Syllabus for MAT 123 Spring 2016

MAT 123: Introduction to Calculus

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:

- Ensure that you have fluency with a variety of topics, such as trigonometry, exponentials and logarithms, algebraic functions (polynomials and rational functions).

- Ensure that you are comfortable and conversant with the underlying concepts such as functions, domain, range, inverse functions, functional composition, and so on.

- Ensure that you have mastered the various means of manipulating functional and algebraic expressions, solving basic equations, and their graphical representations.

- Be able to apply the above to problems both within and outside of mathematics. Part of this is a deeper understanding of functions, whether viewed as graphs, tables, or formulae. Fluency in understanding the language of mathematics is essential for success in the sciences or engineering.

The text is *Precalculus: a Prelude to Calculus (2nd edition)*, by Sheldon Axler.
Use of WebAssign is required but you are NOT required to purchase the text book. 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 MAT123, you must have either

- Passed MAP103 with a grade of C or better, or

- Received a score of level 3 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 Noon.*

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	Monday, February 22	8:45 – 10:15 PM
Midterm 2	Thursday, April 7,	8:45 – 10:15 PM
Final	Wednesday, May 11	8:00 – 10:45 AM

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 Recess: March 14 – 20. Classes resume on March 21.
Classes end on May 6.

You may drop without tuition liability until January 24.
You may withdraw without a "W" , or add/swap classes) until February 5 at 4:00 pm.
You may move up or down in MAT/MAP courses until March 4 at 4:00 pm.
You may withdraw with a "W" until April 1 at 4:00 pm.
You may change the course to Grade/Pass/No Credit until April 1 at 4:00 pm.

How your grade will be calculated

Homework, WebAssign, Recitation - 15%
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 Centr	103	David Kahn
R01	M	12:00pm-12:53pm	Library	W4525	Fadi Elkhatib
R02	Th	8:30am- 9:23am	Mathematics	P131	Zili Zhang
R03	Tu	11:30am- 12:23pm	Mathematics	P131	Amit Quackenbush
R05	W	12:00pm- 12:53pm	Library	E4320	Stephanie Salvator
LEC 02	TuTh	2:30pm-3:50pm	Earth&Space	001	Letao Zhang
R06	M	1:00pm-1:53pm	Library	E4310	Apratim Chakraborty
R07	W	11:00am-11:53am	Lgt Engr Lab	152	Marlon de Oliveira Gomes
R08	M	4:00pm- 4:53pm	Library	W4535	Thomas Rico
R9	Th	8:30am- 9:23am	Library	E4330	Apratim Chakraborty
R10	Tu	11:30am- 12:23pm	Earth&Space	079	Yanhuan Li
LEC 03	MW	4:00pm- 5:20pm	Engineering	143	Deb Wertz
R12	M	12:00pm-12:53pm	Library	N3063	John Sheridan
R13	W	12:00pm-12:53pm	Library	W4530	Miriam Flynn
R14	Th	11:30am- 12:23pm	Mathematics	P131	Yanhuan Li
R15	M	5:30pm- 6:23pm	Library	E4310	Xuan Chen

Course Schedule

Date	Topic	Relevant Chapter(s) in Axler	Homework
25-Jan	Administrative material and course expectations		
27-Jan	Functions and Graphs	1.1, 1.2	
29-Jan	Composition of functions	1.4	Diagnostic WA
1-Feb	Transformations	1.3	
3-Feb	Inverse Functions	1.5, 1.6	WA 1 is due at Noon
5-Feb	Introduction to Trigonometry	4.3, 4.5	HW1 is due at Noon
8-Feb	Right triangle trigonometry	4.3, 4.5	
10-Feb	Right triangle trigonometry	4.3, 4.5	WA 2 is due at Noon
12-Feb	Unit Circle	4.1, 4.2	HW2 is due at Noon
15-Feb	Unit Circle	4.1, 4.2	
17-Feb	The reciprocal trig functions	4.4, 4.5	WA 3 is due at Noon
19-Feb	Review for Midterm 1		HW3 is due at Noon
22-Feb	Review for Midterm 1		
24-Feb	Go over Midterm 1		
26-Feb	Linear equations and graphs	2.1	
29-Feb	Quadratic equations and graphs	2.2	
2-Mar	Polynomials	2.4	WA 4 is due at Noon
4-Mar	Laws of Exponents	2.3	HW4 is due at Noon
7-Mar	Rational Functions	2.5	
9-Mar	Exponential Functions	Chapter 3	WA 5 is due at Noon
11-Mar	Exponential Functions	Chapter 3	HW5 is due at Noon
21-Mar	Logarithms	Chapter 3	
23-Mar	Logarithms	Chapter 3	WA 6 is due at Noon
25-Mar	Word problems	Chapter 3	HW6 is due at Noon
28-Mar	Some Trig Identities	4.6	
30-Mar	Inverse Trig Functions	5.1	WA 7 is due at Noon
1-Apr	Inverse Trig Functions	5.1	HW7 is due at Noon
4-Apr	Review for Midterm 2		
6-Apr	Review for Midterm 2		
8-Apr	Go over Midterm 2		
11-Apr	Graphs of Sine and Cosine	6.1	
13-Apr	More Identities	5.2	WA 8 is due at Noon
15-Apr	Angle Sum/Difference Formulas	5.5, 5.6	HW8 is due at Noon
18-Apr	Double and Half Angle Formulas	5.5, 5.6	
20-Apr	Law of Sines	5.4	WA 9 is due at Noon
22-Apr	Law of Cosines	5.4	HW9 is due at Noon
25-Apr	Solving Equations		
27-Apr	Solving Equations		WA 10 is due at Noon
29-Apr	Solving Equations		HW10 is due at Noon

2-May   Cumulative Review
4-May   Cumulative Review
6-May   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.