

**ME 360A Computer Applications
Fall Y2K**

1999-2000 Catalog Data: Computer Applications Credits 3. An Introduction to the essential computer tools necessary for the mechanical engineering curriculum. Basic word processing and spreadsheet skills, C programming language as applied to mechanical engineering problems will be covered. Fundamentals of linear algebra and other computational tools will be taught.

Prerequisites: Math 243(Calculus II).

Textbook: Engineering Programming – C, Matlab, Java - by Austin and Chancogne, John Wiley & Sons, ISBN: 0-471-00116-3.

Instructor: V.Srinivasa Murthy, Department of Mechanical Engineering. Room:101G,
E-mail: sxvasame@alpha.engr.twsu.edu; Office Hours: as posted.

Coordinator: Dr. T.S Ravi Gururajan, Department of Mechanical Engineering.

Goals: This course is designed to teach the students skills necessary for numerically solving problems in mechanical engineering courses. The student will be able to write efficient computer programs in one or more contemporary languages and prepare laboratory reports in a professional manner.

Topics (1 class period is 50 minutes):

1. Introduction to computer hardware and software systems(1)
2. Word processing skills and spreadsheet skills (2)
3. C: Data types, basic I/O statements in C (2)
4. Repetitive techniques (2)
5. Introduction to functions (2)
6. Arrays and pointers (2)
7. fundamentals of linear algebra and array applications(4)
8. Structures and Strings (2)
9. Java: Object-Oriented programming concepts (2)
10. Basic I/O techniques (2)
11. Classes, constructors, and methods (6)
12. Exams (3)

Estimated ABET Category Content:

Engineering Science: 3 credits or 100%

Engineering Design: 0 credits.

Office: Room 101G ; e-mail: sxvasame@alpha.engr.twsu.edu

Homework: A number of programming assignments will be assigned throughout the semester. Also, the students will be given homework assignments which will be turned in at the Instructor's request in the class.

The students are expected to try the homework problems on their own.

OTHER INFORMATION

3 Tests (15 x 3: <i>Sep XX, Oct. XX, Dec XX</i>)	= 45
Programming assignments	= 50
'Final' programming assignment (Due on Wed. Dec 10)	= 5

Grades: *A > 90%; B > 80%; C > 70%; D > 55%; F < 55%*
*** Last date to drop with a 'w' October XX, 2000*

For Your Information:

1. All exams are close book and closed notes.
2. No make-up test will be given.
3. Daily attendance is strongly encouraged. You will be responsible for obtaining any class notes, assignments, handouts, and/or announcements from your friends.
4. All programming assignments will be due as specified – no exceptions, however, the lowest two scores will be dropped.
5. During tests, seat assignments will be at the instructor's discretion.
6. If cheating on a test or a program assignment is established, the student will receive a '0'. In addition, the student's final grade will be reduced by 2 letter grades (that is 'A' becomes 'C' and a 'B' will be changed to 'D'). Repeat offenders will be given an 'F' for the course, and further action may be taken by the department.