

Syllabus for MAT 125 Fall 2020 - Online

MAT 125: Calculus A

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Office hours: MWTTh 11:15-12:15 Online

About this course: The goal of this course is to ensure that you have a proper background to take Calculus B 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 called *Calculus-Volume 1* and is an OpenStax textbook. You can find and download the textbook in the Documents folder in BlackBoard. The textbook is an Open Educational Resource and is FREE. The computer homework program is through Lumen Learning and is also FREE.

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](#).

Hardware and Software Requirements

You will need access to the internet, a computer, a webcam (which can be your smartphone), and a microphone. You may also find it helpful to have access to a printer.

BlackBoard

Throughout this course, we will communicate with the course by making announcements in BlackBoard. You will receive an email containing the announcement. The announcement will also remain in BlackBoard throughout the course for you to refer to. You are expected to read each announcement carefully and it is your responsibility to know what has been announced.

We suggest that you check Blackboard before you email your TA or professor.

There are two sections of BlackBoard. One will be the master section of BlackBoard and will contain information that applies to the entire course. The

other section will be specific to your recitation and will contain information that applies only to your recitation.

Your paper homework grades and final grades will be posted in the Grade Center in the master section in BlackBoard.

Lumen

You will access Lumen through their website <https://ohm.lumenlearning.com> We have posted instructions in the master section of BlackBoard with instructions on how to set up your Lumen account. You will have approximately 25 assignments in Lumen. We will drop the lowest 5 of them and the other 20 will be graded. You can find the grades for all of your Lumen work in the GradeBook in Lumen.

Homework will be assigned through Lumen. At the beginning of the course, you will receive three “late passes”. These are given to you in the place of extensions. You may use these on Lumen homework assignments to do the assignment late. *Note that once you start the assignment, even if you just click on it to look at it, you may not use a late pass. Also note that if you are late on more than three assignments, for ANY reason, you will not receive an extension.*

The midterm and final exams will also be given through Lumen. You may not use late passes for those. If you are eligible for extra time or other special conditions, please make sure that you contact SASC to set that up.

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.

Lectures

Each week, we will make an announcement in BlackBoard telling you which videos to watch for the upcoming week. It is **YOUR** responsibility to watch the videos in advance of the lectures. The videos can be found in the video page: <http://www.math.stonybrook.edu/Videos/courses/?open=MAT123>

The lectures will consist of question and answer sessions where your professor will take questions about the material in the lectures. Your professor will also have prepared problems to review with the class. We strongly suggest that you watch these sessions. They will be given through Zoom and will be available for subsequent viewing. You can find the links to Zoom in BlackBoard.

In addition to the videos and lectures, you will have weekly recitations where you can meet with your TA to go over questions that you have about the material.

Homework

Most weeks you will have paper homework problems that you must hand in at recitation. You will scan or upload your homework to your TA, who will grade the homework and put your grades in BlackBoard. ***You should check BlackBoard frequently for due dates.*** You will also have homework in Lumen. See above for details.

If you are having difficulty understanding a topic, we suggest that you 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. Some recitations will be in person and some will be held online. If your recitation is online, your TA will post the Zoom link to your recitation in the BlackBoard section for your recitation.

Exams

There are two midterms and a final. Midterms will be 90 minutes, online exams. You will have a 24 hour period during which you may take the exam. The schedule is:

Midterm 1	Thursday, October 1, 9:00am-Friday, October 2 9:00am
Midterm 2	Thursday, October 29, 9:00am-Friday, October 30, 9:00am
Final	Wednesday, Dec. 9, 2:15pm-5:00pm

All exams will be given through Lumen.

Important Dates:

There are no classes on September 7 for Labor Day.
Thanksgiving Break is November 23 through November 29.
The last day of classes is December 7.
Classes end on December 7.
You may drop without any tuition liability until August 28.

You may withdraw without a “W”, or add/swap classes, until September 4 at **4:00 pm**.

You may move up or down in MAT/MAP courses until October 2 at **4:00 pm**.

You may withdraw with a “W” until October 23 at **4:00 pm**.

You may change the course to Grade/Pass/No Credit until October 23 at **4:00 pm**.

How your grade will be calculated

Lumen – 40%

Paper homework – 10%

Midterm 1 – 15%

Midterm 2 – 15%

Final – 15%

We reserve up to 5% for participation.

Lectures and Recitations

LEC 01	80619	MW	6:05pm- 7:25pm	Online		Holly Chen
R01	80621	M	10:30am-11:25am	Online		Phway Sandi San
R02	80622	Tu	4:45pm- 5:40pm	Library	E4320	Dylan Galt
R03	80623	M	1:00pm- 1:55pm	Library	E4320	Dylan Galt
R04	80624	Th	6:30pm- 7:25pm	Online		Karina Cho
R05	80625	M	11:45am-12:40pm	Library	E4320	Albert Guo
R06	80626	M	7:50pm- 8:45pm	Online		Mark Lombardi
R07	86972	W	8:30am- 9:25am	Online		Karina Cho
R30	87224	F	1:00pm- 1:55pm	Online		Stephanie Salvator
R32	84758	W	11:45am-12:40pm	Library	E4320	Yinzhe Gao
R34	87226	Th	4:45pm- 5:40pm	Harriman Hill	137	Jacob Laxer
R35	86974	M	8:30am- 9:25am	Online		Phway Sandi San
R41	87227	Tu	3:00pm- 3:55pm	Javits Lectr	110	Zhecheng Wu
R42	87228	W	4:25pm- 5:20pm	Online		Holly Chen
R45	87823	Tu	11:30am-12:25pm	Online		Stephanie Salvator
R46	88238	Th	4:45pm- 5:40pm	Psychology A	137	Veronica Matedero
LEC 02	80620	TuTh	9:45am-11:05am	Online		David Kahn*
R20	87222	Th	8:00am- 8:55am	Online		Stephanie Salvator
R21	83551	F	1:00pm- 1:55pm	Earth&Space	1	Yinzhe Gao
R22	83552	W	1:00pm- 1:55pm	Earth&Space	1	Stella Di Cocco
R23	84472	Th	1:15pm- 2:10pm	Engineering	143	Timothy Alland
R24	86973	M	4:25pm- 5:20pm	Harriman Hill	137	Timothy Alland
R25	87223	M	6:05pm- 7:00pm	Engineering	143	Veronica Matedero
R26	88160	Tu	11:30am-12:25pm	Earth&Space	131	Mohamad Rabah

R27	88237	Th	11:30am-12:25pm	Online		Holly Chen
R31	84681	Tu	3:00pm- 3:55pm	Engineering	145	Stella Di Cocco
R33	87225	Tu	11:30am-12:25pm	Javits Lectr	102	Taras Kolomatski
R40	85950	Th	11:30am-12:25pm	Harriman Hll	137	Taras Kolomatski

Course Schedule

Date	Topic	Relevant Chapters
Week of 24-Aug	Administrative material	
	Review of functions	1.1-1.5
	Review of trigonometry	1.1-1.5
Week of 31-Aug	Tangent and Velocity Problems	2.1
	Limit of a function	2.2
	Limit of a function	2.2
Week of 7-Sept	The Limit Laws	2.3
	The Limit Laws	2.3
	Continuity	2.5
Week of 14-Sept	Defining the derivative	3.1
	The Derivative as a function	3.2
	Differentiation Rules	3.3
Week of 21-Sept	Differentiation Rules	3.3
	Derivatives as Rates of Change	3.4
	Derivatives as Rates of Change	3.4
Week of 28-Sept	Review for Midterm	
	Review for Midterm	
	Go over Midterm 1	
Week of 5-Oct	Derivatives of Trigonometric Functions	3.5
	The Chain Rule	3.6
	Derivatives of Inverse Trigonometric Functions	3.7
Week of 12-Oct	Derivatives of Inverse Trigonometric Functions	3.7
	Implicit Differentiation	3.8
	Implicit Differentiation	3.8
Week of 19-Oct	Derivatives of Logarithmic and Exponential Functions	3.9
	Related Rates	4.1
	Related Rates	4.1
Week of 26-Oct	Related Rates	4.1
	Go over Midterm 2	
	Go over Midterm 2	
Week of 2-Nov	Related Rates	4.1
	Linear Approximations and Differentials	4.2
	Maxima/Minima	4.3
Week of 9-Nov	Maxima/Minima	4.3
	Curve Sketching	4.5
	Curve Sketching	4.5
Week of 16-Nov	Limits at Infinity and Asymptotes	4.6
	Optimization Problems	4.7

	Optimization Problems	4.7
Week of 30-Nov	Optimization Problems	4.7
	L'Hôpital's Rule	4.8
	Review for Final Exam	
December 7	Review for Final Exam	

Face Mask Policy

Students should be aware that a face mask is required while in the classroom. If a student does not comply, the student will be asked to leave the classroom.

If the student does not comply or leave the classroom, we will end the class and the students will be reported to the Office of Student Conduct and Community Standards at communitystandards@stonybrook.edu.

ACCOMMODATIONS FOR STUDENTS WITH HEARING AND COMMUNICATION IMPAIRMENTS

Some students with hearing and communication impairments may need their instructor to wear a clear mask for lip and facial expression purposes. If the student has registered with the Student Accessibility Support Center (SASC) and has requested an accommodation for clear masks, SASC will reach out to the student's instructors and provide a clear mask for them to wear while teaching and/or interacting with the student. If you have questions, please email sasc@stonybrook.edu or call (631) 632-6748.

FACE MASK ACCOMMODATIONS, MODIFICATIONS, OR EXEMPTIONS

The Student Accessibility Support Center (SASC) works with students who may require academic accommodations. If a student is unable to wear a mask for health reasons, the student should contact SASC at sasc@stonybrook.edu. SASC will work with the student to help identify arrangements to complete in-person courses in an alternate format. If, however, there is an in-person class that cannot be accommodated in an alternate format, a student may be approved by the Medical Director of Student Health Services to wear a modified face mask or no face covering. In this situation, SASC will communicate this information to the faculty member. Approved students will also be provided with a written exemption from the Medical Director of Student Health Services that indicates any modifications or exceptions, which they must carry with them to show faculty if requested. Please note that medical exemptions are rare and are based solely on medical necessity. If a student is exempt from the face mask policy, please consider how to seat students to ensure proper social distancing within a given instructional setting. If you have questions regarding accommodations, please email sasc@stonybrook.edu. For health related concerns in the classroom, please contact Dr. Rachel Bergeson, Medical Director, at rachel.bergeson@stonybrook.edu.

Americans with Disabilities Act:

If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact the Student Accessibility Support Center, 128 ECC Building, (631) 632-6748, or at sasc@stonybrook.edu. 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 the Student Accessibility Support Center. For procedures and information go to the following website: <https://ehs.stonybrook.edu/programs/fire-safety/emergency-evacuation/evacuation-guide-people-physical-disabilities> and search 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.