

Syllabus for MAT 126 Spring 2020

MAT 126: Calculus

About the Course

The goal of this course is to extend your knowledge from Differential Calculus to Integral Calculus. You will develop a deeper understanding of Calculus and learn to apply what you learn in a variety of areas. You will develop deeper skills in algebraic manipulation of formulas and equations, working in two and three dimensions. And you will enhance those skills to enable you to pursue further study of mathematics, science, and engineering.

A C or better in MAT126 fulfills the Master Quantitative Problem Solving (QPS) objective. In this course you will:

- Interpret and draw inferences from mathematical models such as formulas, graphs, tables, or schematics through the use of Differential and Integral Calculus
- Learn to represent mathematical information symbolically, visually, numerically, and verbally.
- Employ the methods of calculus to solve problems.
- Estimate and check the results of your mathematical analysis for reasonableness.
- Recognize the limits of mathematical methods in solving problems.

The texts are called *Calculus-Volume 1 and Volume 2* and are OpenStax textbooks. You can find and download the textbooks in the Documents folder in BlackBoard. The textbooks are an Open Educational Resource and are FREE. The computer homework program is through Lumen Learning and is also FREE.

You will access Lumen Learning through BlackBoard, not through their site.

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

Course Prerequisites: In order to take MAT126, you must have either

- Passed **MAT 103** with a grade of C or better, or
- Received a score of level 5 or better on the math placement exam.

Homework

Most weeks you will have paper homework problems that you must hand in at recitation. ***Paper homework is due at the beginning of your recitation. You should check Lumen frequently for due dates.***

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 or TA's office hours. We also strongly recommend that you attend the PAL sessions. They are very helpful!

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, March 2	8:45 – 10:15 PM
Midterm 2	Monday, April 13	8:45 – 10:15 PM
Final	Wednesday, May 13	11:15 AM – 1:45 PM

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

We do not give makeup 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 16-20.

Classes end on May 8.

You may drop without any tuition liability until February 2.

You may withdraw without a "W", or add/swap classes, until February 7 at **4:00 pm.**

You may move up or down in MAT/MAP courses until March 6 at **4:00 pm.**

You may withdraw with a "W" until March 6 at **4:00 pm.**

You may change the course to Grade/Pass/No Credit until March 6 at **4:00 pm.**

How your grade will be calculated

Paper homework and Lumen – 10%

Midterm 1 – 25%

Midterm 2 – 25%

Final – 35%

We reserve up to 5% for participation.

Blackboard

Please check Blackboard frequently. 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	ESS	001	David Kahn
R01	F	12:00pm-12:53pm	ESS	183	Hang Yuan
R02	Tu	4:00pm- 4:53pm	ESS	181	Nathan Chen
R03	Tu	5:30pm- 6:23pm	ESS	181	Nathan Chen
R04	Th	8:30am- 9:23am	ESS	183	Yunpeng Niu
R05	M	1:00pm- 1:53pm	Lgt Engr Lab	154	Diljit Singh
R06	M	9:00am- 9:53am	Mathematics	P131	Roberto Albesiano
R07	W	11:00am-11:53am	Mathematics	P131	Paul Frigge
R08	Th	2:30pm- 3:23pm	Physics	P116	Diljit Singh
LEC 02	TuTh	2:30pm- 3:50pm	Javits Lectr	102	Yu Li
R20	Th	1:00pm- 1:53pm	ESS	69	Thomas Rico
R21	F	1:00pm- 1:53pm	ESS	79	Phway Sandi San
R22	W	12:00pm-12:53pm	Harriman	116	Deb Wertz
R23	M	10:00am-10:53am	Harriman	112	Paul Sweeney
R24	M	12:00pm-12:53pm	ESS	79	Phway Sandi San
LEC 03	MW	4:00pm- 5:20pm	ESS	001	Holly Chen
R30	W	9:00am- 9:53am	Mathematics	P131	Roberto Albesiano
R31	Tu	10:00am-10:53am	Physics	P117	Paul Sweeney
R32	W	10:00am-10:53am	Physics	P117	Aleksandar Milivojevic
R33	Th	4:00pm- 4:53pm	Physics	P117	Kristen Pagano
R34	W	5:30pm- 6:23pm	Physics	P117	Kristen Pagano
R35	M	5:30pm- 6:23pm	ESS	183	Yeorgia Kafkoulis
R36	Tu	1:00pm- 1:53pm	Physics	P117	Thomas Rico
R37	M	12:00pm-12:53pm	ESS	69	Stephanie Salvator

Course Schedule

Date	Topic	Relevant Chapters
Week of 27-Jan	Administrative material	
	Review of derivatives	
	Review of derivatives	
Week of 3-Feb	Antiderivatives	4.10
	Antiderivatives	4.10
	Antiderivatives	
Week of 10-Feb	Approximating Areas	5.1
	Approximating Areas	
	The Definite Integral	5.2
Week of 17-Feb	The Fundamental Theorem of Calculus	5.3
	Integration Formulas	5.4
	Integration Formulas	5.4
Week of 24-Feb	Review for Midterm 1	
	Review for Midterm 1	
	Substitution	5.5
Week of 2-Mar	Substitution	5.5
	Substitution	5.6
	Integrals of Log and Exponential Functions	5.6
Week of 9-Mar	Integrals of Inverse Trig Functions	5.7
	Integration By Parts	Vol. 2, 3.1
	Integration By Parts	3.1
Week of 23-Mar	Trig Integrals s	3.2
	Trig Integrals	3.2
	Trig Substitution	3.3
Week of 30-Mar	Trig Substitution	3.3
	Partial Fractions	3.4
	Partial Fractions	3.4
Week of 6-Apr	Improper Integrals	3.7
	Review for Midterm 2	
	Review for Midterm 2	
Week of 13-Apr	Area Between Curves	2.1
	Area Between Curves	2.1
	Volumes by Slicing	2.2
Week of 20-Apr	Volumes by Slicing	
	Volumes by Shells	2.3
	Volumes by Shells	2.3
Week of 27-Apr	Arc Length	2.4
	Arc Length	2.4
	A little more exponential and log stuff	2.7, 2.8
Week of 4-May	Review for Final Exam	
	Review for Final Exam	
	Review for Final Exam	

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 SASC. For procedures and information, go to: <http://www.ehs.sunysb.edu> and look at Fire Safety and Evacuation 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.