MAT122: Overview of Calculus with Applications
Fall 2019
COURSE SYLLABUS

Lecture: Deb Wertz   debra.krieg@stonybrook.edu   **Office:** Math Tower 2-121 (second floor)

Recitation: Shamuel Auyeung   shamuel.auyeung@stonybrook.edu   Math Tower 5-125B (fifth floor)

Roberto Albesiano   roberto.albesiano@stonybrook.edu   Math Tower S-240A (sub level)

Overview: This course covers both differential and integral calculus and explores the relationship between them.

Pre-requisite: C or better in MAP103 or 3 or better on placement exam.

Textbook: *Calculus and its Applications, 11e* by Bittinger/Ellenbogen/Surgent but it is not required you to purchase a hard copy. You may choose to get the electronic copy with the online homework access.

Calculator: No calculators will be allowed for the exams but some homework questions will require the use a calculator.

Blackboard: Material relevant to the course including grades, documents and announcements will be posted on Blackboard. WebAssign will be accessed from Blackboard as well (see below).

Grading: Your course grade will be determined from the following items:

Midterm 1 = 15% of course grade

Midterm 2 = 25% of course grade

Final Exam = 45% of final grade (final exam is cumulative)

MyLab, Quizzes, Participation = 15% of final grade

Exams: See Course Curriculum on Blackboard for exam dates. All exams are given during class. **Make-up exams will not be given under any circumstances.** If a midterm is missed due to a documented emergency, the final exam grade will back fill in as the grade of the missed midterm. Note that the final will be held in class, not during final exam week. If the final exam is missed due to a documented emergency, an Incomplete will be given as the course grade and you must make arrangements to make up the final.

MyLab will be used for web-based homework assignments and can be accessed through "Tools" in Blackboard - with this procedure you will not need a course key or login. It is most cost effective to buy the access code directly through MyLab. Course ID, etc will be posted on Blackboard.

Recitation: A short quiz will be given most weeks. Recitation is also a prime opportunity to ask questions regarding homework problems as well as to get any clarification on lecture material. Print out homework assignments from MyLab and try to formulate questions in advance so you can get the most out of the session.

Homework Guidelines:

1. Working through problems is crucial to understanding math. An assignment will appear after each lecture and is to be completed on the due date at 11:59pm.
2. You will always have the opportunity to ask homework questions during recitation before the assignment is due. Print out the assignment, try to work through all the problems and bring it to class along with your work so you can get the most out of the Q&A session.
3. While it is to use a calculator on the homework, it will not be allowed during exams so be sure you also know how to solve the problems without the calculator.
4. Comprehension of homework questions as well as the examples covered in lecture will be instrumental in preparing you to do well on the exams. I encourage you to take good notes and form study groups.
5. There is a document on Blackboard labeled Course Curriculum itemizing the topics covered during each lecture.

Office Hours: Office hours are held every week and you are encouraged to attend. You do not need to make an appointment. Times are listed on the main Blackboard course page under Faculty Information.

Concerns: If you have ANY problem related to the course, please feel free to discuss it with either your lecturer or recitation instructor. We truly want you to succeed in this course and will do whatever we can to help resolve the problem. You can talk to us before or after class, during office hours or via email.

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.

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.

IMPORTANT: It is the **student's** responsibility to keep the instructor informed of situations and events that prohibit student learning including family emergencies, illnesses and disabilities (please see the statement regarding students with disabilities above). Communication is a must and initial communication is the student's responsibility. When emergencies occur that prohibit student learning and performance, it is the student's responsibility to email me informing me of the situation **before returning to class**.

Course Curriculum
(subject to change - check regularly)

Week of:	
26-Aug	**Week 1**
domain/range	
functions	

Week of:	
28-Oct	**Week 10**
area under shapes	
Riemann sum	

2-Sep	**Week 2**
composition/decomposition	
linear functions	

4-Nov	**Week 11**
area under curves	
definite integral	
area between curves	

9-Sep	**Week 3**
inverse functions	
common graphs/transformations	
linear applications	
quadratic functions	
polynomial functions	

11-Nov	**Week 12**
Fundamental Theorem of Calculus	
Average Change	

16-Sep	**Week 4**
exponent laws	
exponential functions	
logarithmic functions	
Review - Friday	

18-Nov	**Week 13**
marginal cost	
integration with substitution	

23-Sep	**Week 5**
Exam 1 - Monday (weeks 1-4)	
limits	

25-Nov	**Week 14**
integration by parts (start)	
NO CLASS - Wednesday, Friday	

30-Sep	**Week 6**
average rate of change	
difference quotient	
definition of the derivative	
4Oct 4pm: deadline to move up/drop down	

2-Dec	**Week 15**
integration by parts (finish)	
Review - Wednesday	
Final Exam Part I - Friday (cumulative)	

7-Oct	**Week 7**
power rule	
e^x derivative	
product rule	
quotient rule	

9-Dec	**Week 16**
Final Exam Part II - Monday	
(cumulative)	

14-Oct	**Week 8**
NO CLASS - Monday	
Review - Wednesday	
Exam 2 - Friday (weeks 5-7)	

21-Oct	**Week 9**
chain rule	
a^x derivative	
log/ln derivative	
antiderivative	
25Oct 4pm: deadline to GPNC, withdraw w 'W'	