

Course Syllabus

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Syllabus: CIS 127 - Programming and Problem Solving

Course Information

Course Title: Programming and Problem Solving

Course Prefix/Number: CIS 127

Semester: Fall 2020

Class Days/Times: Online with Zoom Meetings scheduled on Mondays and Wednesdays from 3:45 to 5:00 PM

Credit Hours: 3

Instructor Information

Name: Tim Foster

Phone/Voice Mail: 928-221-4457 (cell)

E-mail: tfoster@tocc.edu

Office location: Online, Zoom meetings

Office hours: Mondays and Wednesdays from 2:30 to 3:30

Course Description

Introduction to computer systems. Includes terminology, fundamental concepts of information systems, hardware, software, operating systems with emphasis on computer programming and problem solving.

Also includes advantages/disadvantages of different language types, source code versus executable code, data structure and data representation, natural and artificial language statements, syntax, semantics, expressions, control structures and procedural abstraction. Also includes concepts of

statements, expressions, control structures and procedural abstraction. It also includes concepts of problem solving techniques, creating test data, program debugging, and program termination, solving simple problems and the use of Visual Basic programming language, programming environment and hardware, and using computers and other methods to complete assignments.

Student Learning Objectives

During this course students will:

1. Review basic computer skills and knowledge of how computers hardware and software work.
2. Create correct if-then statements.
3. Create correct repetition structures.
4. Utilize arrays/lists in programs.
5. Create test cases and debug programs.
6. Create modular programs using parameter passing to solve problems.
7. Use object oriented concepts including encapsulation, constructors, methods, and properties

Student Learning Outcomes

1. Students will create operational programs.
2. Students will demonstrate problem solving skills while programming.
3. Students will debug and correct issues in programs.

Course Structure

This hybrid course will consist of Lecture, Discussion, Reading, Writing Reflections, Lab Activities, Examination, and a Final Project. The majority of class business will be conducted in Canvas with Zoom meetings that will be recorded and transcribed for viewing later.

Course Learning Materials and Textbook Information

1. Getting Started with Programming Logic and Design, Pearson, 2019
ISBN- 13 978-0-480115-5
2. [org](http://code.org) (<http://code.org>)

Courses Outline and Important Dates

CIS 127 - Programming and Problem Solving I

Prerequisites: MAT 142H or Better

- Fundamental information systems review
 1. Hardware
- Operating Systems
 1. Terminology
 2. Input/Output Devices
 3. Storage Medium
 1. Software
- Operating Systems
 1. Terminology
 2. Problem Solving
 1. Process
 3. Programming Languages
 1. Advantages
 2. Disadvantages
 4. Coding Types
 1. Source
 2. Executable
 5. Coding Syntax
 6. Data Structures
 1. Reports
 7. Statements
 1. Natural
 2. Artificial
- Syntax
 1. Semantics
 2. Expressions
- Control Structures
 1. Procedural Abstraction

- 1. Visual Basic Language
- 2. Programming Environment
- 3. Program Debugging

Evaluations and Grading & Assignments:

90 and above is an A

80 - 89 is a B

70 - 79 is a C

60 - 69 is a D

Under 60 is Failing

Your grade will be determined by the following:

Grading Procedures and Policy

Written assignments are to be free of grammatical and spelling errors. Written assignments must be uploaded and turned in ON or BEFORE the assignment deadline as an [APA formatted](https://owl.english.purdue.edu/owl/resource/560/01/) (<https://owl.english.purdue.edu/owl/resource/560/01/>) MSWord document double spaced with size 12 font Times New Roman. They may also be shared with me in the Google Drive.

Grading is weighted according to the following categories:

- Attendance 5%
- Reflection Activities 25%
- Quizzes 10%
- Exams 15%
- Final Project 45%

Software capabilities:

- Ability to run Google Chrome Version 78+
- Updated virus protection, if using PC or Mac. (TOCC recommends the free Windows Defender for Windows machines)
- Security: Must have a password/passcode (login) to access the device. This is responsible computing. Students will be bound by the TOCC IT Policy related to passwords, security, and appropriate usage.

Is there specific software that needs to be installed?

- TOCC recommends installing the Google Chrome browser as it works well with G Suite. Students collaborate with Google Docs and Microsoft 365 on a regular basis.

Can I use Alternative Browsers?

- Firefox, Internet Explorer, Opera, and other unlisted browsers will not be supported.

Which Operating System should the device run?

The decision for the student's device is a matter of personal preference, but the device needs to be able to run the Google Chrome, Microsoft Edge, or Apple Safari Browser. Devices can run Windows, Mac OS, or Chrome OS as long as the minimum requirements listed here:

- Operating System:
 - Windows 8.1, 10
 - MacOS 10.11 or Higher
 - Chrome Version 78 or Higher
- Battery life: 5 hours
- Startup time: No longer than 120 seconds
- Wireless: Integrated
- Keyboard: Integrated, but can be wireless
- Audio: Headphone jack with headphones/earbuds
- Microphone: Integrated
- Camera: Integrated
- Processor: 1.6 GHZ or faster 64-bit processor
- Memory: 4 GB RAM or higher
- Disk Space: 16gb GB or higher
- Screen Size: 10 inches or larger
- Monitor Resolution: 1024 x 768

Hindag Cultural Component

Respect for each other and the learning process is a requirement for this course. Together we will journey along a path of discovery that will enable students to better communicate with others in the written and oral forms using technology.

Policies and Expectations

Participation and critical thinking are required!

Attendance is mandatory and consists of 5% of the grade.

All students are expected to complete their own individual work.

All students are expected to contribute equally to their group and complete group work assignments.

Students will be required to have read the text before class and be prepared for discussion.

Late Work will NOT be accepted. I will, of course, accept early work.

Missed exams and quizzes will be graded as 0 (zero) points.

Plagiarism [_\(http://www.plagiarism.org/article/what-is-plagiarism\)](http://www.plagiarism.org/article/what-is-plagiarism) will result in a “0” (zero) score for that assignment and reported to the Dean.

Student behavior will also be assessed per the school’s code of conduct. [Student Handbook](https://docs.wixstatic.com/ugd/36475f_2bec3e89e5974ef3bbcad38fb963f704.pdf) (https://docs.wixstatic.com/ugd/36475f_2bec3e89e5974ef3bbcad38fb963f704.pdf)

Attendance Policy

You are expected to arrive to Zoom meetings on time and be prepared to participate in each class period. You may request to be excused from class for religious observances and practices, for illness, for school or work-related travel or for personal or family emergency. If you will be absent, please notify the instructor as soon as possible.

Incomplete Policy

Incomplete (I) grades are not awarded automatically. The student must request an “I” from the instructor who can choose to award an Incomplete only if all three of the following conditions are met:

1. The student must be in compliance with the attendance policy.
2. The student must have unavoidable circumstance that would prohibit the student from completing the course.
3. The student must have completed over 75% of the course requirements with at least a “C” grade.

Incompletes are not a substitute for incomplete work due to frequent absences or poor academic

performance. Incomplete grades that are not made up by the end of the ninth week of the following semester will be automatically changed to an F if the agreed upon work, as stipulated on the written form signed by the instructor and the student when the I grade is awarded, is not completed.

Instructor Withdrawals

Students who have missed four consecutive classes (or the equivalent) not submitted any assignments nor taken any quizzes by the 45th day census report, due on [date of 45th day found in Academic Calendar on TOCC website] are assumed NOT to be participating in the class and may be withdrawn at the faculty member's discretion. [faculty members should be clear in their withdraw policy, if you do not withdraw students please note in appropriate sections].

Student Withdrawals

Students may withdraw from class at any time during the first 2/3 of the semester without instructor permission and without incurring any grade penalty. Please be sure to withdraw yourself by [withdrawal deadline date found in Academic

Calendar on TOCC website] if you do not expect to complete the class, otherwise you may receive an "F" grade.

Special Withdrawals (Y) Grade

The "Y" grade is an administrative withdrawal given at the instructor's option when no other grade is deemed appropriate. Your instructor must file a form stating the specific rationale for awarding this grade. "Y" grades are discouraged since they often affect students negatively. Your instructor will not award a "Y" grade without a strong reason.

Equal Access Statement/Disability Accommodations

Tohono O'odham Community College seeks to provide reasonable accommodations for qualified individuals with disabilities. The College will comply with all applicable regulations, and guidelines with respect to providing reasonable accommodations as required to ensure an equal educational opportunity. This process includes self-identifying as a student with a disability, providing supporting

documentation of their disability, and being approved for services through the Disability Resources Office (DRO). It is the student's responsibility to make known to their instructor(s) the student's specific needs within the context of each class in order to receive appropriate accommodations. We will work together in order to develop an accommodation plan specifically designed to meet the individual student's requirements

For more information or to request academic accommodations, please contact: Anthony Osborn, TOCC Disabilities Resource Coordinator, aosborn@tocc.edu, or 520-383-0033 for additional information and assistance.

Title IX

Tohono O'odham Community College encourages each student to have the knowledge and skills to be an active bystander who intervenes when anyone is observed or being harassed or endangered by sexual violence. Sexual discrimination and sexual violence can undermine students' academic success and quality of life on campus and beyond. We encourage students who have experienced or witnessed any form of sexual misconduct to talk about their experience and seek the support they need.

Confidential support and academic advocacy can be found with: Student Services Title IX Coordinator/Counselor, Alberta Espinoza, M.Ed. located in I-We:mta Ki: Room 18. Phone 520-383-0033 email: aespinoza@tocc.edu

Conduct: Bias, Bullying, Discrimination and Harassment

Tohono O'odham Community College faculty and staff are dedicated to creating a safe and supportive campus environment as a core value. Harassment based on age, class, color, culture, disability and ability, ethnicity, gender, gender identity and expression, immigration status, marital status, political ideology, race, religion/spirituality, sex, sexual orientation, and tribal sovereign status will not be tolerated.

Academic Integrity:

Violations of scholastic ethics are considered serious offenses by Tohono O'odham Community College, the Student Services Department, and by your instructor. Students may consult the TOCC Student Handbook sections on student code of conduct, on scholastic ethics and on the grade appeal procedure. Copies are available at Tohono O'odham Community College.

All work done for this class must be your own, or the original work of your group. While you may discuss assignments with other class members, the final written project must clearly be original. You may use work from books and other materials if it is properly cited. Copying from a book without proper reference

or from a person under any circumstances will result in an “F” for the assignment, and at the instructor’s discretion, possibly an “F” for the course. If you are uncertain about proper citations ask your instructor or the librarian.

Course Feedback:

All assignments will be graded and returned to the students promptly, typically within a week after the assignment is closed for handing in. Email and phone messages will be returned within two days. A student or the instructor may request a student conference at any time during the semester. Quarterly grade reports will be provided to each student, either in person, by email or via the electronic system of Canvas.





DISCLAIMER: This syllabus is designed to evolve and change throughout the semester based on class progress and interests. You will be notified of any changes as they occur.



Course Summary:

Date	Details
	 Final Project https://tocc.instructure.com/courses/1773/assignments/18241



Date	Details
	 Quiz 1 (https://tocc.instructure.com/courses/1773/assignments/18242)
	 Quiz 2 (https://tocc.instructure.com/courses/1773/assignments/18243)
	 Quiz 3 (https://tocc.instructure.com/courses/1773/assignments/18244)
	 Roll Call Attendance (https://tocc.instructure.com/courses/1773/assignments/18245)