

**Computer Applications I** 4 Credits  
Administrative Details

This course covers a variety of computer tools used by mechanical engineers. Structured programming using Matlab will be emphasized. Other covered topics will include dynamic simulation and web page development. Use of computer tools, teamwork skills, and design will be incorporated into several mini-projects throughout the course.

Section	Hour	Room	Instructor	Office	Phone
1	3	G222	Olson	D104	877-8324

**Web Page:** <http://www.rose-hulman.edu/ME123/>

**Course Objectives: After completing this course a student should:**

- Objective 1: Be able to write structured programs in Matlab to solve engineering problems.
- Objective 2: Be able to create a variety of engineering plots and graphs using Matlab.
- Objective 3: Understand and program simple numerical methods used for numerical integration.
- Objective 4: Be able to trouble-shoot with confidence.
- Objective 5: Be able to create and simulate simple dynamic systems using Working Model.

**Student Evaluation:**

A grade will be given to evaluate how well the student has assimilated the course material. The total grade for the quarter will be dependent upon homework, tests, and projects.

*Grade Distribution:*

Homework	15%
Exam I	20%
Exam II	20%
Exam III	10%
Final (Exam IV)	20%
Mini-Projects	15%

*Grade criteria*

$x \geq 90\%$	A
$90\% > x \geq 80\%$	B or B+
$80\% > x \geq 70\%$	C or C+
$70\% > x \geq 60\%$	D or D+
$60\% > x$	F

**Exams:**

All exams will be given in class. The exam days are listed on the online course calendar.

**Final Exam:**

The final course exam is given during the final exam slot. It is designed as a 90 minute exam but you will have the entire four hours to complete the exam if you wish.

**Passing the Course:**

To pass the course, students must have a passing weighted exam average with passing defined as a D (60%) or higher.

**Homework:**

Homework is work assigned for each lecture. Assigned homework is due by 5 pm on the day of the following lecture. Please come ask for help with the homework before it is due if you are struggling with the homework. Homework should be turned in to the box outside my office.

Late homework will not be accepted except for medical reasons or if prior arrangements (more than 24-hour notice) have been made with me.

Each set of homework must start with a cover page, which should include an honor statement. You may download an electronic copy from the course website.

**Programs:**

You will often be assigned to write a program for your homework. Program assignments are expected to represent a student's individual effort. While it is certainly okay to give or get help with portions of your program, using the efforts of another as your own will not be tolerated. Additionally, the concept of team programming is not acceptable unless the problem was assigned in that manner. You will not gain the skills you are expected to learn by watching somebody else program. Any indication of using large amounts of other student's work will result in loss of grade.

As stated in the Rose-Hulman academic policies, cheating and plagiarizing are strictly forbidden. Respect and observe the rule.