

41097 Math 110 Section 001
Mathematical Computing
1 credit

Spring Semester 2019
Wednesday
1140 - 1240
COE 417

Instructor Dr. Mark D. Jacobson

Office Hours Monday and Tuesday: 10:30 – 12:00 p.m.; Thursday: 0920 – 1020 a.m. or by appointment

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Text All material is online for Mathematica, Version Number 11.1.1.0.

Optional Text Schaum's Outline of Mathematica 2nd Edition, Eugene Don, 2009

Catalog Description M 110 Mathematical Computing 1 credit

Prerequisite: M 171 or equivalent.

Corequisite: M 172.

Introduces the use of computer algebra systems to solve mathematical problems.

Course Description

Mathematical Computing deals with learning the Wolfram Mathematica software, a computer algebra system designed to perform complex mathematical calculations. The assignments in this course covers material in Calculus I and II (M 171 and M 172).

Learning Outcomes

- [1] Understand the Mathematica software language.
- [2] Use Mathematica to perform complex mathematical calculations, such as calculating limits, derivatives, integrals, series and differential equations.
- [3] Use Mathematica to plot results of mathematical calculations.
- [4] Apply the knowledge gained in this course to other computer algebra systems, situations and disciplines.

Assessment Progress by the student will be assessed through computer work. **In the event of an emergency, you must notify me by phone or e-mail PRIOR**

to the test. The purpose of this form of assessment is to measure mastery of material as well as encourage development of problem solving and critical thinking skills.

<u>ITEM</u>	<u>Percentage</u>
Mathematica Homework	100 %

<u>Percentage</u>	<u>Grade</u>	<u>Points</u>
100 – 93 %	A	4.0
92 – 90 %	A-	3.7
89 – 87 %	B+	3.3
86 – 83 %	B	3.0
82 – 80 %	B-	2.7
79 – 77 %	C+	2.3
76 – 73 %	C	2.0
72 – 70 %	C-	1.7
69 – 67 %	D+	1.3
66 – 63 %	D	1.0
62 – 60 %	D-	0.7
Below 60%	F	0.0

Homework

The assigned homework is located in D2L. The completed homework is uploaded in D2L in the **Assignments** folder. D2L's website: <https://msubonline.net/> .

Download Mathematica software for free: <http://www.msubillings.edu/it/is/software/wolfram/> .

Incompletes

An Incomplete (grade) is given only when students have been in attendance for at least three-fourths of the semester but have been prevented by circumstances beyond their control from completing all the requirements of the course. The student must provide adequate evidence to the instructor as to the reason why they were unable to complete the requirements of the course. An Incomplete must be made up within one calendar year or the grade will revert to an F. In general, to make up an incomplete for this class, the student must retake the course and will be required to submit all material required by the new instructor of a regular student.

Plagiarism / Cheating

Neither will be tolerated in this class. Stealing others work – with or without their permission – is not acceptable for the simple reason that it blocks your learning. It will catch up with you eventually. You are expected to come out of any course with a knowledge base. If you do not have it, your success later may be in jeopardy. I cannot guarantee that I will catch all acts of dishonesty. However, for those I do catch, the first instance

is a zero on that assignment and the second is an F for the course. Don't do it! You have more integrity than that. Refer also to page 134 of your student handbook.

Cell phones, et el

I expect all modes of electronic communication as well as games, etc. to be off during class time. If there is some reason that you must be available for a call, please talk to me about it.

On-campus evacuations

There will be times when you will be exiting your classroom due to evacuation drills or a real emergency. Keep two things in mind:

- Treat all instances seriously!
- **TAKE ALL PERSONAL BELONGINGS WITH YOU.** Any that you leave behind may be confiscated for several days!!

Phone numbers

Admissions and records 657-2158

Campus police 657-2147

**Students with disabilities, whether physical learning, or psychological, who believe that they may need accommodations in this class, are encouraged to contact Disability Support Services as soon as possible to ensure that such accommodations are implemented in a timely fashion. Please meet with [DS] staff to verify our eligibility for any classroom accommodations and for academic assistance related to your disability. Disability Support Services is located in the Academic Support Center.