Tentative syllabus, Math 323 Calculus III, Spring 2022

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Sections

01 11081 Nicholas Lacasse MWF 8:00-9:30 CW 112
02 11082 Wei Yang MWF 8:00-9:30 CW 214
03 11083 Christopher Eppolito MWF 9:40-11:10 UU 215
04 20226 Steven Gindi MWF 11:20-12:50 AA G007
05 20227 Adam Weisblatt MWF 1:10-2:40 AA G007
06 20883 Paul Loya MWF 1:10-2:40 LH 013
07 16955 Ulysses Alvarez MWF 2:50-4:20 LH 005
08 25577 Adam Weisblatt MWF 4:40-6:10 SL 302

Coordinator: Paul Loya

Textbook

Multivariable Calculus by James Stewart, 9th Edition. We will cover Chapters 12-16 with some material omitted. Please see your instructor if the 8th edition is allowed in your section.

Prerequisites

Math 227 or Math 230

Course objectives

Develop theoretical and practical skills for multivariable calculus. Specifically, students are expected to demonstrate the following:

- Visualize geometry in three-dimensional space.
- Find and apply vector and scalar equations of lines and planes in three-dimensional space.
- Understand the calculus of vector-valued functions.

- Solve unconstrained and constrained optimization problems.
- Find and interpret partial derivatives, directional derivatives, and gradients.
- Set up and evaluate double and triple integrals in rectangular, cylindrical, and spherical coordinates.
- Set up and evaluate line and surface integrals and applying Green's, Stokes', and Divergence theorems.

Homework

For each section of material covered, there are practice exercise problems in the table below and instructors may also assign problems on WebAssign. Some instructors will assign WebAssign homework while others will not. Study groups are encouraged, but students should not become too dependent on others. Watching the instructor, or other students, do the problems will not be enough to learn the material. It will be necessary for you to do many exercises yourself in order to be successful on the exams. Attempts to solve homework problems provide the best way to learn the material and to prepare for exams.

WebAssign is an online homework system which includes an e-book version of our text. If you have a multi-term access code or “Cengage Unlimited” from when taking 226/227, then you do not need to purchase another one. If you buy the book through the Binghamton University Bookstore then it comes with an access code. If you do not wish to buy the textbook package through the Bookstore, then you can purchase ($119.99) “Cengage Unlimited”, 1 term -4 months. This comes with the ebook and can also be purchased through our Bookstore. “Cengage Unlimited” also comes with the option to rent a hard copy of the textbook by just paying for shipping and handling. You'll have temporary free access to WebAssign for two weeks into the semester without an access code. All information regarding how to login with Class Key and purchase an access code can be found here WebAssign Student Quick Start Guide

Your username is your Binghamton University username and the institution code is “binghamton”.

WebAssign Login Page

Tentative schedule

At a bare minimum, you should know how to do all the odd numbered problems from those listed. We will skip most problems that rely heavily on technology or physics. If you have the 8th edition of the book, the problem numbers below will be slightly off. However, if you remember to skip problems that rely heavily on technology or physics, then you can figure out which problem numbers don't apply to the 8th edition.

Tentative schedule and practice problems

Week of	Problems for 9th edition	Comments
1/24	12.1: 1-22, 25-46. 12.2: 1-29, 41-48.	12.2: Skip physics problems.
1/31	12.3: 1-47. 12.4: 1-38, 42-44. 12.5: 1-68, 71-74.	12.3: Skip work problems. 12.4: Skip torque. Please read 12.6 on your own.
2/7	13.1: 1-40, 49-54. 13.2: 1-30, 37-44, 49-52. 13.3: 1-8, 13, 15-18. 13.4: 3-16.	Add and Drop/Delete Deadline: Feb 7. 13.3: Arclength only (no curvature or TNB material). 13.4: Focus on defs. of vel, speed, acceleration.
2/14	14.1: 1-16, 20-36, 38-56, 61-72. Wed: Review for Friday's test. **Friday: Test 1 on Ch. 12-13.**	Test 1 on sections 12.1-13.4 and not on 14.1.

2/21	14.2: 5-34, 37,38, 41-53. 14.3: 2-64, 67-69, 74, 77-85. 14.4: 1-10, 15-25, 27, 31-45.	
2/28	14.5: 1-30, 39-40, 42-47, 49-55. 14.6: 1-32, 34-35, 37-42, 44, 47-69, 71-72. 14.7: 1-24, 33-40, 43-57.	
3/7	14.7: Continued. 14.8: 1, 3-29, 39, 41-55. 14.8: Continued.	For 14.8, do only 1 constraint problems.
3/14	Spring break.	
3/21	15.1: 9-49, 53-56. Wed: Review for Friday's test. **Friday: Test 2 on Ch. 14.**	Friday: Test 2 on 14.1-14.8 and not on 15.1.
3/28	15.2: 1-40, 43-50, 55-66, 71-72. 15.3: 1-42. 15.6: 1-26, 31-42.	We skip 15.4 since this is covered in physics. We skip 15.5 since this is covered in 16.6.
4/4	15.7: 1-13, 15-27, 31-32. 15.8: 1-32, 37-45. 15.9: 1-21, 25-30.	For 15.9, do only 2d change of variables.
4/11	Monday: Review for Wednesday's test. **Wed: Test 3 on Ch. 15.**	Wednesday: Test 3 on 15.1-15.3 and 15.6-15.9 No class Friday April 15.
4/18	16.1: 1-22, 25-34. 16.2: 1-24. 16.3: 1-26, 31-32, 34-41.	Monday classes meet Tuesday!
4/25	16.4: 1-18, 23, 31-33. 16.5: 1-24, 32-34. 16.6: 1-6, 13-26, 33-36, 39-51.	
5/2	16.7: 5-32. 16.8: 1-14, 17-20, 22-23. 16.9: 1-17, 19-22, 26-32.	
5/9	Mon: Review Sections 16.4, 16.8, 16.9. Wed: Review for final.	
Exams	**Test 1:** Friday 2/11. **Test 2:** Friday 3/25. **Test 3:** Wednesday 4/13. **Final:** TBA.	**No calculators are allowed during exams.** **No cheat/crib sheets are allowed during exams.**

Evaluation

Grades are determined by the 4 exams.

Test 1: Friday 2/11	20%
Test 2: Friday 3/25	20%
Test 3: Wed. 4/13	20%
Final: TBA.	40%

The following grading scale is only an approximation (+ and - grades will also be assigned).

A	90 - 100
B	80 - 89
C	70 - 79
D	60 - 69
F	0 - 59

Help and disability services

The Math Help Room, located in Whitney Hall (WH-233), will be open after the first week of classes. Students can walk in with no appointment and can ask questions of any available instructor.

Click here for the Math Help Room schedule.

There is free tutoring offered though University Tutoring Services. All information regarding tutoring can be found here: http://www.binghamton.edu/clt/tutoring-services/index.html

If you have test anxiety information about how to handle anxiety can be found here:https://www.binghamton.edu/hpps/mental-health/anxiety.html

If you need accommodations for a disability, please see your instructor with documentation from Services for Students with Disabilities. We will do our best to accommodate your needs.

Academic Honesty

Cheating is considered a very serious offense. According to the University Catalog, cheating consists of: “Giving or receiving unauthorized help before, during or after an examination”. The full strength of Binghamton Academic Honesty Policy will be applied to anyone caught cheating. This may include failing the course, and further disciplinary action.

Hours spent on 323

Math 323 is a 4-credit course, which means that students are expected to do no less than 12.5 hours of course-related work or activity each week during the semester. The best way to succeed is to be faithful to this minimum time. This 12.5 hours includes scheduled class lecture/discussion meeting times as well as time spent completing assigned readings, studying for tests and examinations, going to the Math Help Room, doing practice problems, and other course-related tasks.
