Stony Brook Mathematics Department

MAT 132 Calculus II Fall 2003

Course Information

FIRST MIDTERM RESULTS

A = 81 - 97; B = 66 - 79; C = 50 - 65; D = 40 - 49; F = 0 - 39.

MAT 132 is the second semester of the two-semester calculus sequence MAT 131 - 132. We will study methods of integration, applications of integration, differential equations and infinite sequences and series. Students will need to be familiar with the definition, methods and applications of differentiation, and with the definition and elementary properties of integration, including the Fundamental Theorem of Calculus.

Prerequisite: The prerequisite for this course is C or higher in MAT 131 or 141 or AMS 151; or level 7 on the Mathematics Placement Examination.

Course Coordinator: Bernard Maskit, Math. Bldg.5-112,

e-mail: bernie@math.sunysb.edu,

Telephone: 632-8257

Office Hours: (Tentative) Mon and Tues., Noon-3:15 p.m.

Text: Chapters 5(end), 6, 7, 8, 9 and appendices H and I of *Calculus, Concepts and Contexts* 2nd Edition, by James Stewart, Brooks/Cole 2001.

Calculators: Students are required to have a graphing calculator. We recommend the Texas Instruments TI-82, TI-83, or TI-83 Plus, which are widely available. Other calculators (TI-85, TI-86, Sharp EL9300C) are also acceptable. The programs we will use this term will be available for these calculators and others from this website. Note that the TI-89, TI-92, and any calculator incorporating a Computer Algebra System (CAS), are not acceptable for use on examinations.

Examinations: There will be two midterms and a final examination. Students are expected to ensure when they register for the course that they will be available for all three of these examinations. There will be no make-up quizzes or midterms. If you need to miss a quiz or midterm, see your lecturer with a written excuse.

Grades: The final course grades will be determined as follows. Recitation work (includes homework, class participation and quizzes): 15%; two midterms: 50%; final exam 35%. Incompletes will be granted only if documented circumstances beyond your control prevent you from taking the final examination.

Lectures and Recitations: New material is presented each week in the lectures. The recitation each week gives students a chance to review, in a smaller class, material from the week before. This includes going over difficult parts of assigned homework, and new exercises, proposed by the recitation leader, to be carried out individually or in groups. Recitation leaders can give valuable feedback to the lecturer. Try to make sure your recitation leader knows who you are!

Problem solving: When you start working on a problem, your first response should be to *think* about how to solve the problem, rather than blindly doing calculations, or punching buttons on a calculator. After you have seen what you think is a path towards solution of the problem, then you should do the requisite calculations, by hand or by calculator, whichever is appropriate. After you have finished your calculations, you should read the problem again, to make sure that you have indeed solved the problem you set out to solve. Finally, look at your answer, and make sure that it is reasonable.

Reasonableness of answers: After you have solved a problem, with or without the use of a calculator, you should ask yourself if your answer is reasonable. If your answer is reasonable, move on. If your answer is not reasonable, you should note that the answer is not reasonable (this is especially important on tests), and you should search for the reason. Once you have found the reason, you might have to resolve the problem. *Several questions on each of the examinations will receive no partial credit if your final answer is not reasonable.*

Warning about Solution Manuals: Solution manuals can be of assistance in helping you to learn the material *if used properly*. If used improperly, they can cause damage. Here is the proper way.

- First do a problem yourself.
- Then use the solution manual to see if your answer is correct. If the solution manual agrees with you, move on to the next problem.
- If the solution manual disagrees with you, find a logical explanation of why there is a disagreement. (NOTE: **Everyone makes mistakes**. This includes students, teachers, authors of textbooks and authors of solutions manuals. If you cannot by yourself resolve a disagreement between yourself and the textbook and/or a solution manual, you should seek help from your recitation instructor and/or the lecturer.)
- Put aside all your notes, and the solution manual, do the problem again, preferably after waiting a day or two, and repeat the above steps as necessary.

Group work: We encourage you to form teams of three or four students and to work together. We will try to do as many group exercises as possible, in class and in recitation, to get you used to this type of work. Several people thinking together about a problem can often see around a difficulty where one person might get stuck. This is one reason why the ability to work well in a team is rated very highly by prospective employers.

Homework: Homework is a means to an end, the "end" being for you to learn the material. We *encourage* you to work on homework together with friends. *In this course, we will never prosecute anyone for academic dishonesty on any issue relating to homework.* If you hand in complete, correct solutions, you will get full credit for them, no matter how you obtained them. If someone regularly "does" the homework by copying from friends or from solution manuals, they are only cheating themselves, since this is not a way to learn the material.
Homework is to be handed in at the recitation meeting the week after the material is covered in lecture.

Never be shy to ask us how to do a homework problem, even if you handed in a copied solution that you do not understand. We will be glad to help you!

The homework for the entire semester has not as yet been posted. It will be posted on a week by week basis.

Questions on Midterms and Final: Most of the questions on the midterms and the final will be similar to those on the homework. However, a few questions will be of a different nature: more conceptual, and designed to test whether you really understand the material. In order to do well on these conceptual questions, you will need to *attend* and *understand* the *lectures*. (The recitations, homework and review sheets will most likely *not be sufficient* to help you prepare for these conceptual questions.)

General Advice: In order to understand the lectures, it is essential that, before you come to class, you **review the material covered in the previous class.** This will greatly increase your understanding. Please remember that mathematics is cumulative, so **don't fall behind!** If you are behind, you will find new material presented in lectures much more difficult to follow, and you will be forced to try to learn that new material on your own. This will cost you a lot of extra time. If you feel you are slipping behind, consult your recitation instructor or your lecturer immediately: get help right away!

Extra Help with Calculus: Your recitation leader and your instructor will be happy to answer your questions during their office hours. The Math Learning Center (Math S-240A) is open often, for extra help.

Complaints: If you have any complaints about the course, please contact your instructor *first*. If this does not resolve the matter, please contact the course coordinator. If you still need to talk with someone about this matter, please see the Math Undergraduate Program Director (2-8250), and then the Math Dept Chair (2-8290).

Special Needs: If you have a physical, psychological, medical or learning disability that may impact your course work, please contact DisabilitySupport Services, ECC (Educational Communications Center) Building, room 128, (631) 632-6748. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

Students requiring emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information, go to the following web site.

http://www.ehs.stonybrook.edu/fire/disabilities.asp

Stony Brook University Mathematics Department

MAT 132 Calculus II Spring 2003

TEACHING STAFF ADDRESSES AND OFFICE HOURS

Name	Position	e-Mail
Maskit, Bernard	Lecturer and course Coordinator	Bernie@math.sunysb.edu
Chiose, Ionut	Lecturer, sec. 9	Chiose@math.sunysb.edu
Dupont, Emiko	Instr. Secs. 1, 2	Emiko@math.sunysb.edu
Li, Tao	Instr. Secs. 3, 7	Litao@math.sunysb.edu
Liu, Yuan	Instr. Secs. 4, 5	Yliu@astro.sunysb.edu
Waddington, Travis	Instr. Secs. 6, 8	Ratatosk@math.sunysb.edu
Zeng, Huayi	Grader	Hzeng@math.sunysb.edu

NAME	OFFICE	HOURS
Maskit, B	5-112	Tu.12:00-1:00(MLC), 1:00-3:00
Chiose, I.	2-117	Tu. 4:00-6:00, Th. 5:00-6:00
Dupont, E.	3-117	Tu.2:00-3:00 (MLC), W. 2:00-3:00
Li, T.	2-112	M. 3:00-5:00 (MLC); W. 4:00 - 5:00
Liu, Y.	4-118	Th 11:00- 1:00 (MLC), TuTh 5:00-6:00
Waddington, T.	3-122	MW, 6:00-7:00 (MLC)

Zeng, H.	S-240C	F. 2:00 - 3:00

Math Learning Center is in Math S-240A; All other rooms also in Math Tower unless otherwise indicated.

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January 16 2003

Stony Brook Mathematics Department

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Syllabus

(Sections from Stewart, *Calculus, Concepts and Contexts*, 2nd Edition)

We will cover chapters 5(end), 6, 7, 8, 9, and Appendices H and I.

Week:	Sections:
Sep. 1	Review of 5.1-5.4
Sep. 8	5.5, 5.6
Sep. 15	5.9, 5.10
Sep. 22	6.1, 6.2, 6.4
Sep. 29	6.5, 6.7
Oct. 6	7.1
Oct. 13	Review and Reflect (Exam 1)

Monday, Oct. 13 Midterm Exam 8:30-10 PM.

Midterm 1 covers material in sections 5.1 through 6.5

Oct. 20	7.2, 7.3
Oct. 27	7.4, Appendix H.1
Nov. 3	Appendix I, 8.1
Nov. 10	Review and Reflect (Exam 2)

Tuesday, Nov. 11 8:30-10:00 PM: Midterm Exam

Midterm 2 covers material in sections 6.7, 7.1-4 and Appendix H

Nov. 17	8.2, 8.3
Nov. 24	8.4, 8.5

Dec. 1 8.6, 8.7

Dec. 8 Final Review

Tuesday, Dec. 16, 11:00-1:30 PM: Final Examination.
Lecture 1 (Maskit), sections 1, 3, 4, 5, 7 in SBU Auditorium
Lecture 1 (Maskit), sections 2, 6 in SBU room 135
Lecture 1 (Maskit), section 8 in Javits 109
Lecture 2 (Chiose), in Javits 109

The Final covers all material discussed during the semester.

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Homework

Text: Stewart, *Calculus, Concepts and Contexts*, 2nd Ed,
Here is a list of homework problems.

- Do *at least* these.
- Hand in the **bold-face** problems at the first recitation meeting of the following week.
- Your recitation instructor may also assign additional homework.

Section	Problems
Week of Sep. 1	
5.1	1, **2**;
5.2	**1**, 11;
5.3	3, 4, **15**, 17, **22**;
5.4	9, **10**, 12, 19.
Week of Sep. 8	
5.5	2, **9**, **14**, 21, 39, **48**, 60;
5.6	1, **4**, **13**, 27, 32.
Week of Sep. 15	
5.9	1(a),(b),(c), 3, 6, **26**, **27**;
5.10	2, **8**, **13**, **45**, 46;
Week of Sep. 22	
6.1	4, 7, 12, **22**, **28**;

6.2 1, 2, 8, **11, 19,** 22, 27;

6.4 **5**, 10, 11.

Week of Sep. 29

6.5 **28,** 31, **32,** 33;
6.7 1, **2,** 3, **4, 7;**

Week of Oct. 6

No homework due for this week.

Week of Oct. 13

7.1 1, **2,** 5, **10;**

Week of Oct. 20

7.2 1a(i)-(ii),**2a(i)-(iii)**, 3, 4, 7, **22;**

7.3 2, 3, **4,** 15, **23,** 34, **35;**

Week of Oct. 27

7.4 1, **2, 5, 8,** 9, 13;

App. H.1 1, **3,** 7, 8, 40, 42, **47;**

Week of Nov. 3

No homework due for this week.

Week of Nov. 10

App. I **8,** 11, **20,** 43;
8.1 6, **10, 13,** 23, 24;

Week of Nov. 17

8.2 1, 9, 10, **13, 16**, 46;
8.3 2, 3, 4, **5, 6**, 9, **14,** 17;

Week of Nov. 24

8.4 **4,** 13, 19, **23, 29,** 32;
8.5 **3,** 4, 12, **20**;

Week of Dec. 1

8.6 3, 5, **7, 11,** 15, 36(b);
8.7 5, **6,** 8, **17,** 24, **34.**