

MA265 CALCULUS III

Northern Michigan University
Roxin Zhang
Fall 2020

MA265 SYLLABUS

Class Meeting Hours

- ▶ Monday, Wednesday, Thursday, Friday
- ▶ 12:00 – 12:50 PM, New Jamrich Building 3313
- ▶ The class is face-to-face. Normally there will be no Zoom broadcasts of classes unless there is a special request.

Instructor

- ▶ Roxin Zhang
- ▶ Office: New Jamrich 2208
rzhang@nmu.edu

Office Hours

MWRF 11:00 – 11:50 AM (In person and through Zoom)

Computer and Calculator Requirements

- ▶ A computer with Maple installed (mandatory)
- ▶ A scientific calculator is needed for day-to-day work

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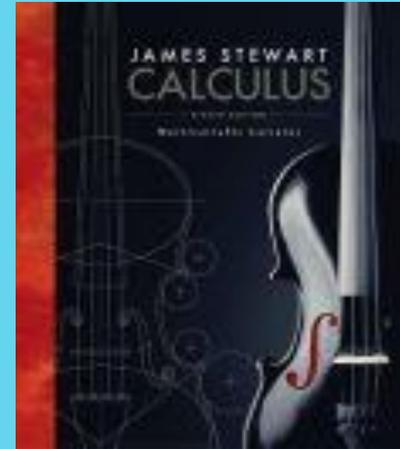
Prerequisite

- ▶ A C- or better from MA163.

Text Book

Multivariable Calculus (8e)

by James Stewart



Students are required to purchase Cengage WebAssign Access.

The Access contains the online homework and an e-textbook. The WebAssign ISBN is 9780357700037 at the bookstore (ISBN 9780357700006 directly from Cengage).

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Required Course Material

- ▶ This course requires WebAssign from Cengage. WebAssign is available for purchase on its own, or through Cengage Unlimited, a subscription that gives you access to all your Cengage access codes and online textbooks for \$120 per term, no matter how many Cengage products you use. You also get a textbook rental, if desired, with your activation through Cengage Unlimited for \$7.99 + free shipping.

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Register for Your WebAssign Access

One of the following methods:

- ▶ To access your WebAssign course and your Cengage Unlimited trial:
 1. Go to [GetEnrolled.com](https://www.getenrolled.com)
 2. Enter this Class Key: nmu 6704 7304
 3. Follow the on-screen instructions to complete WebAssign registration

 CENGAGE

Let's get you enrolled in your course!

Start by entering the Course Key provided by your instructor.

Don't have a key? Reach out to your instructor to request it.

If your course is integrated with your campus Learning Management System (i.e. Blackboard, Brightspace, Canvas or Moodle), head there to enroll in your course or check out our [quick walkthrough](#).

[What is a key?](#)

Enroll

- ▶ For questions, watch an instructional video [HERE](#).

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Homework Assignments

- ▶ Section homework are given through WebAssign.
- ▶ The homework assignments on WebAssign are graded and scores will contribute into the final grade.
- ▶ Homework problems can be reattempted up to 5 times within the due dates. Extensions on due dates can be granted under special circumstances upon requests.
- ▶ The scores of homework based on (a) how many problems attempted; (b) how many attempts needed to complete.

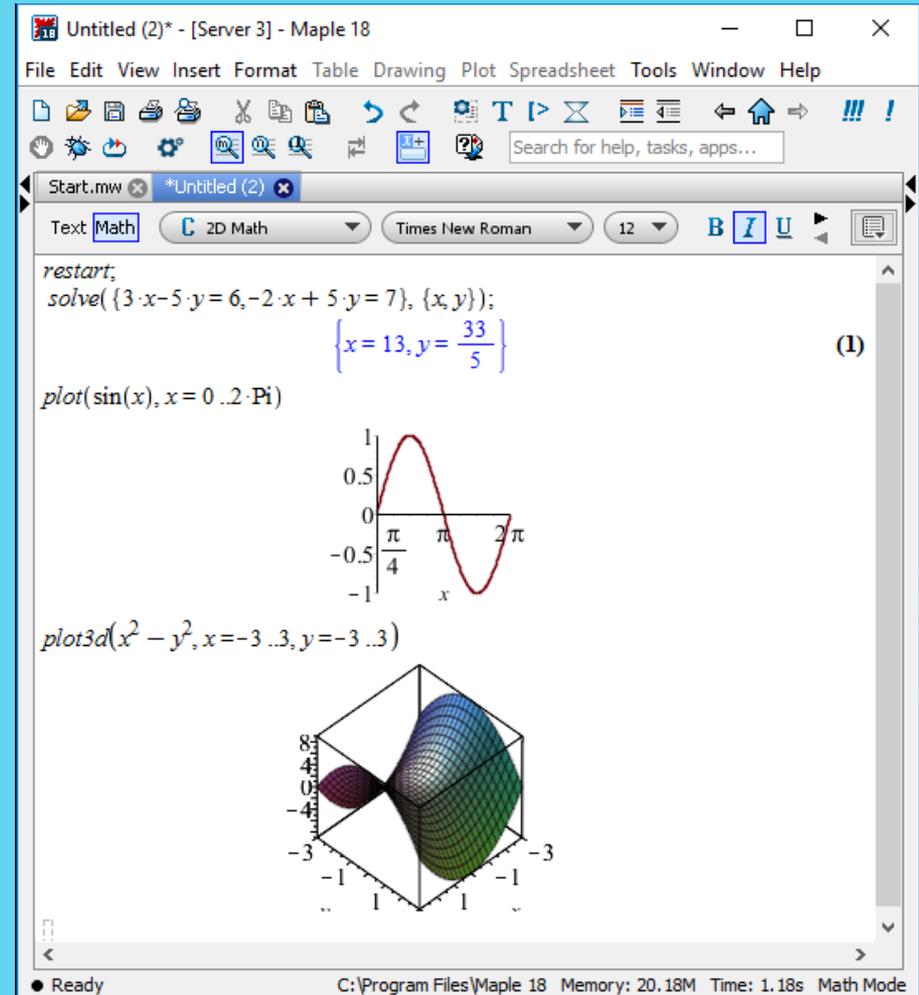
Classroom Seating and Attendance

- ▶ Students should keep a fixed seating location throughout the semester.

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Computer and Program Requirement

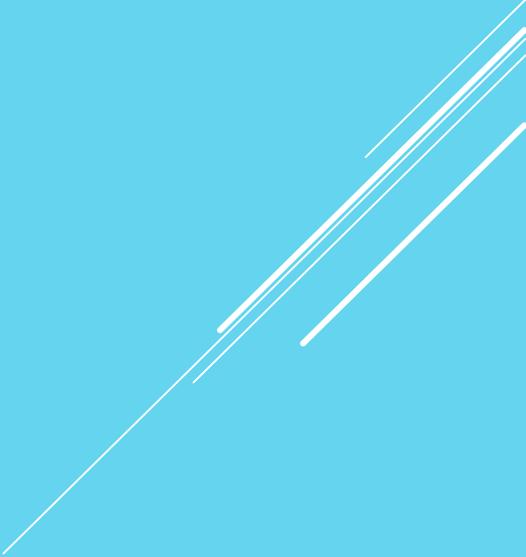
- ▶ Students are required to have Maple installed on their computer.
- ▶ To install Maple, go to Academic Computing within the first two weeks of the semester.
- ▶ Here is a screenshot of Maple.
- ▶ Use of Maple or not for a test will be specified on the test.



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Tests and Quizzes

- ▶ 5 - 6 1-hour Quizzes (drop one lowest quiz).
 - ▶ One Midterm (1 hour)
 - ▶ One final exam, check NMU website Final Exam Schedules
 - ▶ Take-home quizzes are called projects.

 - ▶ Test and quizzes are mostly paper tests.
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Grading

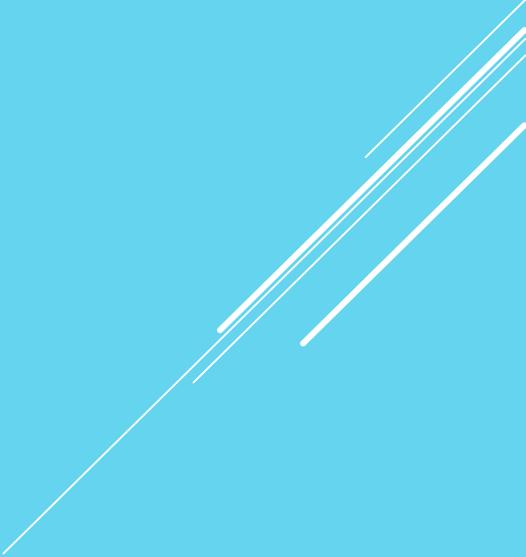
- ▶ Homework Assignments 29%
- ▶ Quizzes and Projects 40%
- ▶ Midterm 15%
- ▶ Final Exam 15%
- ▶ Attendance 1%

Grading convention

95%	A		70%	C+
90%	A-		65%	C
85%	B+		60%	C-
80%	B		55%	D+
75%	B-		Etc.	

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In this course, our main focus is on multivariable calculus – calculus for functions involving more than one variables. Topics includes:

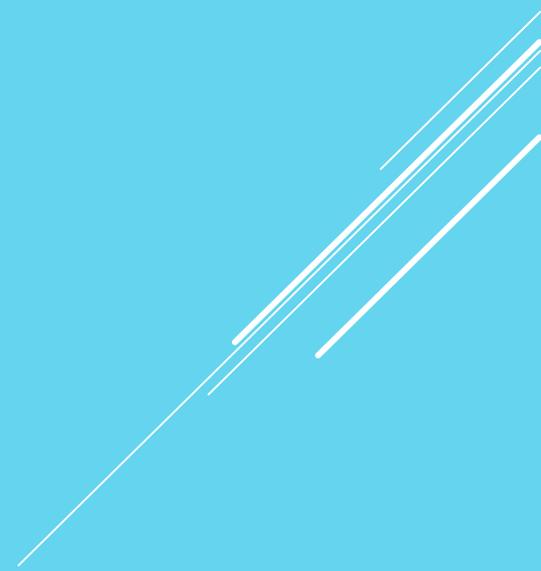
- ▶ Vectors in the plane and in space, space analytical geometry;
 - ▶ Vector functions and motion, surfaces, coordinate systems;
 - ▶ Functions of two or three variables, their derivatives and integrals in various coordinate systems;
 - ▶ Maxima and minima of functions, and applications;
 - ▶ Vector analysis
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Learning Outcomes

Upon completion of this course, student should be able to

- ▶ Understand the analytical and geometric properties of multivariable functions, vectors, and vector functions.
- ▶ Comprehend the geometric meanings of mathematical forms in 3D space and higher dimensions.
- ▶ Perform calculus calculations, including derivatives, integrations and limits of functions in space.
- ▶ Use space calculus to solve large classes of mathematical, geometrical and application problems. Many times the calculations can be completed with much less steps compared to the approaches without calculus.
- ▶ Modeling related application problems with multivariable calculus.
- ▶ Learn the basic concepts of vector analysis including line integrals, potential functions, Green's Theorem, curl and so on.

CHAPTERS COVERED

- ▶ Chapter 12
Vectors and the Geometry of the Space
 - ▶ Chapter 13
Vector Functions
 - ▶ Chapter 14
Partial Derivatives
 - ▶ Chapter 15
Multiple Integrals
 - ▶ Chapter 16
Vector Calculus
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DISABILITY SERVICES

- ▶ If you have a need for disability-related accommodations or services, please inform the Coordinator of Disability Services in the Dean of Students Office at 2001 C. B. Hedgcock Building (227-1737 or disserv@nmu.edu). Reasonable and effective accommodations and services will be provided to students if requests are made in a timely manner, with appropriate documentation, in accordance with federal, state, and University guidelines.
- ▶ Certain students may qualify for alternative face-covering accommodations due to a variety of health conditions. These students have gone through a qualifying process with the Office of Disability Services. Faculty have been notified of which students receive these accommodations in their class. If you have concerns regarding this topic please contact the faculty member outside of class. Please do not question or confront fellow students in the classroom who are using alternative or modified face coverings.

