

MATH 211: Calculus III Course Syllabus Spring 2010

MWF 1:50-2:50 pm, Frey 343

Tuesday, 12:25-1:25 Frey 166

Instructor:

Dr. Angela Hare
Frey 326
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Office Hours:

Tuesday, 2:00-4:00 pm
Wednesday & Friday, 9:00 am - 11:00 am
or by appointment

Text:

Calculus, by Larson, Hostetler, Edwards. 8th edition. Houghton-Mifflin, Boston, 2006. ISBN 0-618-50298-X

Course Objectives:

In Calculus I, you learned techniques of differentiation and integration and explored their applications to problems in engineering and the life sciences. In Calculus II, you continued to learn applications of differential and integral calculus and also learned about infinite series. In Calculus III, we will begin to study vectors and their applications in two and three dimensions, with the following course objectives:

1. To develop a rigorous understanding of the geometry of space and functions of several variables including partial differentiation and multiple integration.
2. To develop a rigorous understanding of vectors and vector-valued functions with an introduction to vector analysis.
3. To use the tools of calculus to formulate and solve multistep problems and to interpret the numerical results.
4. To enhance the ability to communicate mathematical concepts through a series of written laboratory assignments and classroom discussions.
5. To select and use technology when appropriate in problem solving.

Prerequisites:

The official prerequisite for the course is MAT 112 or the equivalent. You should have a strong understanding of both differentiation and integration. Calculus III is a required course for many majors, including mathematics, engineering, and physics. If you have questions about your placement in this course, please consult with me or your advisor as soon as possible.

Course Description and Requirements:

The assignments you will be given in this class are designed to motivate you to think about and work on mathematics problems regularly and consistently throughout the semester. In order to do well in the course, it is essential that you develop the habit of reading assignments and reviewing class notes soon after they are covered in class. All class assignments are available as *Microsoft Word* files on Sakai.

Your performance in this course will be assessed primarily according to your final grades on 3 written exams, 8 quizzes, 10 homework assignments, 10 projects, and a cumulative final exam. The point system shown below for calculating your course grade should be viewed as a guideline; your assigned grade may be higher than your numerical average if your grades show steady and significant improvement over the semester. As outlined in the Student Handbook, your grade may be lowered, possibly to an F, regardless of your point average, in cases of academic dishonesty such as cheating or plagiarism.

Unit Exams (3@100): 300 points

Quizzes (10@20): 200 points

Homework (10@10): 100 points

Projects (10@15): 150 points

Final Exam: 200 points

Attendance: 30 points

Course Grade is based on 980 points total

92-100: A	90-91: A-	87-89: B+	81-86: B	79-80: B-	76-78: C+
70-75: C	68,69: C-	58-67: D			

Late Work/ MakeUp Policy:

All written assignments should be handed in on or before the assigned due date. There will be a 2 point grade reduction per weekday for any late project without a written medical excuse. Makeup quizzes and exams are not given. For planned absences, you may arrange to take a quiz or exam before it is given in class. In the case of a written medical excuse or school-excused absence, your grade on a missed quiz or exam will be replaced by your average on other quizzes/exams. It is your responsibility to get written documentation to me in the case of an excused absence.

If you are unable to take a scheduled exam due to illness or other emergency, please make every attempt to contact me before the exam. You may leave a message at any time by email or voicemail, at extension 7230. In cases of documented emergency or with permission of the instructor, your grade on a missed exam will be replaced with your percentage grade on the final exam. If you miss an exam and do not contact me within twenty-four hours of the exam, the grade is automatically a '0'.

Calculators:

You should have access to some type of scientific or graphing calculator to use in class and for homework assignments. There are no specific calculator requirements or restrictions for the course.

Student Math Helpers:

Student math helpers are available on a free, walk-in basis Monday through Thursday evenings (7-9 pm) in Frey 341 throughout the semester. In addition, David Bigelow is the student assistant for this course. He will conduct 1-hour review sessions each Tuesday 5-6 pm and Thursday, 7-8 pm in Frey 343. You are encouraged to attend; guided review will improve your homework and quiz grades.

Weather Emergency

In case of a weather emergency, all class plans will be moved up to the next official meeting time. In particular, this means that if the school is closed on a day when an exam is to be given or an assignment is due, you should assume that the exam will be given on the next day the school is open and class is scheduled to meet, or that the assignment will be due in the next class. If Messiah College is not closed, you should assume that class is meeting as scheduled.

Final Exam

The final exam is scheduled for Thursday, May 6, 1:30 – 3:30 pm in F343. All students must take the final exam to complete the course. Please make a note of this date and time, as final exams cannot be rescheduled unless you have more than two exams scheduled for the same day. In this case, you must complete a “Request for Final Examination Change” form and submit it to the Registrar’s Office at least one week prior to the first day of final exams.

Students needing special accommodations:

Any student whose disability falls within ADA guidelines should inform the instructor at the beginning of the semester of any special accommodations or equipment needs necessary to complete the requirements for this course. Students must register documentation with the Office of Disability Services.

Maple Student Edition (optional information)

Student Maple 13 Licensing - Home Use

As a student of Messiah College, you are eligible to receive 25% off a student home use license of Maple 13 . To purchase, please go to <http://webstore.maplesoft.com/> and enter the following information:

1. Purchase Type: Student
2. Your Location: United States
3. Promotional Code, if any: MessiahLH06

Please note, you must enter the promotional code in order to receive the discounted price.

Spring 2010 (M-W-F)

MATH 211, Dr. Angela Hare

MWF, 1:50-2:50 am, F343

T, 12:25-1:25, F166

Day	Date	Assignment
Mon.	February 1	11.1: 10, 12, 28, 30, 40, 56
Tues.	2	Introduction to <i>Maple</i> Begin Project 1
Wed.	3	11.2: 6, 10, 28, 36, 48, 84
Fri.	5	11.3: 12, 20, 28, 48, 74 Homework 1 due: 11.1, 11.2 Quiz 1: 11.1, 11.2
Mon.	8	11.4: 4, 14, 42, 48 Project 1 due
Tues.	9	Begin Project 2
Wed.	10	(No class; snow cancellation)
Fri.	12	11.5: 10, 16, 20, 26, 42, 46
Mon.	15	11.7: Cylindrical Coordinates: 4, 10, 16, 18, 26 Homework 2 due: 11.3-11.5 Quiz 2: 11.3-11.5

Day	Date	Assignment
Tues.	16	11.7: Spherical Coordinates: 32, 40, 46, 52, 58 Project 2 due
Wed.	17	Begin Project 3
Fri.	19	Exam 1: Chapter 11 Homework 3 due: 11.7
Mon.	February 22	12.1: 6, 26, 30, 54 Project 3 due
Tues.	23	Begin Project 4
Wed.	24	12.2: 4, 16, 20, 34, 60, 68
Fri.	26	12.3: 6, 18, 22, 28, 36 Homework 4 due: 12.1-12.2 Quiz 3: 12.1-12.2
Mon.	March 1	12.4: 6, 14, 24 Project 4 due
Tues.	2	Begin Project 5
Wed.	3	12.5: 4, 8

Day	Date	Assignment
Fri.	5	Quiz 4: 12.4, 12.5
Mon.	8	Begin Project 6 Project 5 due
Tues.	9	Exam 2: Chapter 12 Homework 5 due: 12.3-12.5
Wed.	10	13.1
Fri.	12	13.2 Project 6 due
	15	Spring Recess March 13–21, 2010 No Classes
	17	
	19	
Mon.	March 22	13.3
Tues.	23	Begin Project 7
Wed.	24	13.4
Fri.	26	13.5 Quiz 5: 13.1-13.4 Homework 6 due: 13.1-13.4

Day	Date	Assignment
Mon.	29	13.6 Project 7 due
Tues.	30	Begin Project 8
Wed.	31	13.8
Fri.	April 2	Easter Break April 2–5, 2010 No Classes
Wed.	7	13.9 Project 8 due
Fri.	9	13.10 Quiz 6: 13.5, 13.6, 13.8
Mon.	12	Begin Project 9
Tues.	13	Exam 3: Chapter 13 Homework 7 due: 13.5, 13.6, 13.8-13.10
Wed.	14	14.1
		April 15 – Service Day No Classes
Fri.	April 16	14.2 Project 9 due

Day	Date	Assignment
Mon.	19	14.6
Tues.	20	Begin Project 10
Wed.	21	14.8
Fri.	23	15.1 Quiz 7: 14.1, 14.2, 14.6, 14.8 Homework 8 due: 14.1, 14.2, 14.6, 14.8
Mon.	26	15.2 Project 10 due
Tues.	27	15.3
Wed.	28	15.4
Fri.	30	No Class Meeting (MEB Student Scholars' Expo: Attendance required)
Mon	May 3	Quiz 8: Chapter 15
Thurs.	6	Final Exam: 1:30-3:30 pm, F343