notified to students via Blackboard and in class.
**NOTES:** When in doubt on any of the above, please contact the instructor to check if you are following the authorized procedure.

**Expected 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 the relationship between classes and objects
7) The purpose of pre/post conditions, in particular as related to verification
8) Compilation and interpretation

**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) Simple I/O operations (reading from and printing to the terminal)
   b) User-defined types and their implementation as classes
   c) 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) Apply Binary arithmetic to solve problems. This includes:
   a) Conversion between binary, decimal, and hexadecimal numbers,
   b) Application of arithmetic operations on binary and hexadecimal numbers
8) Use recursion for solving simple problems
9) Use linked lists
10) Instead of IDEs, use a command line interface (terminal) to compile and execute programs.
11) Use teamwork roles and strategies in the classroom

**Level 3 Outcomes: 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 include:
   a) Min
   b) Max
   c) Average
   d) Summation
   e) Linear search
9) Coding and documentation standards