Honor Code: For the tests and quizzes in this class you must not give or receive any aid. For the homework and in class practice problems you are encouraged to work with other students, but the work you turn in should be in your own words and should be understood by you.

Classroom format: We meet four times a week,

251.01: MWF 11:00–11:50, KH 305, Tu 12:15–1:30, KH 004
252.02: MWF 12:00–12:50, KH 305, Tu 10:50–12:05, KH 004

In general, most days will start with some time for questions on the homework. Then I’ll present some new material, we’ll discuss it a little bit, and then have you practice it.

Text and Calculator: The textbook is Calculus: early transcendentals, seventh edition, by James Stewart. You can have either the single variable version if you don’t think you are going to take Calc III, or you can have the multivariable version if you think you are going to take Calc III (and you don’t mind carrying around a really big book).

You can optionally get the student solution manual. This provides complete solutions to roughly 1 out of 6 odd problems.

For homework you can use a graphing calculator (such as the TI-84), or a computer package such as Desmos (www.desmos.com), or the Grapher on the Mac (Built in at: Applications/Utilities/Grapher), or Geogebra (downloadable). However, please note two things: (1) You should in almost all problems leave answers in exact, algebraic format as opposed to using a decimal calculation, (2) On the quizzes and tests you will not have a calculator or computer to help you.

Classroom Please do not use your cell-phone (for talking or texting), PDA, iPad or laptop during class without talking to me ahead of time. If I see you using one of these I will stop and stare at you until you put it away.

Grade Breakdown: Your grade will be based on the following percentages for each category of the course.

<table>
<thead>
<tr>
<th>Homework</th>
<th>Quizzes</th>
<th>Midterms</th>
<th>Final exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>15%</td>
<td>15%</td>
<td>20%, 15%, 10% (highest to lowest)</td>
<td>25%</td>
</tr>
</tbody>
</table>

To calculate your grade you take your average in each category, multiply it by the percentage that category is worth, and add these up. If you want to calculate your grade part-way through the semester, there is no perfect way to decide how to weight the components, but the simplest thing to do is to use the percentages given above, and then to divide by the total of the percentages in the available categories. For example, after the first two midterms you might have

<table>
<thead>
<tr>
<th>HW</th>
<th>Quizzes</th>
<th>MT1</th>
<th>MT2</th>
</tr>
</thead>
<tbody>
<tr>
<td>83%</td>
<td>75%</td>
<td>60%</td>
<td>88%</td>
</tr>
</tbody>
</table>

Then you could approximate your grade as shown:

\[
\frac{.15 \times (.83) + .15 \times (.75) + .1 \times (.6) + .2 \times (.88)}{.15 + .15 + .1 + .2} = .783
\]

So what do I do with the total percentage? Here’s how the breakdown works:
A ≥ 93  B+ ≥ 87  C+ ≥ 77  D ≥ 60
A− ≥ 90  B ≥ 83  C ≥ 73  F ≥ 0
B− ≥ 80  C− ≥ 70

Participation: I encourage you to come to class every day, follow along in class, read the material, ask questions, etc. In my experience there is a pretty strong correlation between all of this participation and how high your grade is. I will sometimes call on people, but only in an effort to promote responses; it is never my intention to put you on the spot. I may assign a problem at the end of class that is to be turned in, but these will not be graded, just checked off.

How to get the grade you want: The biggest part of the total grade is from exams. To do well on exams, you really need to practice doing problems; do them until you make no mistakes, and then do one more. Still, most people don’t do quite as well on exams as they would like. In this case you need your other scores to bring your exams up.

Here’s a typical example of some grades:
Typical A student: Exam average 88%, Other scores 96%, total average 92.4
Typical C student: Exam average 70%, Other scores 80%, total average 73.5

Homework: There’s a bunch of points to make about homework.

• Mathematics is very experiential. What this means is that you learn it most by doing, not by listening to me. My purpose is just to give you the basic material that you will work with, to point you at the next topic, and to help keep you from getting stuck.

• There’ll be two kinds of homework problems:
  1. Textbook problems. These will be collected, some of the problems will be graded, and others will be just checked off.
  2. WebWork problems. WebWork is a web-based homework grading system. It has pros and cons, but I believe the pros outway the cons, and I’ll try to minimize the cons.
  3. Your total homework average is an average of your written textbook percentage and your WebWork percentage.

• We’ll have two homework assignments per week, due on Tuesday and Friday. Each of these assignments will have a few WebWork problems and a bunch of problems from the textbook.

• Homework is due at the beginning of class. You can turn it in one class day late for a 10% penalty. After this it will not be accepted.

• I’ll drop the lowest two homework scores. As a result, I will not accept any late homework assignments (except as noted above) unless you notify me ahead of time. Thus, you should count on doing every assignment well and only using the dropped assignments for real emergencies.

• I will take points off for homework that fails any of the following:
  1. If your homework needs more than one sheet, then it needs to be stapled. Not paperclipped, or folded together, or anything else.
  2. The problems need to be (mostly) in order. If one or two problems is out of order, write the problem number in order with the rest of the problems, and then a little note like “see the last page” or something.
  3. Work needs to be legible enough that I can tell what you’re doing, that it’s correct, etc.

Quizzes: We will have 3 quizzes. These are meant to be easier than the midterms, and serve as a chance for me to find out how you’re really doing, and for you to find out what sorts of problems I write and how I grade them. They will be on the following dates (subject to change if we have snow days, etc.):

1. Quiz 1: Monday, September 26
2. Quiz 2: Monday, October 24
3. Quiz 3: TUESDAY, November 29
Tests: We will have three midterms exams and one Final. The Midterms will be on the following dates (subject to change if we have snow days, etc.)

1. Midterm 1: Friday, September 30
2. Midterm 2: Friday, October 28
3. Midterm 3: Friday, December 2

Note Sheets and Calculators: Calculators will NOT be allowed on quizzes or exams.

I will allow you to bring a hand written note card to the exams: one side of a 3″ × 5″ card for each midterm, and both sides for the final. There will be no note cards for the quizzes.

Office Hours: I’ll have regularly scheduled office hours (in my office, KH 301g) during the following times. 

<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
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<tbody>
<tr>
<td>3:00</td>
<td>2:30</td>
<td>2:00</td>
<td>11:00</td>
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During office hours I am guaranteed to be there and to have my time reserved for you (unless I have a dentist appointment or something like that). Everyone should come to my office at least once.

You are also welcome to drop by my office at other times, but only if you do not get offended if I’m busy with other work (like meetings, grading or research).

Disabilities: I will happily accommodate any needs you have based upon a disability that is registered with the office of Disability Support Services (DSS). You need to contact me ahead of time for this accommodation. You can contact DSS at 410-617-2062, or mwiedefeld “at” loyola.edu.

Outline We’ll cover chapters 6, 7, 8, 10, 11, occasionally skipping a section. This includes standard material about applications of integrals, techniques of integration, parametric equations, polar coordinates, infinite series, and Taylor series. We have roughly 40 lectures to cover the material, so on average, this is about one section per lecture.

Goals and Aims
The University has defined the following aims (among others) as goals for all undergraduate students.

1. Intellectual Excellence
   (a) appreciation of and passion for intellectual endeavor and the life of the mind
   (b) appreciation of and grounding in the liberal arts and sciences
   (c) excellence in a discipline, including understanding of the relationship between one’s discipline and other disciplines; understanding the interconnectedness of all knowledge
   (d) habits of intellectual curiosity, honesty, humility, and persistence

2. Critical Understanding: Thinking, Reading, and Analyzing
   (a) the ability to evaluate a claim based on documentation, plausibility, and logical coherence
   (b) the ability to analyze and solve problems using appropriate tools
   (e) the ability to use mathematical concepts and procedures competently, and to evaluate claims made in numeric terms
   (g) the ability to use information technology in research and problem solving, with an appreciation of its advantages and limitations

3. Eloquencia Perfecta
   (a) the ability to use speech and writing effectively, logically, gracefully, persuasively, and responsibly

8. Diversity
   (a) recognition of the inherent value and dignity of each person, and therefore an awareness of, sensitivity toward, and respect for the differences of race, gender, ethnicity, national origin, culture, sexual orientation, religion, age, and disabilities
All of the departments of natural and mathematical sciences have defined the following aims as goals for students taking our classes.

1. Students develop their innate curiosity about the natural world and take a life-long interest in science news and advancements.

2. Students explore one or more of the central ideas that form the foundation for modern science.

3. Students understand the process of science – its methodology, how questions are framed, how data are acquired, how arguments are constructed and conclusions reached. In this context, students should learn what science is not and have the ability to recognize and reject pseudoscientific claims. In addition, students should also have the ability to recognize the limits of science. Students also should understand the relationship between science and technology and how the results of scientific discovery can be applied to the needs of society. Students should learn the linkage between experimental methodology and scientific content.

4. Students learn to reason mathematically, and to think critically and analytically through statistical or mathematical methods. Because of the close interrelationship between science and math, in each science course in the core, students will achieve a better understanding of the power of quantitative tools used in the particular discipline.

5. Students learn how recent technological advances have facilitated and accelerated scientific inquiry. They gain a realistic understanding of the potential and limitations of computation.

The Mathematical Sciences Department has determined the following goals for students taking MA 252, Calculus II.

The student will be able to

- Evaluate definite and indefinite integrals using various algebraic techniques.
- Demonstrate an understanding of the integral through various applications.
- Determine the convergence or divergence of sequences and series, including absolute and conditional convergence and radius of convergence.
- Define and use Taylor/Maclaurin series and polynomials.
- Use relations defined by parametric equations and polar coordinates for applications in Calculus.