

South Plains College
Common Course Syllabus: COSC 1301
Revised August 2020

Department: Mathematics, Engineering, and Computer Science

Discipline: Computer Science

Course Number: COSC 1301

Course Title: Introduction to Computing

Available Formats: conventional/flex

Campuses: Levelland

Course Description: Overview of computer systems—hardware, operating systems, the Internet, and application software including word processing, spreadsheets, presentation graphics, and databases. Current topics such as the effect of computers on society, and the history and use of computers in business, educational, and other interdisciplinary settings are also studied. This course is not intended to count toward a student's major field of study in business or computer science.

Prerequisite: Successful completion with a grade of 'C' or better in MATH 1314

Credit: 3 **Lecture:** 3 **Lab:** 0

Textbook: (Optional) Computer Science - an Overview, Edition 13, J. Glenn Brookshear and Dennis Brylow. ISBN 9780134875460. Pearson, 2019. You do NOT need an online access code.

Supplies: You must have access to a laptop or desktop where you can write programs. You must also be able to store your projects so that they are accessible from anywhere. It is recommended that you purchase a USB flash drive to bring to class. You will be able to use this drive for future computer science classes as well. It is recommended that you back up your files on this drive to a home computer or other media.

This course partially satisfies a Core Curriculum Requirement: None

Core Curriculum Objectives addressed:

- **Communications skills**—to include effective written, oral and visual communication
- **Critical thinking skills**—to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- **Empirical and quantitative competency skills**—to manipulate and analyze numerical data or observable facts resulting in informed conclusions

Student Learning Outcomes: Upon completion of this course and receiving a passing grade, the student will be able to:

1. Describe the fundamentals of computing infrastructure components: hardware, application software, operating systems, and data communications systems.
2. Delineate and discuss societal issues related to computing, including the guiding principles of professional and ethical behavior.
3. Demonstrate the ability to create and use documents, spreadsheets, presentations and databases in order to communicate and store information as well as to support problem solving.
4. Describe the need and ways to maintain security in a computing environment.

Student Learning Outcomes Assessment: A pre- and post-test questions will be used to determine the extent of improvement that the students have gained during the semester

Course Evaluation: There will be departmental final exam questions given by all instructors.

Attendance/Student Engagement Policy: Attendance and effort are the most important activities for success in this course. The instructor maintains records of the student's engagement throughout the semester. The student will be allowed to miss twenty percent (20%) of class assignments for the semester, **for any reason**. Should this number be exceeded, the instructor has the right to drop the student with a grade of F or an X, depending on the instructor's discretion.

Plagiarism violations include, but are not limited to, the following:

1. Turning in a paper that has been purchased, borrowed, or downloaded from another student, an online term paper site, or a mail order term paper mill;
2. Cutting and pasting together information from books, articles, other papers, or online sites without providing proper documentation;
3. Using direct quotations (three or more words) from a source without showing them to be direct quotations and citing them; or
4. Missing in-text citations.

Cheating violations include, but are not limited to, the following:

1. Obtaining an examination by stealing or collusion;
2. Discovering the content of an examination before it is given;
3. Using an unauthorized source of information (notes, textbook, text messaging, internet, apps) during an examination, quiz, or homework assignment;
4. Entering an office or building to obtain an unfair advantage;
5. Taking an examination for another;
6. Altering grade records;
7. Copying another's work during an examination or on a homework assignment;
8. Rewriting another student's work in Peer Editing so that the writing is no longer the original student's;
9. Taking pictures of a test, test answers, or someone else's paper.

COVID Syllabus Statement: Should be provided by the Vice-President of Student Services over email.

Student Code of Conduct Policy: Any successful learning experience requires mutual respect on the part of the student and the instructor. Neither instructor nor student should be subject to

others' behavior that is rude, disruptive, intimidating, aggressive, or demeaning. Student conduct that disrupts the learning process or is deemed disrespectful or threatening shall not be tolerated and may lead to disciplinary action and/or removal from class.

Diversity Statement: In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

Disability Statement: Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office at Levelland (Student Health & Wellness Office) 806-716-2577, Reese Center (Building 8) 806-716-4675, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611.

Nondiscrimination Policy: South Plains College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Vice President for Student Affairs, South Plains College, 1401 College Avenue, Box 5, Levelland, TX 79336. Phone number 806-716-2360.

Title IX Pregnancy Accommodations Statement: If you are pregnant, or have given birth within six months, Under Title IX you have a right to reasonable accommodations to help continue your education. To [activate](#) accommodations you must submit a Title IX pregnancy accommodations request, along with specific medical documentation, to the Director of Health and Wellness. Once approved, notification will be sent to the student and instructors. It is the student's responsibility to work with the instructor to arrange accommodations. Contact the Director of Health and Wellness at 806-716-2362 or [email cgilster@southplainscollege.edu](mailto:cgilster@southplainscollege.edu) for assistance.

Campus Concealed Carry: Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in South Plains College buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and South Plains College policy, license holders may not carry a concealed handgun in restricted locations. For a list of locations and Frequently Asked Questions, please refer to the Campus Carry page at: <http://www.southplainscollege.edu/campuscarry.php> Pursuant to PC 46.035, the open carrying of handguns is prohibited on all South Plains College campuses. Report violations to the College Police Department at 806-716-2396 or 9-1-1.

SPC Bookstore Price Match Guarantee Policy: If you find a lower price on a textbook, the South Plains College bookstore will match that price. The difference will be given to the student on a bookstore gift certificate! The gift certificate can be spent on anything in the store.

If students have already purchased textbooks and then find a better price later, the South Plains College bookstore will price match through the first week of the semester. The student must have a copy of the receipt and the book has to be in stock at the competition at the time of the price match.

The South Plains College bookstore will happily price match BN.com & books on Amazon noted as *ships from and sold by Amazon.com*. Online marketplaces such as *Other Sellers* on Amazon, Amazon's Warehouse Deals, *fulfilled by Amazon*, BN.com Marketplace, and peer-to-peer pricing are not eligible. They will price match the exact textbook, in the same edition and format, including all accompanying materials, like workbooks and CDs.

A textbook is only eligible for price match if it is in stock on a competitor's website at time of the price match request. Additional membership discounts and offers cannot be applied to the student's refund.

Price matching is only available on in-store purchases. Digital books, access codes sold via publisher sites, rentals and special orders are not eligible. Only one price match per title per customer is allowed.

Note: The instructor reserves the right to modify the course syllabus and policies, as well as notify students of any changes, at any point during the semester.

Instructor Course Information: Fall 2020

Time: Section 001: M/W 09:30 AM - 10:45 AM (Mondays Face to Face, Wednesdays Online)
 Section 002: M/W 11:00 AM - 12:15 PM (Mondays Face to Face, Wednesdays Online)
 Section 003: T/Th 01:00 PM - 02:15 PM (Tuesdays Face to Face, Thursdays Online)

Course Title: Introduction to Computing and Logic

Instructor: Dr. Don Pathirage

Room: Levelland Math Building 125B

Phone: 806-716-2666 (voice mail capable)

Email: dpathirage@southplainscollege.edu

Office Hours:

| Mon (F2F) | Tues (F2F) | Weds (Online) | Thurs (Online) | Friday (Online) |
|--|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 9:00AM-9:30AM 12:15PM-1:00PM 3:00PM-4:30PM | 9:00AM-9:30AM 12:00PM-1:00PM 2:15PM -3:30PM | 12:15PM-1:00PM Or by appointment | 12:00PM-1:00PM Or by appointment | 12:00PM-1:15PM Or by appointment |

Assignment Policy: Current assignments and due dates will be announced in the class. If you are absent, you are still responsible for the assignment for the next class. Short quizzes may be given announced or unannounced. Quizzes will be used to assess if the student is practicing and mastering the materials. **No makeup short quizzes will be given - an absence equals a zero for the quiz grade.**

All assignments will be given a *Due Date*. Assignments turned in late will have 10 points deducted for each day and will be accepted **no later** than one week past the due date.

Grading Policy There will be two major exams and a final exam. No student will be exempt from the final. Your lab grade will be calculated from: short quiz grades, homework assignments, and programming assignments. The final average will be computed as follows:

| | |
|------------------|-----|
| Two Major Exams: | 50% |
| Final Exam: | 20% |
| Lab Grade: | 30% |

All tests will count towards the final grade, i.e. no exam grades will be "dropped". Only students that miss an exam due to a collage-approved absence are eligible to take the makeup exam. If you miss an exam, it is your responsibility to contact me as soon as possible using email. If permission is granted for a makeup exam, I will want it to be taken before the next class meeting. Missing an exam is a serious matter and it is up to the student to take the proper action, otherwise a zero will be recorded for that exam. **Your work schedule or any other schedules must not overlap with the class schedule.**

Additional Course Objectives: *In this course the student will...*

- Develop a general understanding of computer terminology and computer hardware.
- Understand how all types of data are represented and stored in binary form.
- Understand what constitutes an algorithm, how to process an algorithm, and how to write an algorithm.
- Learn the binary, hexadecimal and octal number systems and how they relate to computers.
- Understand simple circuit designs.
- complete projects using application programs appropriate for math, engineering, and computer science students.
- learn fundamental concepts of programming including data types, control structures, and subprograms using Python as the programming language.

COSC1301 Fall 2020 Course Outline

This proposed schedule may change as the semester progresses! Always refer to Blackboard for exact dates.

| Week Start date | Topics |
|---------------------------|--|
| 1 Aug 24 | Introduction to Computer Science The role of algorithms |
| 2 Aug 31 | Investigating CS concepts and history Abstractions in computer science |
| 3 Sep 7 | <i>Mon 9/7 Labor Day Holiday</i> Representing information as bit patterns |
| 4 Sep 14 | Binary Number System Hexadecimal Number System |
| 5 Sep 21 | Octal Number System Exam 1 |
| 6 Sep 28 | Two's complement representation Adding signed integers in binary |
| 7 Oct 5 | Floating point representation |
| 8 Oct 12 | Boolean operators and Logic gates |
| 9 Oct 19 | Simple circuits Exam 2 |
| 10 Oct 26 | Machine Language |
| 11 Nov 2 | Machine Language and Program Execution Algorithms and Pseudocode |
| 12 Nov 9 | Learning about programming using Python Python: Variables, expressions, and statements <i>Thurs 11/19 Last Drop Day</i> |
| 13 Nov 16 | Python conditional structures |
| 14 Nov 23 | Python: Control Structures <i>Thurs 11/25 – 11/27 Thanksgiving Holiday</i> |
| 15 Nov 30 | Python: Functions |
| 16 Dec 7 | Final Exams: Section 001: Wednesday 12/9 (8:00 a.m.-10:00 a.m.) Section 002: Monday 12/7 (10:15 a.m.-12:15 p.m.) Section 003: Thursday 12/10 (10:15 a.m.-12:15 p.m.) |

This proposed schedule may change as the semester progresses! Always refer to Blackboard for exact dates.

Classroom Seating Arrangement:



 Students are not allowed to sit in the X marked area to maintain a 6 feet distance.

All keyboards will be wrapped in plastic. Students' seating areas will be swapped with X marked areas after each class.

