



Syllabus: *CIS 127 Programming and Problem Solving*

Course Information	
Course Prefix/Number: CIS 127	Credit Hours: 3
Semester: Fall 2019	Course Title: Programming and Problem Solving
Class Days/Times: Tuesday/Thursday 3:00 – 4:15 PM	Room: Main IWK 24
Instructor Information:	Phone/Voice Mail: 520-383-0102
Name: Tim Foster	E-mail: tfoster@tocc.edu
	Office location: Ha-Macamdam Ha-Ki Room 119
	Office hours: TBD - or by appointment

Course Description: Prerequisites: MAT 151 – C or Better

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 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.

Course 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

Course 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.

Texts and Materials: *(list text(s), and materials students will need)*

1. Starting out with Program Logic and Design ISBN -13 978-0-13-480115-5

starting out with >>> **PROGRAMMING
LOGIC AND DESIGN**
FIFTH EDITION



TONY GADDIS

2. [Code.org](https://www.code.org)

Evaluation and Grading & Assignments

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](#) MSWord document double spaced with size 12 font Times New Roman.

Grading is weighted according to the following categories:

Attendance 5%

Reflection Activities 25%

Quizzes 10%

Exams 15%

Final Project 45%

Grade Scale

“A” 90% – 100%

“B” 80% - 89%

“C” 70% - 79%

“D” 60% - 69%

“F” 0% - 59%

Himdag 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 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](#)

ADA statement

Tohono O’odham Community College complies with the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973, as amended. In addition, TOCC

complies with other applicable federal and state laws and regulations that prohibit discrimination on the basis of disability.

Reasonable accommodations, including materials in an alternative format, will be made for individuals with disabilities when a minimum of five working days advance notice is given. Students needing accommodations are encouraged to contact the Vice President of Student Services, at (520) 383-8401. For additional information, see the TOCC Student Handbook.

Important Dates

Fall Semester 2019	
First Day of Classes	Aug 19, 2019
Add without Instructor's signature	Aug 19 - 23, 2019
Add with Instructor's signature	Aug 26 - 30, 2019
Labor Day - College Closed	Sep 2, 2019
Drop/Full Refund Deadline	Sep 3, 2019
O'odham Tas - College Closed	Sep 27, 2019
Fall Break - No Classes	Sept 30 - Oct 3, 2019
45th Day Census	Oct 3, 2019
St. Francis Day - College Closed	Oct 4, 2019
Withdrawal Deadline	Nov 4, 2019
Veteran's Day - College Closed	Nov 11, 2019
Thanksgiving Holiday - College Closed	Nov 28-29, 2019
Last Week of Classes/Final Exams	Dec 9 - 13, 2019
Final Grades Due	Dec 17, 2019
Winter Break - College Closed	Dec 25, 2019 - Jan 1, 2020

Course Outline and Tentative Schedule:

CIS 127 - Programming and Problem Solving I

Prerequisites: MAT 151 C or Better

I. Fundamental information systems review

A. Hardware

1. Operating Systems

a. Terminology

b. Input/Output Devices

c. Storage Medium

B. Software

1. Operating Systems

a. Terminology

II. Problem Solving

A. Process

III. Programming Languages

A. Advantages

B. Disadvantages

IV. Coding Types

A. Source

B. Executable

V. Coding Syntax

VI. Data Structures

A. Reports

VII. Statements

A. Natural

B. Artificial

C. Syntax

D. Semantics

E. Expressions

1. Control Structures

F. Procedural Abstraction

VIII. Visual Basic Language

IX. Programming Environment

X. Program Debugging

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.