

MA 242-002: Calculus III

Summer I 2020

North Carolina State University

General Course Details

Instructor: Kristen Windoloski

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Office: Language and Computer Labs 208 (currently remote)

Office Hours: Tuesday & Friday by appointment via Zoom (email me to set up a time)

Delivery: Online

Course Description

From the NCSU course catalog:

“Third of three semesters in a calculus sequence for science and engineering majors. Vectors, vector algebra, and vector functions. Functions of several variables, partial derivatives, gradients, directional derivatives, maxima and minima. Multiple integration. Line and surface integrals, Green's Theorem, Divergence Theorems, Stokes' Theorem, and applications. Use of computational tools.”

This course is a 4-credit hour course, and it does not fulfill the General Education Program (GEP) requirement.

Prerequisites

MA 241 with a grade of C- or better or AP Calculus credit, or Higher Level IB credit.

Student Learning Outcomes

Students who successfully complete this course will be able to:

1. Use mathematical notation and terminology consistent with that taught in MA 242.
 2. Understand and use concepts and methods taught in MA 242.
 3. Solve problems using critical thinking.
 4. Present solutions in a clear and concise manner.
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Course Materials

WebAssign

- Homework and the course textbook is accessed through Webassign via <https://www.webassign.net/ncsu/login.html>. You must purchase access to WebAssign. The cost is approximately \$77.95.

Textbook

- **Calculus for Engineers and Scientists, Volume III** by John E. Franke, John R. Griggs, and Larry K. Norris, 1st Edition. This PDF textbook is available to students through WebAssign (Home->Resources->Select the chapter/section you want)

Calculators

- Graphing calculators are **not allowed** during any exam. Non-graphing calculators are allowed on exams, but not required. You should be able to do all computations without a calculator.
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Course Structure

Lecture

- Students are expected to watch pre-recorded lecture videos as their main source of information for the course. These videos are available through a link posted to our course Moodle page (titled “Course Videos”). Students are expected to keep up with the course content and follow the course pacing guide.

Problem Sessions

- I will be holding two problem sessions per week (**Tuesday/Friday 2:00-3:00pm**) live on Zoom where I will go over examples of material presented in the pre-recorded lectures and answer questions students

have. They will be recorded and uploaded to our Moodle page so that students who were unable to attend the session can watch them as well. These sessions are **optional** but I strongly encourage students to watch the videos. Please post questions/topics you want me to address in the session in the Q&A Forum on Moodle **no later than 10:00am** the day of the problem session.

WebAssign

- Students are assigned homework through WebAssign. There will be more problems on WebAssign than I am going to ask you to complete. See the course pacing guide for which problems I am counting towards your course grade and when those WebAssigns are due. I would **strongly encourage** students to begin working on each assignment as soon as you complete the corresponding lecture videos.

Exams

The exam dates are listed below. We will have 3 midterm exams and a **cumulative** final exam. You may use your class notes and course textbook on each exam. However, you may **NOT** use any other resource (internet websites, graphing calculators, fellow students, family, friends, etc). Each exam will appear on Moodle on the specified day. Students will have an allotted amount of time to complete the exam and upload their work to Moodle as a single, multipage PDF.

Exam Schedule		
<u>Exam</u>	<u>Date</u>	<u>Content Included on Exam</u>
Exam 1	Thursday, May 21	Chapters 1 & 2
Exam 2	Monday, June 1	Chapter 3
Exam 3	Monday, June 8	Chapter 4 & 5
Final	Wednesday, June 17	All previous content plus chapters 6 & 7

Final Grade Components

Your final grade will be calculated based on the following components. There is **NO** extra credit.

15%: WebAssign
60%: Midterm Exams (3 exams worth 20% each)
25%: Final Exam

This course uses the standard NCSU grading system (NCSU REG 02.50.03).

A+: 97-100	B+: 87-89.99	C+: 77-79.99	D+: 67-69.99	F: 0-59.99
A: 93-96.99	B: 83-86.99	C: 73-76.99	D: 63-66.99	
A-: 90-92.99	B-: 80-82.99	C-: 70-72.99	D-: 60-62.99	

Communications

Email

- If a student needs to communicate with me privately, please reach me via email. In the subject line, write “MA 242-002”. In your email, tell me your name and be clear on what you’re asking me. If you need help on a WebAssign problem, send me your work so far on that problem. If I feel that a question emailed to me is better addressed to the entire class, I may post it in the forum on Moodle.

Moodle

- Moodle will be the main hub of information for this course. I will send out announcements to the class via Moodle, so make sure that you have your notifications turned on. All course materials will be posted to Moodle, including the links to lectures, problem sessions, WebAssign, exams, and any additional documents or resources. I will also have a “Question & Answer” forum on Moodle. Students are encouraged to post questions in this forum, which I will address in problem sessions, throughout the semester. Therefore, the following statement is included:

“Students may be required to disclose personally identifiable information to other students in the course, via electronic tools like email or web-postings, where relevant to the course. Examples include online discussions of class topics, and posting of student coursework. All students are expected to respect the privacy of each other by not sharing or using such information outside the course.”

Make-Up Policy

All anticipated absences must be excused in advance of the test date and a makeup test scheduled in advance of the absence, if possible. These include University duties or trips (certified 1 by an appropriate faculty or staff member), required court attendance (certified by the Clerk of Court), or religious observances (certified by the Department of Student Development: 515-2441). Emergency absences must be reported within 3 days of returning to class and must be appropriately documented (illness by an attending physician or family emergencies by Student Development). No other make-ups will be given.

Attendance

Attendance will not be taken. However, it is expected that students watch all lectures and problem sessions included on the pacing guide and keep up with WebAssign problems. For complete attendance and excused absence policies, please see <http://policies.ncsu.edu/regulation/reg-02-20-03>.

Academic Integrity & Honesty

Students are required to comply with the university policy on academic integrity found in the Code of Student Conduct at [11.35.01 – Code of Student Conduct – Policies, Regulations & Rules](#). Academic dishonesty on an assignment will result in the student receiving a zero on that particular assignment. Your signature on any exam indicates "I have neither given nor received unauthorized aid on this test or assignment."

Accommodations for Disabilities

Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, students must register with the Disability Resource Office at Holmes Hall, Suite 304, 2751 Cates Avenue, Campus Box 7509, 919-515-7653. For more information on NC State’s policy on working with students with disabilities, please see the Academic Accommodations for Students with Disabilities Regulation (REG02.20.01) <https://policies.ncsu.edu/regulation/reg-02-20-01/>

Non-Discrimination Policy

NC State University provides equality of opportunity in education and employment for all students and employees. Accordingly, NC State affirms its commitment to maintain a work environment for all employees and an academic environment for all students that is free from all forms of discrimination. Discrimination based on race, color, religion, creed, sex, national origin, age, disability, veteran status, or sexual orientation is a violation of state and federal law and/or NC State University policy and will not be tolerated. Harassment of any person (either in the form of quid pro quo or creation of a hostile environment) based on race, color, religion, creed, sex, national origin, age, disability, veteran status, or sexual orientation also is a violation of state and federal law and/or NC State University policy, and will not be tolerated. Retaliation against any person who complains about discrimination is also prohibited. NC State's policies and regulations covering discrimination, harassment, and retaliation may be accessed at <http://policies.ncsu.edu/policy/pol-04-25-05> or http://www.ncsu.edu/equal_op/. Any person who feels that he or she has been the subject of prohibited discrimination, harassment, or retaliation should contact the Office for Equal Opportunity (OEO) at 919-515-3148.

Note: The course schedule is subject to change. Students will be notified if any changes occur.

Course Pacing Guide

Date	Sections	Lecture Videos	Problem Session (2-3pm)	Graded WebAssign Problems	Graded Work	Notes
May 13	1.1 & 1.2	1 (start at 15:00) 2 3 (Start at 6:30)		1.1: All 1.2: 2-4, 6-9,11		
May 14	1.3 & 1.4	4 (Start at 10:20) 5 6		1.3: All		
May 15	1.4, 1.5, & 2.1	7 8 9	Yes	1.4: 1-8, 10-11 1.5: All		
May 18	2.1, 2.2, & 2.3	10 11 (start at 5:00) 12		2.1: 1-3, 5-9 2.2: 1, 3, 5-11 2.3: 1-7, 9		
May 19	2.3 & 2.4	13 (start at 16:10) 14 (start at 11:00) 15 (stop at 14:07) 16 (watch 0-10:20,15:54-17:30,19:03-32:20)	Yes	2.4: 1-3, 6-7		
May 20	3.1 & 3.2	18 19 20		3.1: All 3.2: 3-9		
May 21	3.2 & 3.3	21			Exam 1 (Chapter 1 & 2) WebAssign 1.1-2.4 Due May 21 at 11:59pm	Review: Video 17 (Optional)
May 22	3.3 & 3.4	22 23 24	Yes	3.3: All		
May 26	3.4 & 3.5	25 26 27	Yes	3.4: 1-7 3.5: 1-2, 4-16		
May 27	3.6	28 29 30		3.6: 1-6		

May 28	4.1	32 33		4.1: 1, 3-10		
May 29	4.1	34 35	Yes	4.2: All		
June 1	4.1	36			Exam 2 (Chapter 3) WebAssign 3.1-3.6 Due June 1 at 11:59pm	Review Video 31 (Optional)
June 2	4.2 & 4.3	37 39 40	Yes			Video 38 (optional) has additional applications of double integrals
June 3	4.3 & 5.1	42 43 44		4.3: 1-9 5.1: 1-4, 6-9		Video 41 (optional) has extra triple integral examples
June 4	5.2 & 5.3	45 46 47		5.2: All 5.3: All		
June 5	6.1 & 6.2	49 50	Yes	6.1: All		
June 8	6.2	51		6.2: 1-2, 4-7	Exam 3 (Chapter 4 & 5) WebAssign 4.1-5.3 Due June 8 at 11:59pm	Review Video 48 (optional)
June 9	6.3	52 53 54	Yes	6.3: All		
June 10	6.3 & 6.4	55 (skip 17:00-32:45) 56		6.4: All		
June 11	6.5	57 58 59		6.5: 2-4, 7-9		Video 60 (optional) has extra examples
June 12	7.2 & 7.3	61 (skip to 23:20) 63 64 65 (skip to 7:25)	Yes	7.2: All 7.3: All		
June 15	7.4 & 7.5	66 67		7.4: All 7.5: All		

June 16	Review	68	Yes			Study! You can watch the review videos (17,31,48,62)
June 17	FINAL EXAM (CUMULATIVE)					
June 18	WebAssign 6.1-7.5 Due June 18 at 11:59pm					

Review Videos:

- Chapter 1 & 2: Video 17
- Chapter 3: Video 31
- Chapter 4 & 5: Video 48
- Chapter 6: Video 62
- Semester Review: Video 68