### Math 134: Calculus 2 with Fundamentals Spring 2019

Course Web Page. http://mathcs.holycross.edu/~spl/134/

#### **Course Instructor**

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Course Teaching Assistant Bridget Harris Email: beharr19@g.holycross.edu

Office Hours: Monday 7-8, Wednesday 7-8

Class Meetings. MTWRF 10:00-10:50, Swords 321

**Required Text.** Calculus, Early Transcendentals, by Jon Rogawski and Colin Adams, 3rd edition. We will cover material from Chapters 5 through 10.

**Course Description.** This course will continue where Calculus 1, left off. Most of the course will involve the study of integrals and their applications. After a brief review of Calculus 1 topics, we will study definite integrals, which arise naturally when trying to calculate areas of curved regions. We will then study the Fundamental Theorem of Calculus, which relates definite integrals to antiderivatives. A good deal of time will then be devoted to studying methods of finding antiderivatives, and methods of approximating definite integrals. We will complete our study of integrals by consider further applications of definite integrals. The next section of the course will involve the study of sequences (infinite lists) and series (infinite sums), and their applications. The course will conclude with a study of differential equations. We will look at how differential equations are used to model a variety of different natural phenomena, and how our knowledge of integration helps us to solve differential equations.

**Homework.** There will be weekly homework assignments. Each homework assignment will have an online component which will be posted on WebAssign (www.webassign.net) and a written component which will be posted on the course web page. The WebAssign Class Key for our section is holycross 5862 6354.

**Quizzes.** There will be a short quiz every Friday. The quiz will be on material from that week's homework assignment.

**Exams.** There will be three midterm exams and a final exam. Please let me know as soon as possible if you have a conflict with any of the exam times.

- Exam 1: Tuesday, February 19, 5:30pm to 7:00pm, Swords 328
- Exam 2: Tuesday, March 19, 5:30pm to 7:00pm, Swords 328
- Exam 3: Thursday, April 25, 5:30pm to 7:00pm, Swords 328
- Final Exam: Friday, May 10, 3:00pm to 5:30pm, Swords 321

Grades. Grades will be calculated using the following system.

Midterm Exams	55%	(lowest score $15\%$ , other two scores $20\%$ each)
Final Exam	25%	
Homework	10%	(WebAssign 5%, written $5\%$ )
Quizzes	10%	

### How to succeed in this course.

- Read the book. All the course material we will be covering is in the textbook. Before each class meeting, you should read through the section in the text that is covered in that class period. (See the daily schedule.) My lectures are intended to supplement what is in the text, not be a replacement for it. I will often go over examples that are different from those in the text, so that you can use the ones in the text as additional resources. There is not enough class time to go over every example and concept in the text, so there will be times when you will be expected to learn something that is covered in the book but not in class. I will of course be available outside of class to answer questions about any topic.
- Come to class, and be an active participant. While everything you need to know is in the textbook, it is essential to come to class. My goal during class is for everyone to gain an understanding of that day's topics. I will often stop to ask questions to make sure everyone is still with me. Please don't be afraid to answer, even if you're pretty sure your answer is wrong! I promise I will not judge you. I also strongly encourage you to ask questions during class. As the saying goes "there are no dumb questions, only dumb answers." I want our class environment to be one where everyone feels comfortable discussing math (or other topics) with each other.
- **Practice, practice, practice!** I often tell my students that learning mathematics is similar to learning to play a sport. Just as in sports where skills are honed by regular practice, proficiency in mathematics requires regular practice. The best way to become proficient at solving a certain type of problem is by practicing several practice problems of that type. In addition to the homework that is assigned, you should work through additional practice problems each day. At the end of each section of the text there are a number of exercises. The answers to most of the odd-numbered exercises are in the back of the book. Select a few to do each day, and check your answers. If you don't get the correct answer, try again. If you keep getting the wrong answer, come see me or Bridget during office hours.

# Sources of Help.

- My office hours and Bridget's office hours listed above are the times that are set aside specifically for meeting with students. You do not need an appointment to see me or Bridget during those times. I strongly encourage you to stop by whenever you have a question about the course material.
- The Calculus Workshop provides drop-in peer tutoring on a first-come, first-served basis. It is open Sunday through Thursday, 7:00-9:00pm in Swords 321.
- For students requiring support beyond office hours and the Calculus Workshop, the Office of Academic Services and Learning Resources runs a STEM+E Workshop. See the ASLR website for more details.

# **Disability Accommodations.**

- Any student who feels the need for accommodation based on the impact of a disability should contact the Office of Disability Services to discuss support services available. Once the office receives documentation supporting the request for accommodation, the student would meet privately with Disability Services to discuss reasonable and appropriate accommodations. The office can be reached by calling 508-793-3693 or by visiting Hogan Campus Center, room 215A.
- If you are already registered with Disability Services, please be sure to get your accommodation letters and deliver them to your instructors in a timely fashion. Instructors need 4-5 days advance notice to be able to facilitate the process of receiving testing accommodations.