

**College of the Holy Cross, Fall Semester, 2020**  
**Math 136, Section 02** (Professor Hwang)  
Course Information Sheet

### Contact Information

Office Hours: M 1-2, R 10:30-11:30, R 1:30-2:30, or by appointment  
email: [ahwang -at- holycross -dot- edu](mailto:ahwang-at-holycross-dot-edu)  
web: <http://mathcs.holycross.edu/~ahwang/teach/136/index.html>

**Note:** Course information and updates are distributed by **email**.

**How to Succeed** True learning always happens through your own efforts as a student. My role is largely as a guide, both pointing out the highlights of the course material, and helping you learn to use the material in class and office hours.

Following the schedule in Moodle, I will post a *frozen lecture* for most meetings. This is a PDF file paced like a lecture. It's essential to read this before class, just as you might watch a video for a flipped class. Before class, I also recommend reading, or at least skimming, the corresponding section of the textbook.

I'll also suggest odd-numbered questions from the book for practice (answers are in the back), which you're welcome to ask about in class or office hours. Again, I'm here to help you learn, both by pacing the material and explaining when things don't seem to be working out.

Your primary aim should be to **learn the course material**, and *as a result* to do well on the tests. Success requires reading, working practice problems, figuring out what you don't yet understand, and asking for help. The same is true of learning—and of life—in general!

### Grading

The course grade has four components: attendance and participation, group worksheets, midterm tests (3), and the final exam.

**Attendance and Participation** Class will be held online, with each of you assigned to a small group with rotating membership. Each day you're present earns an attendance point, and each day your group is actively engaged you each earn an attendance point. Attendance and participation count for 20% of your course grade.

**Worksheets** There will be about five collaborative assignments during the term, worth 20% of your course grade in total. You'll work on these in your group, and turn in one write-up per group. These assignments are similar to the daily activities, but may involve more conceptual or open-ended questions, and will in part be graded on the organization and clarity of the explanation.

**Midterms and Final Exam** There are three midterm tests, scheduled for Friday, September 25; Monday, October 26; and Friday, November 20. In total, the midterms count for 40% of your grade: The best two scores count for 15% each, the lowest is worth 10%. Midterms will be held during class time. There will be a comprehensive final exam during the exam period, TBA, worth 20% of the course grade.

### Academic Integrity

Like all Holy Cross faculty, I strongly support the College's Policy on Academic Integrity, which is detailed in the catalog. Again, the point of the course is to have fun learning the material and developing your mathematical-thinking superpower. Intellectual honesty is crucial to our shared enterprise.

## Meeting Schedule

The following is the day-by-day schedule for the term. Any substantial variations from this schedule will be announced by email.

W	Sep 2		Review
R	Sep 3	Section 5.1	Approximating and Computing Area
F	Sep 4	Section 5.2	The Definite Integral
M	Sep 7	Section 5.3	The Indefinite Integral
W	Sep 9	Section 5.4	The Fundamental Theorem I
R	Sep 10	Section 5.5	The Fundamental Theorem II
F, M	Sep 11, 14	Section 5.7	The Method of Substitution
W	Sep 16	Section 5.7	Fun with Large Numbers
R	Sep 17	Section 6.1	Area Between Two Graphs
F, M	Sep 18, 21	Section 6.2	Density, Average Value
W	Sep 23	Section 6.3	Volumes of Revolution
R	Sep 24	Section 6.4	The Method of Cylindrical Shells
F	Sep 25		<b>Midterm 1</b>
M	Sep 28	Section 6.4	Some Surprising Volumes
R, F	Oct 1, 2	Section 7.1	Integration by Parts
M	Oct 5	Section 7.1	Reduction Formulas
W	Oct 7	Section 7.1	Factorials
R, F	Oct 8, 9	Section 7.3	Trig Substitution
M, W	Oct 12, 14	Section 7.7	Improper Integrals
R	Oct 15	Section 7.8	Probability and Integration
F	Oct 16	Section 7.8	Normal Distributions
M	Oct 19	Section 7.9	Numerical Integration
W, R	Oct 21, 22	Section 8.1	Arc Length
F	Oct 23	Section 8.3	Center of Mass
M	Oct 26		<b>Midterm 2</b>
W, R	Oct 28, 29	Section 9.1	Solving Differential Equations
F, M	Oct 30, 31	Section 9.2	Growth and Decay Equations
W	Nov 4	Section 9.3	Graphical and Numerical Methods
R	Nov 5	Section 9.4	The Logistic Equation
F	Nov 6	Section 10.1	Sequences
M	Nov 9	Section 10.2	Geometric Series
W	Nov 11	Section 10.3	Convergence of Series with Positive Terms
R	Nov 12	Section 10.4	Absolute and Conditional Convergence
F	Nov 13	Section 10.5	The Ratio Test
M	Nov 16	Section 10.6	Power Series
W	Nov 18	Section 10.6	Operations on Power Series
R	Nov 19		Review
F	Nov 20		<b>Midterm 3</b>
M	Nov 30	Section 10.7	Cosine and Sine
W	Dec 2	Section 10.6	Exponential Series
R	Dec 3	Section 10.7	Euler's Formula
F	Dec 4	Section 10.7	ODEs revisited
M	Dec 7		Review