

MAT 127: Calculus C, Fall 2009

Course Information

Course Instructors and Graders

	name/e-mail	OHS
L01: MWF 9:35-10:30am Library E4320	Caner Koca caner@math	Tu 8-10am, Math 3-118 W 11am-12noon, MLC
L02: MW 5:20-6:45pm SB Union 236	Qian Wang qwang@math	M 12noon-1pm, MLC M 1-3pm, Math 4-120
L03: TuTh 2:20-3:40pm Math P131	Aleksy Zinger azinge@math	Tu 3:45-5:15pm, Math 3-111 W 9-10:30am, Math P143
L04: TuTh 5:20-6:40pm Math P131		
graders	Raquel Perales praquel@math	MF 10-11am, MLC M 11-12pm, Math S-240C
	Jun Wen jwen@math	W 6-7pm, MLC W 7-9pm, Math S-240
	Zheng Zhang zzhang@math	W 1-3pm, Math S-240 W 3-4pm, MLC

Please generally attend the lecture you are registered for. If you are unable to attend a class in the lecture you are registered for or would like to see a specific topic again, you may attend another lecture; however, due to space limitations, the students registered in any given lecture and arriving on time will have priority. On the other hand, please free to attend *any* of the office hours. Additional help is also available through the Math Learning Center,

<http://www.math.sunysb.edu/MLC>,

which is located in Math S-240A and staffed by math grad students and faculty. The morning hours at MLC are usually less popular and thus the staff are more likely to be able to devote more attention to each student.

Due to the size of the class, it may not be possible for the lecturers and the graders to respond to every e-mail. Before sending an e-mail with an administrative question (e.g. about exam locations), please check to see if the answer to your question is contained in this hand-out, on the course website (see below), or available through the Stony Brook University pages. Please do not e-mail mathematical questions (e.g. how to do a specific problem); instead please come to office hours.

There will be occasional adjustments to the above office hours, especially during weeks with long weekends. These will be posted on the course website.

Course Website

All homework assignments, exam information, and a lot more will be posted on the main website for MAT 127,

<http://math.sunysb.edu/~azinger/mat127-fall109/>.

Please visit this website at least twice a week.

Grading and Exams

Grading: *Homework 15%, Midterm I 25%, Midterm II 25%, Final 35%*

Exams: *Midterm I*, 10/07 (Wed), 8:30-10pm
Midterm II, 11/04 (Wed), 8:30-10pm
Final, 12/14 (Mon), 8-10:45am

Your grades will be available through the *Blackboard* website, linked from the MAT 127 website. If you would like to discuss your homework grades (as opposed to the homework itself), please speak with the grader who graded it. Similarly, if you would like to discuss your score on a specific exam problem, please speak with the person who graded it.

NO late homework will be accepted. However, your lowest homework score will be dropped. If you will be out of town when a homework is due, you can turn it in to your lecturer any time before it is due (which you are welcome to do even if you won't be out of town).

The two midterms will be on Wednesdays, October 7 and November 4, 8:30-10pm. The final exam will be on Monday, December 14, 8-10:45am. The locations for the exams will be announced on the course website (see above). There will be **no** make-up exams. If you have a legitimate and well-documented reason for missing a midterm, your final exam score will be substituted for the missed midterm score. *You must bring your Stony Brook ID card to all exams.*

Textbook

The textbook for this course is the *Stony Brook Edition* of J. Stewart's *Calculus: Concepts and Contexts*, 3rd Edition. This is the textbook used by MAT 125, 126, 127, 131, and 132 *last* year, as well as by 126 and 132 this semester. However, it is **not** the same as the edition being used by MAT 125 and 131 this semester; *make sure to get the correct edition*. The textbook is required and is available at the campus bookstore and possibly at Stony Books. We will also use notes on second-order differential equations; these are available on the course website.

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 125 and 126.

Course Description

MAT127 is the final part of the three-part one-variable calculus sequence MAT125-126-127. It continues where MAT126 left off and covers the final two chapters of the textbook: 7 and 8. 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.

While the two parts of the course are essentially independent of each other, what makes this course particularly difficult is that it continues MAT 126 after a 4-month break and it is not feasible to review much of MAT 125 and 126 in class. It is therefore your responsibility to insure that you have a firm grasp of the material covered in MAT 125 and 126, in particular

Chapter	1	2	3	4	5	Appendixes
Sections	3,5,6	2-8	1,2,4-7	3,5,9	2-7,10	A,B,C,F,G

If you do not have a firm grasp of the above material, your grade in MAT 127 is likely to be significantly lower than in MAT 126. Please review the necessary concepts as soon as possible.

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

Special Needs

If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact Disability Support Services at (631) 632-6748 or

<http://studentaffairs.stonybrook.edu/dss/>.

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 professors and Disability Support Services. For procedures and information go to the following website:

<http://www.sunysb.edu/ehs/fire/disabilities.shtml>.

Homework Assignments

The reading and written homework assignments will be posted on the course webpage. You *cannot* learn calculus without working on exercises. Nearly all of the signed problems will be fairly routine exercises from the textbook and the notes on second-order differential equations. In addition to working on the assigned problems, please try to do as many additional exercises from the book as possible; you can find answers (but not solutions) to the odd-numbered problems at the end of the book. The assigned problems will be collected at the *beginning* of the lecture on the day specified.

At least some of the problem sets will contain an additional problem that requires more concentration, but no knowledge beyond the textbook and the notes. The aim of these additional problems is to develop a deeper understanding of the subject and/or discover connections between different areas of mathematics. All problems on the exams will of the “standard” type, similar to past exams (these will be made available on the course website).

Please read the assigned sections in the textbook thoroughly and *before the lecture*. Each section contains a number of examples that are worked out in detail. You should try to do these examples yourself before going through the book’s explanation; this might help with the homework problems. *You will be responsible for the material contained in the assigned sections of the textbook, whether or not it is directly covered in lecture.* Please do not attempt the homework exercises until you read the corresponding section in the book.

Since it is not possible to spend much time for review in each lecture, you are expected to be familiar with the material covered in the preceding lectures. Please keep up with the class; it will be harder to catch up later. You are encouraged to discuss any aspect of this class, including the material covered in lectures, the readings, and the homework exercises, with anyone, including other students in the class and the MLC staff. You can also consult any source that may help you with the class in general and the exercises in particular. You may compare your answers and solutions to the homework exercises with each other. *However, you must write your own solutions to the problem sets.*

Please write your solutions legibly; the graders may disregard solutions that are not readily readable. All solutions must be stapled (no paper clips) and have your name and lecture number in the upper-right corner on the first page.