

COCONINO COMMUNITY COLLEGE

COURSE OUTLINE

Prepared by: Dr. Pattie Odgers
Revised by: D. Marshall, J. Jones, S. Rencher
Effective Term: Fall 2020

December 4, 1991
Fall 2019

A. Identification:

1. Subject Area: Computer Information Systems
2. Course Number: CIS 220
3. Course Title: COMPUTER PROGRAMMING I
4. Credit Hrs: 4
5. Catalog Description : Prerequisite : CIS 120. This course will provide students with a good foundation in object-oriented programming concepts and practices. Emphasis is placed on the development of desktop, web and mobile applications. CIS 215 Programming with Python is recommended prior to this course. Four lecture.

B. Course Goals: To provide students with a good foundation in object-oriented programming concepts and practices. This course also provides a solid foundation for other programming courses. Emphasis on efficient design, coding and documentation of desktop, web and mobile applications. No prior programming experience is required.

C. Course Outcomes:

Students will:

1. Develop efficient program code
2. Prepare clear, understandable program documentation internally and externally
3. Write programs that interface with database files
4. Construct programs using sequence, selection, and repetition structures
5. Construct programs using classes and methods
6. Properly use variables and constants including correct syntax, data type, and scope
7. Create executable programs
8. Debug programs to locate syntax and logic errors.

D. Course Outcomes Assessment:

Assessment will include:

1. Capstone project writing an original program on a specific topic
2. Exams

E. Course Content:

Will include:

1. Object-oriented programming and design concepts
2. Variables and constants
3. Sequence, selections and repetition structures
4. Classes and methods
5. Variable arrays
6. Database and sequential data files
7. Flowcharts, pseudocode, and program specifications
8. Program documentation
9. Program language syntax and debugging
10. Program development life cycle
11. Executable programs