

MAT 127: Calculus C, Spring 2022

General Course Information

Course Website

You can access the course website through *BlackBoard*, as well as at

<http://math.stonybrook.edu/~azinger/mat127-spr22/>.

Please print out the *Office Hours, etc., Additional Course Information*, and *Frequently Asked Questions* handouts as soon as possible. All homework assignments, exam information, and a lot more will also be posted on the course website. *Please visit it at least twice a week.*

Self-Administered Early Exam

As MAT 127 builds on MAT 123, 125, and 126, the mastery of the key material in these courses is necessary for passing MAT 127. A multiple-choice exam will be posted on the course website by Saturday, January 29. You must take it over the weekend under self-imposed test conditions (no phones, no friends, etc.), after reviewing the sections of the textbook listed in Table 2 of the *Additional Course Information* handout. If you score below 10/20 under properly improvised test conditions, you are *very* unlikely to pass this course and should drop it before the add/drop date, Friday, February 4. If you score in the low 10s, you are at a significant risk of failing this course without an extraordinary effort.

Grading Policy

<i>Homework</i> 16%, <i>Midterm I</i> 22%, <i>Midterm II</i> 22%, <i>Final</i> 40%
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The thresholds for the letter grades for the semester are *A* 90, *A-* 85, *B+* 82, *B* 78, *B-* 75, *C+* 70, *C* 60, *C-* 55, *D+* 50, *D* 45, but this may be lowered based on the difficulty of the exams. Your grades will be available through the *BlackBoard* website.

NO late homework will be accepted; a deadline is a deadline and even 1 second late (according to the *WebAssign* clock for online hw and your instructor's cell phone for paper hw) is late. However, your lowest homework score will be dropped. If you will be out of town when a paper homework is due, you can turn it in to your instructor any time before it is due (which you are welcome to do even if you won't be out of town).

Your letter grade for the semester will be determined exclusively by your weighted total (rounded to one decimal place), with the following exception **only**. If your weighted total is x points below the next letter grade cut-off and your final exam score as a percent of the maximum possible score is at least $10x$ points higher than the corresponding cut-off on the final exam, then you'll receive that letter grade for the term. This exception may increase your letter grade one step only (e.g. from *C+* to *B-*). As it already gives you an extra chance to get a better letter grade, this exception will be implemented without any flexibility (e.g. if your weighted total is .5 below the *C* cut-off for the semester, while your rescaled final exam score is 4.67 points above the *C* cut-off for the final (7 points out of 150), you will not receive a *C*).

This class is not "curved". The letter grade cut-offs for the exams and the homework will be determined based on how difficult these are and how harshly they are graded; in turn, these cut-offs will determine the cut-offs for the semester. If you receive a *C* in this course, this means you are qualified to take any course for which MAT 127 is a prerequisite (assuming you have met the other prerequisites); this has nothing to do with how many other students do better or worse than you or withdraw from the class (and thus lower your relative standing in the class). Similarly, *A* means "superior work"; this also has nothing to do with how many people do better or worse than you.

Prerequisites

In order to take MAT 127, you must have either completed MAT 126 with a grade of *C* or higher or achieved at least *Level 8* on the Mathematics Placement Examination. Furthermore, you must have a solid understanding of the topics covered in MAT 123, 125, and 126 (otherwise, you'll almost certainly fail MAT 127).

Course Description

MAT 127 is the final part of the three-part one-variable calculus sequence MAT 125-126-127. It continues where MAT 126 left off and covers Chapters 4-6 of the textbook. These chapters build on the notions developed in MAT 125 and 126 to introduce two (seemingly) separate concepts: ordinary (i.e. one independent variable) differential equations and infinite power series. These are essential in many areas of mathematics, science, and engineering and are in fact closely related, as many real-life problems can be modeled by differential equations and solutions to these equations are often described by power series.

Unlike MAT 125 and 126, there are no recitation sections in MAT 127, but the lectures themselves are quite a bit smaller. You are very much encouraged to actively participate in the class; please do ask questions during lecture (and come to office hours!).

Textbook

The textbook for this course is *Calculus*, Volume 2, by E. Herman and G. Strang, also used by MAT 125, 126, 131, and 132 now. It is available for free download at

https://d3bxy9euw4e147.cloudfront.net/oscms-prodcms/media/documents/CalculusVolume2-OP_esPpXTB.pdf

However, acquiring a hardcopy is likely to help you manage through this course, possibly enough to make the difference between passing and failing it. You can purchase a new hardcopy at amazon, for example, at about the cost of an RT ticket to NYC. We will also use supplementary notes on some topics; these will be available on the course website. Anything else posted on the course website, even temporarily, is required reading as well; this will include exam information, summaries of parts of the course, solutions to the problem sets, etc.

Homework

The problem sets will consist of two parts. You will have to complete one of the parts online through *WebAssign* and to hand in the other part to your instructor. The *WebAssign* portion will be due before the written homework. The proportion of online exercises may vary greatly between different problem sets and will generally be smaller than in MAT 125/126.

You should be able to access your *WebAssign* account through *BlackBoard* starting Monday, January 24, provided you registered for this course sufficiently in advance. If you registered late, you should be able to access your *WebAssign* account within 24 hours of your name appearing on the *BlackBoard* class list. After you login the first time, take a note of your *WebAssign* username; you can use it to gain direct access to your *WebAssign* account by clicking on *Forgot Your Password?* on the *WebAssign* homepage. You will need to purchase a WebAssign access code if you do not already have one; the cost is again about one RT ticket to NYC. This will also give you online access to another textbook.

Special Needs

If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact the Student Accessibility Support Center at (631) 632-6748 or visit

<https://www.stonybrook.edu/sasc/>.

They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential. Students who require assistance during emergency evacuation are encouraged to discuss their needs with their instructors and the Student Accessibility Support Center. For procedures and information, please visit the following website:

<https://ehs.stonybrook.edu/programs/fire-safety>.

Critical Incident Management

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures.

Academic Integrity

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another persons work as your own is always wrong. Faculty are required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology and Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at

https://www.stonybrook.edu/commcms/academic_integrity/.

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