Syllabus: *CIS 127: Programming & Problem-Solving*

Course Information

Course Title: Programming & Problem Solving
Course Prefix/Number: CIS 127
Semester: Spring 2022
Class Days/Times: ONLINE
Room: ONLINE
Credit Hours: 3

Instructor Information

Name: Kenneth Chan
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E-mail: kchan@tocc.edu
Office location: SCAC IT Office and Virtual
Office hours: By appointment only

Course Description

Introduction to programming 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 a programming language, programming environment and hardware, and using computers and other methods to complete assignments.

Student Learning Outcomes

After completion of the course students will be able to:

* Interpret basic syntax for a programming language and apply it in their own coding projects.
* Use flow control structures: if statements, for loops, while loops, and break statements.
* Create simple computer games that can be shared with friends.
* Build basic web pages using web development languages, HTML and CSS.
* Utilize arguments, variables, arithmetic functions, and counters.
* Develop interactive webpages that make use of scripting.
* Use arrays in the storage and retrieval of data.

Course Structure

Students will be expected to complete reading assignments on their own. Due to the nature of the online course, all videos, simulations, hands-on training, and other multimedia learning materials related to the reading assignments will also be completed on your own. Office hours are available to answer additional questions and deepen knowledge.

Courses Outline and Important Dates

Assignments are completed ONLINE through the Canvas learning management system and the CodeCombat programming platform unless otherwise specified. For example, if it says Meet, this is likely an activity that involves meeting online in real-time with the instructor. Please make an appointment by emailing kchan@tocc.edu if no times are specified.

- **Week of Jan 17 (with MLK Holiday Jan 17)**
  - Meet: Welcome to CIS 127: Programming & Problem Solving
  - Meet: Set up Gmail, Canvas, CodeCombat accounts
  - Computer Science 1: Basic Syntax, Arguments, Strings, While Loops, Variables, Algorithms
- **Week of Jan 24**
  - Game Development 1: Basic Syntax, Arguments, Place game objects, Construct mazes, Create a playable, sharable game project
- **Week of Jan 31**
  - Web Development 1: Basic HTML, Basic CSS, Alter existing web pages, Create a sharable web page
- **Week of Feb 7**
  - Computer Science 2: If Statements, Functions, Parameters, Advanced Strings
- **Week of Feb 14**
  - Complete Computer Science 2
- **Week of Feb 21 (with President's Day Holiday Feb 21)**
  - Game Development 2: Functions, Strings, If Statements, Arguments, Basic Input Handling, Basic Game AI, Create a playable and sharable game project
- **Week of Feb 28**
  - Complete Game Development 2
- **Week of Mar 7 (with Spring Break Holiday Mar 7-11)**
  - No new assignments. Catch up or press on ahead!
- **Week of Mar 14**
  - Web Development 2: Basic Web Scripting, Advanced HTML, Basic JavaScript, Basic Event Handling, Create a sharable interactive web page
- **Week of Mar 21**
  - Complete Web Development 2

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.

- **Week of Mar 28**
  - Computer Science 3: Arithmetic, Advanced Strings, Input Handling, Functions, Parameters, Boolean Logic, Arrays, Break Statements, Continue Statements
- **Week of Apr 4**
  - Continue Computer Science 3
- **Week of Apr 11**
  - Complete Computer Science 3
- **Week of Apr 18**
  - Game Development 3: Event Data
- **Week of Apr 25**
  - Continue Game Development 3
- **Week of May 2**
  - Complete Game Development 3
  - KhanAcademy Hour of Code
  - Meet: Set up KhanAcademy Hour of Code
- **Week of May 9**
  - Complete KhanAcademy Hour of Code
  - No Final Exam. Submit any remaining work to receive credit.

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:

Assessment	Percent of Grade
Assignments in CodeCombat	70%
Discussions and Reflections in Canvas	30%

Passing grade is 70% or greater.

Course Learning Materials and Textbook Information

All coursework will be completed in the Canvas learning management system and the CodeCombat.com programming website.

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Apache Cultural Component

San Carlos Apache College is in the process of developing culturally relevant curriculum and coursework in Apache history, culture, and language. Student and community feedback will guide this process. All SCAC instructors will find ways to incorporate culturally relevant topics and materials into their courses as appropriate.

Policies and Expectations

Homework/Lab Assignments: Your work *must* be your *own.* Cheating will result in a grade of 0 for the applicable assignment; further disciplinary action, including assigning a failing grade (F) for the entire course, may also be taken. Missed work will result in a grade of 0 for the assignment. Exceptional circumstances should be discussed with the instructor in advance, or, if after the fact, as soon as possible.

Attendance Policy

This is an online class where you are expected to actively participate in the activities and assignments on a weekly basis. Four unexcused weeks of inactivity 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.

Academic Integrity

Violations of scholastic ethics are considered serious offenses by San Carlos Apache College. Students may consult the SCAC Student Handbook sections on student code of conduct, on scholastic ethics and on the grade appeal procedure.

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.

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 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 miss four consecutive weeks of classes by not submitting any assignments, discussion, nor quizzes are assumed to be NOT 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 March 29, 2021, 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.

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Equal Access Statement/Disability Accommodations

San Carlos Apache 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
San Carlos Apache 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.

Conduct: Bias, Bullying, Discrimination and Harassment
San Carlos Apache 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.

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