

## Syllabus: MAT 284 (Business Calculus) Spring 2018, U001

**Course Instructor:** Laura Ballard

**E-mail:** [lballard@syr.edu](mailto:lballard@syr.edu)

**Office:** 221 Smith, Desk # 2 (ask someone where I am if you cannot find me; it is a large office)

**Office Hours:** Tues 5:15-6:15 PM, Wed 3:40-4:40 PM. At other times, you can see me by appointment (through e-mail).

**Office Phone:** (315) 443-3195

**Class Time and Location:** TTh 6:30-8:20PM, Carnegie 114 (you will be notified if there is a room change)

**Course Supervisor:** Muhammed ALAN, Carnegie 313J, malan@syr.edu

Please inform the instructor of any problems you have with this course. Problems not satisfactorily resolved with your instructor should be brought to the attention of the course supervisor.

**Course Description:** MAT 284 Business Calculus (4 credits). One-variable differential and integral calculus. Applications to business and economics. MAT 284 may not be taken for credit after successful completion of MAT 285 or MAT 295.

**Liberal Arts Core:** The sequence MAT 183-284, taken in either order, satisfies the Quantitative Skills requirement of the Liberal Arts Core in the College of Arts and Sciences.

**Recitation:** Included in Section U001. A quiz or exam will be given most Thursdays. Some class time will be used to consider homework problems and/or questions you may have, as in a typical recitation.

**Mathematics Prerequisite:** Although there are no formal prerequisites, the knowledge of pre-calculus material at the level of MAT 194 is essential for success in this course.

**Textbooks:** Introductory Mathematical Analysis by Haeussler, Paul, and Wood, Custom edition for SU. Pearson, ISBN: 9780558697129. Only the textbook is required. Used copies are fine. The course will cover most of chapters 1-4 and 10-14.

**Calculator:** A TI-83 or TI-84 calculator is required. No other calculators (e.g. TI-Nspire with/or without TI-84 keypad) are to be used on tests or quizzes. Further, calculators are not to be shared during exams and quizzes. The TI-84 or TI-83 is the only calculator that may be used on a test or the final exam.

**Exams:** There will be two midterm exams:

Exam 1	22 February 2018
Exam 2	12 April 2018

**Final Exam:** The final exam will be cumulative. All students must take the final exam at the scheduled time which will be a 2-hour block between 7:30 p.m. and 9:30 p.m. during exam week (date TBA). There will be no exceptions, and so you should not make plans to leave campus before 9:30 p.m. on Tuesday, May 8, 2018, until your exam date has been announced (and then do not make plans to leave campus before the exam end time).

**Exam Policies:** All exams (including the final exam) are closed book and closed notes. Cell phones or any other devices capable of wireless communication are not allowed. There will be no make-up exams. Please see make-up policy below.

**Quizzes:** Starting from the second week of classes, there will be a weekly quiz similar to the homework problems. There may be other quizzes given in class, as well. There will be no make-up quizzes.

Extra credit will be available on quizzes and through quiz corrections and will only apply toward the “Quizzes” grading category. The lowest (one) quiz score will be dropped.

**Make-up Policy:** There will be absolutely no make-ups for any reason. If you miss a test for a valid reason (which must be verified by a note from a physician or your dean’s office), the missing score will be replaced by the final exam. For the specific replacement policy for your section, please contact your lecture instructor.

**Homework:** Homework will be done online using WeBWorK, an open-source homework system for math and sciences courses. The number of attempts is unlimited. Problems can be done in any order. You do not have to do them all at once. Two lowest WeBWorK scores will be dropped.

Homework will be due on Wednesdays at 11 pm. I may ask you to write down and turn in a few problems for homework during the semester.

**WeBWorK access information:**

1. Go to <http://webwork.syr.edu/>
2. Click on the class name “MAT\_284 Spring 2018 xxxx”(depending on your lecture instructor’s last name).
3. Your username is your NetID in lower case letters (for example, “jqpublic”).
4. Your password is initially set to be your 9-digit SUID. You should change it after logging in for the first time. Also, note that even if you used WeBWorK before for another course, the password is reset to the 9-digit student id number.

**Grading:** Your final grade will be based on two midterm exams (25% each), a cumulative final exam (30%), weekly quizzes (10%), and HW (10%). Final letter grades will be given according to the following scale:

Raw Grade x	Letter Grade	Raw Grade x	Letter Grade
$93 \leq x \leq 100$	A	$77 \leq x < 80$	C+
$90 \leq x < 93$	A-	$73 \leq x < 77$	C
$87 \leq x < 90$	B+	$70 \leq x < 73$	C-
$83 \leq x < 87$	B	$60 \leq x < 70$	D
$80 \leq x < 83$	B-	$0 \leq x < 60$	F

**Cell Phones:** All electronic devices other than calculators should be turned off and put away during class.

**Attendance:** Attendance will count as a quiz grade that will not be dropped. You are expected to attend every class, every exam, and the final exam. If you miss a class, it is your responsibility to obtain a copy of the lecture notes for that class from another student. You are also responsible for any announcements about changes to the course schedule, the exam schedule, or the course requirements that were made during that class.

**Learning Goal:** Students will be expected to:

1. use and understand basic mathematical notations;
2. select and apply an appropriate mathematical model for a given business/ economics problem;
3. do hand calculations accurately and appropriately; and
4. do calculations with the aid of appropriate hardware and/or software.

**Available Student Assistance:**

- Office hours (see above)
- UC Clinic, Calculus Help Center, and Math Clinic: see the schedules at [math.syr.edu/help](http://math.syr.edu/help) or posted outside the math office (will be up by the second week of the semester).
- Free small-group tutoring ([class.syr.edu](http://class.syr.edu)) (see below)
- The mathematics department also keeps a list of private tutors (paid) at [math.syr.edu/help](http://math.syr.edu/help)

You should see your instructor for questions requiring explanations about problems, concepts etc.; such questions cannot be taken care of by e-mail.

**Free tutoring for MAT 284 this semester:** I encourage you to attend the free small- group tutoring sessions for MAT 284 available through the Center for Learning and Student Success (CLASS). Several tutoring sessions for MAT 284 will be offered each week. The tutors will be trained undergraduate and graduate students who have access to our course information and can help you study efficiently and effectively. Tutoring sessions will be geared to each week's assignments. Visit [class.syr.edu](http://class.syr.edu) to learn when and where sessions meet and how to reserve a spot. (You may also drop in if space is available.)

**Tips for success in this course:**

- It is absolutely essential that you understand how to solve all of the assigned problems. Your goal when doing homework is to get the level of mastery where you could solve every problem from start to finish without help or resources other than your calculator. Once you understand how to solve a problem, write your solution down neatly and in full detail with explanations that make your reasoning clear.
- Don't fall behind. If you are having difficulties keeping up with the material, see me immediately to discuss the problem.
- Take advantage of office hours (or e-mail for quick questions).
- Discussing problems with a classmate is very useful.
- Asking questions in class is strongly encouraged.
- Expect to work hard. Don't get discouraged if you find some of the material difficult. Be persistent and patient.

**Academic Integrity:** Syracuse University's Academic Integrity Policy reflects the high value that we, as a university community, place on honesty in academic work. The policy defines our expectations for academic honesty and holds students accountable for the integrity of all work they submit. Students should understand that it is their responsibility to learn about course-specific expectations, as well as about university-wide academic integrity expectations. The policy governs appropriate citation and use of sources, the integrity of work submitted in exams and assignments, and the veracity of signatures on attendance sheets and other verification of participation in class activities. The policy also prohibits students from submitting the same work in more than one class without receiving written authorization in advance from both instructors. Under the policy, students found in violation are subject to grade sanctions determined by the course instructor and non-grade sanctions determined by the School or College where the course is offered as described in the Violation and Sanction Classification Rubric. SU students are required to read an online summary of the University's academic integrity expectations and provide an electronic signature agreeing to abide by them twice a year during pre-term check-in on MySlice.

For this course in particular, the use of any notes or the use of any devices capable of wireless communication during quizzes and exams (until quiz/exam is handed in to the instructor) is considered to be a violation of the academic integrity policy.

All violations will be reported to the Academic Integrity Office (AIO).

**Students with Disabilities:** If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS) at

<http://disabilityservices.syr.edu>

located in Room 303 of 804 University Avenue, or call (315) 443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible for coordinating disability-related accommodations and will issue students with documented Disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible. You are also welcome to contact me privately to discuss your academic needs although I cannot arrange for disability-related accommodations. Making arrangements with ODS takes time. Please do not wait until just before the first exam.

**Religious Observances Policy:** SU religious observances policy recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance provided they notify their instructors before the end of the second week of classes. An online notification process is available through MySlice (Student Services → Enrollment → My Religious Observances) from the first day of class until the end of the second week of class.

### **Tentative Course Schedule:**

This schedule is only tentative. It is your responsibility to find out which topics are covered in class each week.

Week of Jan-15	Sec 1.1, 1.3	Week of Mar-19	Sec 12.2-12.3
Week of Jan-22	Sec 2.1-2.3, 2.5	Week of Mar-26	Sec 12.7, 13.1-13.3
Week of Jan-29	Sec 3.1-3.2, 3.6	Week of Apr-02	Sec 13.4, 13.6
Week of Feb-05	Sec 4.1-4.3, 10.1	Week of Apr-09	Catchup + Exam 2
Week of Feb-12	Sec 10.2-10.3, 11.1-11.2	Week of Apr-16	Sec 14.2
Week of Feb-19	Catchup + Exam 1	Week of Apr-23	Sec 14.3
Week of Feb-26	Sec 11.3-11.4	Week of Apr-30	Catchup/Review
Week of Mar-05	Sec 11.5, 12.1	Week of May-01	Catchup/Review
Week of Mar-12	Spring Break	Week of May-07	Final Ex on May 7th

### **Additional practice HW problems (from the textbook):**

(1.1) 11, 17, 29, 33, 40	(11.1) 3, 5, 7, 12, 15
(1.3) 1, 3, 5, 7, 9	(11.2) 17, 25, 33, 45, 47
	(11.3) 13, 19, 21, 23, 30
(2.1) 5, 13, 23, 31, 39	(11.4) 3, 15, 21, 27, 33
(2.2) 1, 3, 11, 32, 33	(11.5) 1, 7, 11, 19, 25
(2.3) 3, 7, 11, 15, 17	
(2.5) 3, 9, 16, 18, 39	(12.1) 3, 5, 11, 25, 43
	(12.2) 3, 5, 11, 13, 25
(3.1) 23, 27, 39, 55, 61	(12.3) 3, 5, 15, 17, 19
(3.2) 5, 15, 17, 21, 23	(12.7) 1, 3, 5, 9, 11
(3.6) 1, 9, 17, 19, 21	
	(13.1) 1, 3, 35, 57, 71
(4.1) 3, 7, 9, 11	(13.3) 7, 9, 29, 35, 63
(4.2) 3, 9, 19, 31, 59	(13.4) 3, 5, 8
(4.3) 5, 21, 35, 45, 47	(13.6) 17, 19, 27, 32, 33
(10.1) 3, 11, 15, 25, 33	(14.2) 3, 5, 9, 15, 21
(10.2) 13, 21, 23, 33, 41	(14.3) 1, 11, 13, 15, 21
(10.3) 1, 5, 9, 12, 25	