



Syllabus: **CIS127-1 Programming and Problem Solving**

Course Information	
Course Prefix/Number: CIS127-1 Semester: Spring 2020 Class Days/Times: Tuesday 2:15 – 3:45 (Hybrid 60% in class /40% online)	Credit Hours: 3 Course Title: <i>Programming and Problem Solving</i> Room: Main 24 IWK
Instructor Information: Name: Timothy Foster	Phone/Voice Mail: 520-383-0102 E-mail: tfoster@tocc.edu Office location: Main HMK 119 Office hours: <i>TBD</i>

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

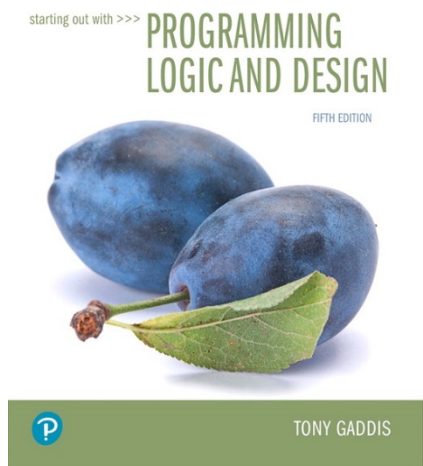
1. **Students will create operational programs.**
2. **Students will demonstrate problem solving skills while programming.**
3. **Students will debug and correct issues in programs.**

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



2. [Code.org \(Links to an external site.\)](#)

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 \(Links to an external site.\)](#) 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.

Attendance Policy

You are expected to arrive to class on time and be prepared to participate in each class period. Four (4) unexcused absences may result in withdrawal and a “W” or “Y” will be recorded. 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. There must be an 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 (4) 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.

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 Withdrawal (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.

Reasonable Disability Accommodations (Americans with Disabilities Act):

TOCC seeks to provide reasonable accommodations for all qualified individuals with disabilities. The College will comply with all applicable federal, state and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to provide an equal educational opportunity. It is the student's responsibility to make known to the instructor his or her specific needs in order to determine reasonable accommodations. We will work together in order to develop an Accommodation Plan specifically designed to meet the individual student's requirements.

Title IX

Tohono O'odham Community College faculty and all staff are dedicated to creating a safe and supportive campus. Title IX and our school policy prohibit discrimination on the basis of sex- this includes sexual misconduct; harassment, stalking, domestic and dating violence and sexual assault. Sexual discrimination and sexual violence can undermine students’ academic success and quality of life on campus and beyond. We encourage students who have experienced 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

Important Dates

Spring Semester 2020	
First Day of Classes	Jan 13, 2020
Martin Luther King Jr.-College Closed	Jan 20, 2020
Add without Instructor's signature	Jan 13 - 17, 2020
Add with Instructor's signature	Jan 21 - 27, 2020
Drop/Full Refund Deadline	Jan 28, 2020
President's Day - College Closed	Feb 17, 2020
45th Day Census	Feb 27, 2020
Graduation Application Due	Mar 6, 2020
Spring Break - No Classes	Mar 16 - 20, 2020
Withdrawal Deadline	Mar 30, 2020
Last Week of Classes/Final Exams	May 4 - 8, 2020
Final Grades Due	May 12, 2020
Commencement	May 15, 2020
Memorial Day - College Closed	May 25, 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.