

COCONINO COMMUNITY COLLEGE
COURSE OUTLINE

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Status: Permanent
Effective: Fall 2016

January 14, 2016

A. Identification

1. Subject Area: Engineering (EGR)
2. Course Number: 122
3. Course Title: Programming for EGR/SCI
4. Credit Hours: 3
5. Course Description: Introduction to computer programming for scientists, engineers, and mathematicians in MATLAB. Guided use of algorithms and structured programming to solve practical problems in applied engineering and science. Prerequisite: MAT 151 or placement beyond prerequisite. Two lecture. Three lab. Fall, Spring.

B. Course Goals: To assist students with learning general concepts in computer programming and obtain experience with the use of MATLAB.

C. Course Outcomes: Upon completion of the course, student will:

1. express potential solutions to problems in flow charts and/or pseudo code;
2. translate pseudo code into a program;
3. debug and evaluate efficacy;
4. create internal documentation of code;
5. and write code utilizing function files.

D. Course Outcome Assessment will include:

1. course grades determined by the instructor as outlined in the course syllabus;
2. and an in-class final exam.

E. Course Content will include:

1. good programming practices;
2. scripts and functions;
3. variables and data types;
4. arrays;
5. conditional statements;
6. loops;
7. input and output;
8. and applications in engineering and science.