Syllabus for MAT 125 Spring 2019

MAT 125: Calculus A

About the Course

About this course: The goal of this course is to ensure that you have a proper background to take calculus at Stony Brook. This means that we will need to accomplish several things:

- Develop your understanding of the concepts of Differential Calculus and your ability to apply it to problems both within and outside of Mathematics.

- Deepen your understanding of functions whether viewed as graphs, tables, or formulae.

- Develop fluency in the language of mathematics, which is essential for success in the sciences or engineering.

The text is *Single Variable* C*alculus*, by James Stewart.
Use of WebAssign is required but you are NOT required to purchase the textbook. There are many options regarding the text other than from the bookstore; please see the page about the text on the class web page for details.

You may use calculators to help you with learning the material or for homework and WebAssign problems. You may **NOT** use calculator on exams.

Course Prerequisites: In order to take MAT125, you must have either

- Passed MAT 123 with a grade of C or better, or

- Received a score of level 4 or better on the math placement exam.

Homework

Each week you will have paper homework problems that you can hand in at recitation or put in your TA's mailbox. ***Homework is due at the beginning of your recitation, and no later than Noon of that week if you miss recitation.*** You will also be required to use WebAssign for further homework problems. ***In general, WebAssign assignments will be due on Wednesdays at 10 am.***
If you are having difficulty understanding a topic, we suggest that you meet go to your recitation section, meet with your TA, go to the Math Learning Center (located in the basement of the Mathematics Tower), or go to your professor's office hours.

Recitations

Recitation is very valuable. There, your TA will go over the homework problems and will be available to answer your questions.

Exams

There are two midterms and a final. The schedule is:

Midterm 1	Tuesday, March 5	8:45 – 10:15 PM
Midterm 2	Thursday, April 4	8:45 – 10:15 PM
Final	Wednesday, May 15	8:00 AM – 10:45 AM

Rooms the exams will be announced in BlackBoard in advance of each exam.

We do not give make up exams but instead replace an exam missed for a valid reason by a grade computed on the balance of the work in the course.
Note that the Midterms are at night, not in the morning!

Important Dates:

Spring Break is March 18-24.
Classes end on May 11.
You may drop without any tuition liability until February 3.
You may withdraw without a "W", or add/swap classes, until February 8 at **4:00 pm.**
You may move up or down in MAT/MAP courses until March 8 at **4:00 pm.**
You may withdraw with a "W" until March 29 at **4:00 pm**.
You may change the course to Grade/Pass/No Credit until March 29 at **4:00 pm**.

How your grade will be calculated

Homework, WebAssign - 10%
Midterm 1 – 25%
Midterm 2 – 25%
Final – 35%

We reserve up to 5% for participation.

Blackboard

Please check Blackboard regularly. Assignments, announcements, grades, etc. will be posted on Blackboard. When items are posted, you will receive an email informing you of the fact. At that point, you will be presumed to know what has been posted. We suggest that you check Blackboard before you email your TA or professor.

Professors and Teaching Assistants

The Course Coordinator is David Kahn

LEC 01	MWF	10:00am-10:53am	Simons Center	103	David Kahn
R01	M	5:30pm- 6:23pm	Earth&Space	181	Apratim Chakraborty
R02	Th	4:00pm-4:53pm	Earth&Space	181	Yuhan Sun
R03	W	12:00pm-12:53pm	Earth&Space	183	Christiane Stidham
R04	Tu	11:30am-12:23pm	Earth&Space	181	John Sheridan
R05	Tu	8:30am-9:23am	Mathematics	P131	Lisa Marquand
R06	M	11:00am-11:53am	Mathematics	P131	Thomas Rico
R07	W	2:30pm-3:23pm	Library	N4072	Christiane Stidham
LEC 02	TuTh	4:00pm-5:20pm	Engineering	143	Babak Modami
R20	M	12:00pm-12:53pm	Physics	P116	Holly Chen
R21	F	12:00pm-12:53pm	Physics	P116	Qianyu Chen
R22	W	10:00am-10:53am	Library	E4310	Lisa Marquand
R23	Tu	11:30am-12:23pm	Earth&Space	079	Aleksander Doan
R24	F	9:00am-9:53am	Mathematics	P131	Martin Averill
LEC 03	MW	4:00pm-5:20pm	Engineering	143	Demetre Kazaras
R30	M	10:00am-10:53am	Earth&Space	181	Santai Qu
R31	F	11:00am-11:53am	Mathematics	P131	Thomas Rico
R32	M	2:30pm-3:23pm	Physics	P116	Holly Chen
R33	Tu	2:30pm-3:23pm	Earth&Space	183	Alexandra Viktorova
R34	W	5:30pm- 6:23pm	Physics	P116	Apratim Chakraborty
R35	Th	5:30pm- 6:23pm	Library	E4320	Alexandra Viktorova

Course Schedule

Date	Topic	Relevant Chapters in Stewart
28-Jan	Administrative material and course expectations; Why Calculus	
	Review of functions, exponentials, logarithms	Chapter 1
	Review of trigonometry Review of functions, exponentials, logarithms.	Chapter 1
4-Feb	Tangent and Velocity Problems, Limit of a function	2.1, 2.2
	Calculating Limits	2.3
	Limits Involving Infinity	2.5
11-Feb	Limits Involving Infinity	2.5
	Continuity	2.4
	Derivatives and rates of change	2.6
18-Feb	The Derivative as a function; What does the derivative tell us about the function	2.7, 2.8
	The Power Rule	3.1
	Derivatives of Exponentials	3.1
25-Feb	The Product and Quotient Rule	3.2
	The Product and Quotient Rule	3.2
	Review for Midterm	
4-Mar	Review for Midterm	
	Go over Midterm 1	
	Derivatives of Trigonometric Functions	3.3
11-Mar	The Chain Rule	3.4
	The Chain Rule	3.4
	Implicit Differentiation	3.5
25-Mar	Implicit Differentiation	3.5
	Derivatives of Inverse Trigonometric Functions	3.6
	Derivatives of Inverse Trigonometric Functions	3.6
1-Apr	Review for Midterm 2	
	Review for Midterm 2	
	Go over Midterm 2	
8-Apr	Derivatives of Logarithmic Functions	3.7
	Derivatives of Logarithmic Functions	3.7
	Linear Approximations and Differentials	3.9
15-Apr	Related Rates	4.1
	Related Rates	4.1
	Maxima/Minima	4.2
22-Apr	Maxima/Minima	4.2
	Curve Sketching	4.3
	Curve Sketching	4.3
29-Apr	Optimization Problems	4.6
	Optimization Problems	4.6
	L'Hôpital's Rule	4.5
6-May	Cumulative Review	
	Cumulative Review	
	Cumulative Review	

Americans with Disabilities Act:

If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Disability Support Services, ECC (Educational Communications Center) Building, room128, (631) 632-6748. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential. Students requiring emergency evacuation are encouraged to discuss their needs with their professors and DSS. For procedures and information, go to: http://www.ehs.sunysb.edu and look at Fire Safety and Evacuatino and Disabilities

Academic Integrity:

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's 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 & 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 http://www.stonybrook.edu/uaa/academicjudiciary/

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.

Conduct

Stony Brook University expects students to maintain standards of personal integrity that are in harmony with the educational goals of the institution; to observe national, state, and local laws and University regulations; and 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.