

Syracuse University
Semester
MAT 397 – Calculus III

Course Supervisor: Dr. Amy Potrzeba Macrina

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- Please inform your instructor of any problems that you are having with the course. Problems that are not satisfactorily resolved with your instructor should be brought to the attention of the course supervisor immediately.

Course Description: Analytic geometry and vectors; functions of more than one variable, multiple integrals, partial differentiation, physical applications.

Prerequisite: Satisfactory completion of Calculus II (MAT 296) or equivalent. Note that satisfactory completion means earning a C- or better.

Course Objectives:

As a result of the learning experiences provided in this course, the student should be able to:

- Determine the equation of lines, planes, spheres, cylinders, & quadric surfaces in 3-D space
- Define a 3-D vector function & compute its higher order derivative
- Define limit and continuity of a function of 2 or 3 variables
- Define & compute the partial derivative, total derivative, directional derivatives & extrema of functions of 2 & 3 variables
- Compute line integrals
- Compute double integrals in Cartesian & polar coordinates
- Compute triple integrals in Cartesian, cylindrical & spherical coordinates
- Apply Green's Theorem to the solution of line integrals
- Compute area, volume, mass & center of mass using double and triple integrals
- Describe parametric surfaces and compute their areas.
- Define and evaluate surface integrals.
- State and apply Stokes' Theorem.
- State and apply the Divergence Theorem.

Textbook & WebAssign: Stewart, James, *Essential Calculus: Early Transcendentals*, 2nd Edition; Cengage Learning.

- You also need a WebAssign access code for submitting online homework.
- The ISBN for the bundle (book and WebAssign) is 9781133425946.
- **Purchasing your textbook and WebAssign code:** All students are required to have a WebAssign access code for online homework assignments. This code includes access to the online electronic version of the textbook. Some students will also want a physical copy of the textbook. **You may choose between the following options:**
 - Purchase a WebAssign access code either at the Syracuse University (SU) bookstore or online at www.webassign.net.
 - Purchase a new textbook bundled with a WebAssign access code at the SU bookstore. This access code includes access to the online e-book version of the textbook and is valid for future semesters in the Calculus sequence.
 - Purchase a new textbook bundled with a WebAssign access code from the publisher's website at www.cengagebrain.com. You can also purchase just the WebAssign access code at the publisher's website.

Calculator Policy: MAT 295-296-397 students are expected to complete the calculus sequence without the use of a calculator. Calculators will not be permitted on quizzes or exams.

Course Format: The course format is 2-3 lectures per week (depending on your section) and one recitation per week. The primary instructor will introduce the new material in lecture and the recitation instructor will answer questions on the course material, homework problems and administer quizzes (in most recitation sessions). Exams will be given either during recitation or in class, to be determined by the instructor.

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Class Attendance and Participation: You are expected to attend and participate in lecture and recitation. If you miss a class, it is your responsibility to obtain notes for that class from another student and to find out about any announcements your instructor made during class. Do not expect your instructor to repeat the class lecture or provide notes.

Syracuse University's Attendance Policy including Verification of Medical Condition: Attendance in classes is expected in all courses at Syracuse University. It is a federal requirement that students who do not attend or cease to attend a class to be reported at the time of determination by the faculty that the student never attended or stopped attending the class. Faculty should use Early-Semester Progress Reports and Mid-Semester Progress Reports in Orange SUccess to alert the Registrar and Financial Aid Office. For more information visit: <http://registrar.syr.edu/faculty-staff/non-attendance/>

Excuses for class absences for medical reasons will be given only if such absences are advised by a health care provider at the Health Center, based on clinical findings and prescribed treatment recommendations. Excused notes will not be given solely to confirm a visit to the Health Center. For complete details on excuse notes, visit: <http://health.syr.edu/faqs/index.html>

Grading Policy: Your course grade will be computed as a weighted average using the following percentages:

Exams 50% (2 exams each 25%)

Quizzes& Homework* 20%

Final Exam 30%

***Note:** It is up to your instructor how the 20% for quizzes and homework will be allocated between homework grades and quiz grades. For more information, please refer to your instructor and his/her individual, explicit course policies.

Grading Scale: Your letter grade will be determined as follows:

Score	Grade	Score	Grade	Score	Grade	Score	Grade	Score	Grade
93 – 100 %	A	90 – 92 %	A-	87 – 89 %	B+	83 – 86 %	B	80 – 82 %	B-
77 – 79 %	C+	73 – 76 %	C	70 – 72 %	C-	65 – 69 %	D	0 – 64 %	F

Exams: Two exams will be given during the semester. They will be given during recitation OR during class with the precise dates announced by your instructor.

- Exam #1: Week of **XXX**

- Exam #2: Week of **XXX**

There will be **no make-up exams**, even in the case of an emergency. A missed exam counts as a zero unless a valid excuse from a physician or the Dean's Office is presented to your instructor and accepted. With an acceptable written excuse, a missed exam score will be replaced with the percentage earned on the corresponding subsection of the final exam.

You are not permitted to use any outside materials, resources, or electronic devices (including but not limited to calculators, mobile phones, smartwatches, etc.) on the exams. Any violation of this policy is a violation of the university's academic integrity policy.

Final Exam: The final exam is comprehensive and will be given during a two-hour block on **XXX** between 8:00a – 2:30p. The exact time and location will be announced by your instructor later in the semester. The final exam is worth 30% of your grade. The date is already set by the university, so please do not make other plans on the date of the final exam such as appointments, early vacation departures, family outings, etc. Such changes are not negotiable. If a student has a conflict with another final exam, the student must contact his/her instructor at least two weeks in advance in order to have it resolved.

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Homework: The best way to learn the material in a mathematics class is to practice! It is essential for students to complete all of the homework assignments. Many of the homework assignments will be completed using WebAssign and some problems will be written (and assigned from the textbook). Your instructor may require some or all of the written homework assignments to be handed in and graded. Completing all the homework problems is the best way to practice and prepare for quizzes and exams.

Quizzes: Quizzes will be administered weekly during recitation with some possible exceptions. Please refer to your instructor's schedule for exact dates of quizzes. The quizzes will be approximately 2-3 problems (approximately 15-20 minutes). **No make-up quizzes will be given. Calculators are not permitted on quizzes.**

Help: Be proactive about your success in the course! If you need help, there are resources available to help you.

- Your lecture and recitation instructor will be available to answer questions during office hours.
- Help is also available at the Calculus Help Center. <http://math.syr.edu/undergraduate/math-help.html>

Students with Disabilities: Syracuse University values diversity and inclusion; we are committed to a climate of mutual respect and full participation. My goal as your instructor is to create a learning environments that are useable, equitable, inclusive and welcoming. If there are aspects of the instruction or design of this course that result in barriers to your inclusion or accurate assessment or achievement, I invite you to meet with me to discuss additional strategies beyond accommodations that may be helpful to your success. If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS) located at 804 University Avenue, third floor or go to the ODS website at disabilityservices.syr.edu and click current students tab to register on-line. You may also call 315.443.4498 to speak to someone regarding specific access needs. ODS is responsible for coordinating disability-related accommodations and will issue 'Accommodation Letters' to students as appropriate. Since accommodations may require early planning and are not provided retroactively, please contact ODS as soon as possible.

Faith Tradition Observances Policy: Syracuse University's religious observances policy, found at http://supolicies.syr.edu/emp_ben/religious_observance.htm, recognizes the diversity of faiths represented in the campus community and protects the rights of students, faculty, and staff to observe religious holy days according to their tradition. Under the policy, students should have 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 no later than the end of the second week of classes for regular session classes and by the submission deadline for flexibility formatted classes. Student deadlines are posted in MySlice under Student Services/Enrollment/My Religious Observances/Add a Notification. I ask you to include this information, as well as your expectations for how and when academic requirements will be made up, in your syllabus. I also ask you to remind students during the first week of classes about the notification deadline. Instructors may access a list of their students who have submitted a notification in the MySlice Faculty Center. Note that the religious observances icon will not appear unless a student in that class has submitted a notification.

Orange Alert: Orange Alert, Syracuse University's crisis notification system, uses text messages, phone, and email alerts to provide rapid notification and instructions to members of the University community in the event of a critical incident in progress. Critical incidents could include an individual who is considered armed and dangerous, a hazardous materials incident, an explosion, or any other event in which there is an immediate threat of physical harm or death to campus community members. We recognize that faculty may consider activated cell phones as an interruption to their class. However, the public safety department recommends that faculty members leave their own cell phones on vibrate in order to receive text messages about a potential emergency situation. It is also recommended that faculty designate several class members to leave their cell phones on vibrate in order to receive notifications in the event of a critical incident. ORANGE ALERT contact information for students, faculty, and staff is drawn from the MySlice online information system; please keep your contact information current. **In the event of an emergency**

- Phone emergency line from on-campus: 711

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- Phone emergency line from off-campus: 315.443.2224
- Phone emergency line from cell phone providers ATT/Verizon/Nextel: #78

For complete details on emergency procedures, visit: <http://emergencyguide.syr.edu/>.

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 university 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 written 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. The Violation and Sanction Classification Rubric establishes recommended guidelines for the determination of grade penalties by faculty and instructors, while also giving them discretion to select the grade penalty they believe most suitable, including course failure, regardless of violation level. Any established violation in this course may result in course failure regardless of violation level.

For more information and the complete policy, see <http://class.syr.edu/academic-integrity/policy/>.

Use of Student Work: In compliance with the federal Family Educational Rights and Privacy Act, registration in this class is understood as permission for assignments prepared for this class to be used anonymously in the future for educational purposes.

Important Dates:

- Financial Aid/Academic Drop Deadline: XXX
- Last day to withdraw without a grade penalty: XXX
- Final Exam: XXX

Tips for Success: Be proactive about your success in the course.

- Do not procrastinate!
- Attend every class and recitation.
- Ask questions whether it is during class, recitation, office hours, at the math clinic or via email to your instructor.
- Form a study group! Working together will help you and others better understand the course material as you can work through different difficulties and offer each other clarifications on concepts.

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Tentative Weekly Schedule: Please see your instructor for more detailed information on the weekly schedule, assignments, and assessments.

Week	Sections Covered	Week	Sections Covered
Week #1 – Week of XX	10.1, 10.2, 10.3	Week #11 – Week of XX	Exam #2, 13.1, 13.2
Week #2 – Week of XX	10.4, 10.5	Week #12 – Week of XX	13.2, 13.3, 13.4
Week #3 – Week of XX	10.6, 10.7, 10.9	Week #13 – Week of XX	13.5, 13.6, 13.7
Week #4 – Week of XX	11.1, 11.2, 11.3	Week #14 – Week of XX	13.8, 13.9
Week #5 – Week of XX	11.5, 11.6, Exam #1	Week #15 – Week of XX	Review
Week #6 – Week of XX	11.6, 11.4, 11.7		
Week #7 – Week of XX	11.8, 12.1 (brief), 12.2		
Week #8 – Week of XX	12.2, 12.3, 12.4, 12.5		
Week #9 – Week of XX	12.5, 12.6, 12.7		
Week #10 – Week of XX	12.7, 12.8		