

Math 156: Calculus 2
Fall 2026

Method of Instruction: Credit Hours: 4

This class will meet on campus MWF for 70 minutes each day. Additionally, you should plan to spend a minimum of 8 hours per week outside of class working on Math 156 material (homework, going over class materials, studying, office hours, etc.).

Prerequisites:

Completion of Math 155 with a C- or better or an appropriate AP test score is a prerequisite for this course.

Course Coordinator: Dr. Vicki Sealey vicki.sealey@mail.wvu.edu

Section	Instructor	Start Time	End Time	Location
401	Dr. Vicki Sealey	9:20 AM	10:30 AM	127 NRC-E
402	Dr. Vicki Sealey	10:40 AM	11:50 AM	127 NRC-E
001	Dr. Iwona Wojciechowska	8:30 AM	9:40 AM	151 Brooks
002	Dr. Adrian Tudorascu	9:50 AM	11:00 AM	112 Armstrong
003	Dr. Casian Pantea	11:10 AM	12:20 PM	112 Armstrong
004	Dr. Casian Pantea	12:30 PM	1:40 PM	112 Armstrong
005	Dr. Kevin Milans	1:50 PM	3:00 PM	151 Brooks
006	Dr. Adrian Tudorascu	3:10 PM	4:20 PM	151 Brooks

Your section number and primary instructor for the course are listed on your course schedule. Your schedule also lists 7:00-9:00 PM on four Thursday evenings as a required class time. This time will *only* be used on exam dates. Details are provided later in this syllabus.

Course Calendar: Many due dates and links for the course can be found on the [Course Calendar](#). You can also access this via e-campus. Note that instructors assign different quizzes for each section, and quiz dates are *not* listed on this course calendar.

Communication: If there are any unforeseen situations that occur during the semester (missed exam, technology issues, etc.), you should first reach out to your instructor. If something else arises and you would like to speak with someone other than your instructor, you may email the Course Coordinator at vicki.sealey@mail.wvu.edu, the Associate Director of the Institute of Mathematical Learning, Dr. Renee LaRue, at renee.larue@mail.wvu.edu, or Dr. Charis Tsikkou, the Director of the School of Mathematical and Data Sciences, at charis.tsikkou@mail.wvu.edu.

Office Hours: Office hours for your primary instructor will be posted on e-campus within one week of the start of the semester. You may attend your instructor's office hours at any time without an appointment. If you are unavailable to attend your instructor's office hours, you may send him or her an email to request an appointment at a different time. You are also encouraged to visit the Calculus Learning Center without an appointment.

Calculus Learning Center: The CLC in 301 Armstrong Hall provides free tutoring and homework help for this course. Hours will be posted by the end of the second week of class, and a link will be added to the Course Calendar.

About Math 156:

This course will cover techniques of integration, applications of the definite integral, polar coordinates, indeterminate forms, and infinite series. You will be expected to spend several hours outside of class each week doing mathematics. You will be expected to read and understand the material in the textbook, and you will be required to demonstrate your understanding in several ways throughout this course. As such, *it is imperative that you attend class whenever possible and schedule plenty of time outside of class to work on course material.*

Inclement Weather/Class Cancellations:

If WVU or your instructor must cancel class for inclement weather or any other reason, it is likely that there will be an online assignment for you to complete prior to the next class session. Be sure to check your MIX email for additional details.

Math 156 Learning Outcomes:

Upon successful completion of this course, students will be able to:

1. Apply techniques of integration to various integral problems.
2. Recognize and calculate the limit of a sequence.
3. Recognize series and apply appropriate convergence tests to solve series problems.
4. Represent functions as power series.
5. Move fluently between Cartesian and Polar coordinate systems and parametric equations.
6. Use integrals to solve application problems involving (but not limited to) area, volume, average value, arc length.

Required Course Materials:

1. **Cengage Unlimited:** This includes access to the textbook (via WebAssign) and the online homework system.
 - a. **Textbook (included with Cengage Unlimited):** *Calculus: Early Transcendentals, 8th Edition*, by James Stewart. Access to the e-book is available through WebAssign and Cengage Unlimited. Hard copies are not required but are available for purchase. This is the same textbook that is used in Math 155 and Math 251 (Calculus 1 and 3).
 - b. **WebAssign (included with Cengage Unlimited):** This is the online homework system.
 - c. **How to log in:** You can access the text and HW via WebAssign by logging in to the e-campus course for Math 156 and then clicking on the WebAssign link. You will have free access for the first two weeks of class, but fees must be paid by the end of the second week of class.
2. **Calculator:** Calculators will not be allowed on exams, but may be required for homework problems. Free online calculators are recommended, such as the [Desmos scientific calculator](#) or the [Desmos online graphing calculator](#).
3. **Other:** You will need to be able to scan or take pictures of your written work and electronically submit these documents to be graded. Most students use their cell phone for this. If you have questions about how to do this, your instructor can help you.

Grading: Throughout this course, you will be graded not only on your ability to obtain the correct answer to a problem, but also on your ability to use the problem-solving methods taught in this course, your ability to justify your work, and your use of mathematically correct notation. **A correct answer without the supporting work will be given no credit.** This applies to exams, homework, quizzes, and in-class activities. When in doubt, show all of the steps!!

Crowdmark: Much of the grading in this course will be done using Crowdmark, an online grading platform. Assessments graded using Crowdmark will be returned to you electronically. If you have any questions or concerns about electronic grading, including concerns that your handwritten work was not scanned correctly, **you will have one week after the assessment is returned to contact your instructor to dispute your grade.** One week after the assessment is returned, the paper copies will be shredded, and you will have no further opportunities to dispute any grading/scanning.

Academic Integrity: All students should be familiar with WVU's [Academic Standards Policy](#). Should you have any questions about any activity that may be interpreted as an attempt at academic dishonesty, please see your instructor before the assignment is due to discuss the matter.

Unless otherwise stated, you are welcome to work with other students on your assignments, but you must submit **your own written work** which is expected to be a representation of **your understanding** (not of your classmate's understanding). On any assignment where we have a question related to academic integrity, you may be asked to meet with your instructor and/or the course coordinator for a knowledge check. We will then proceed according to policies set forth by [WVU's Office of Academic Integrity](#).

Grade Distribution: Your course grade will be broken into the following components and will be computed using a weighted average. Grades will not be scaled or curved.

Midterm Grade: At a minimum, your midterm grade will include Test 1, Integral Assessment #1, and approximately one third of the points from quizzes and WebAssign. This will comprise approximately 25% of your final course grade.

Final Course Grade		Weighting of Final Course Grade	
A	90.00 – 100	Comprehensive Final Exam	20%
B	80.00 – 89.99	Exams (13% each)*	52%
C	70.00 – 79.99	WebAssign Online Homework	8%
D	60.00 – 69.99	Quizzes	10%
F	0 – 59.99	Integral Assessment #1	5%
		Integral Assessment #2	5%

Exams: Four 90-minute written exams will be given during the semester on Thursday evenings. Room assignments for these evening exams will be posted in e-campus prior to the first exam. Additionally, you will have a 2-hour written comprehensive final exam that covers the material from the entire semester. **If it helps your grade, your lowest regular exam score will be replaced with your grade on the final exam when computing your final course grade.*

Exam 1	Thursday, September 10	7:00-9:00 PM
Exam 2	Thursday, October 1	7:00-9:00 PM
Exam 3	Thursday, October 22	7:00-9:00 PM
Exam 4	Thursday, November 12	7:00-9:00 PM
Final Exam	Monday, December 7	8:00-10:00 PM

WebAssign Homework: This is the online homework and will be common across all sections of Math 156. On a typical assignment, you will have 50 attempts at each problem, so it is expected that all students will earn a 100% for the WebAssign grade. Of course, you are expected to make sure that you understand the underlying concept behind each problem. Any problem completed at least one day prior to the due date will be given 10% extra credit. (See the next page regarding late work.)

Quizzes: Quizzes will be given often throughout the semester and will not be common across sections. These are likely to include traditional on-campus quizzes, take-home quizzes, and pop quizzes. Your instructor will inform you of his or her policies related to quizzes and these details will be posted on e-campus by the end of week 2 of classes. Unless otherwise specified, you are not permitted to work with other students on quizzes.

Integral Assessments: Integral Assessment #1 will cover Section 5.5 (u-substitution) from your textbook, and Integral Assessment #2 will cover Section 7.1 (Integration by Parts). These will be proctored assessments in WebAssign that you will take in the [WVU Testing Center](#) (Room B10 of Hodges Hall). The goal of these assessments is to make sure you have mastered two of the core techniques of integration covered in this class. If you earn at least an 80% on the assessment, you will receive full credit for this assessment, and will earn a 0 otherwise. However, you will be given the opportunity to take the assessment multiple times.

Dates for Integral Assessments

Integral Assessment #1 (u-substitution)	8/31-9/3
Integral Assessment #2 (Integration by Parts)	9/23-9/25, 9/28
Redos and Makeups	11/2, 11/4-11/6

More details about the integral assessments will be provided in e-campus when we cover this material during class. You are encouraged to sign up for your first attempt at each assessment ASAP to secure your desired time slot. Students with accommodations approved by the Office of Student Accommodations may choose to test in the OSA Testing Center. E-mail your instructor and the Course Coordinator so that we can make the necessary arrangements.

Type of Assignment	Late Policy/Makeup Policy	What to do if you miss this
Final Exam	Makeups only in <i>extreme</i> circumstances, with documentation	Email your instructor and the coordinator ASAP.
Regular Exam	Students with valid university sanctioned absences will be given an opportunity to make up an exam <i>if</i> documentation is provided at least one week prior to the exam date.	Provide your instructor with the appropriate documentation ASAP. Your instructor will work with you to arrange a makeup exam, which will most likely occur before the regular exam date.
	Other makeup exams will be given only in <i>extreme</i> circumstances, with documentation. Makeup exam dates will be arranged with your instructor and the course coordinator.. However, all students are able to make use of our exam replacement policy (described earlier).	Email your instructor and the coordinator ASAP.
WebAssign	Automatic extensions can be requested for any assignment that you don't finish on time. You will have an additional 3 days from the original due date to complete work for 70% credit. (No penalty will be applied to problems completed on time.)	Log in to WebAssign. Select the assignment (from “Past Assignments”), and click on the button to get an automatic extension. Note: If you have opened the answer key, you will not be able to get an extension. (You may need to refresh your browser to see the re-opened assignment.)
	In rare circumstances, you may need more than 3 extra days to complete an assignment. If this is the case, your instructor will decide if an additional extension is warranted, or if the late penalty can be waived.	Email your instructor.
Quizzes	The policy for makeup quizzes will be determined by your instructor. There will be some opportunities to make up a small number of on-campus quizzes <i>or</i> a small number of on-campus quiz grades will be dropped. Students with valid university sanctioned absences will be given an opportunity to make up quizzes <i>if</i> documentation is provided at least one week prior to the quiz.	Email your instructor ASAP if you have a scheduled and valid university sanctioned absence.

We will cover the following sections in our calculus textbook, but not necessarily in the order shown below.
Text: Calculus, Early Transcendentals 8th edition, by James Stewart

Chapters 1-4 and Sections 5.1-5.4 are prerequisite material. If you need help reviewing any of this content, go to the CLC and/or schedule an appointment with your instructor.

CHAPTER 5 - INTEGRALS

5.5 The Substitution Rule

CHAPTER 6 - APPLICATIONS OF INTEGRATION

- 6.1 Areas between Curves
- 6.2 Volumes
- 6.3 Volumes by Cylindrical Shells
- 6.4 Work (*not covered every semester*)
- 6.5 Average Value of a Function

CHAPTER 7 - TECHNIQUES OF INTEGRATION

- 7.1 Integration by Parts
- 7.2 Trigonometric Integrals
- 7.3 Trigonometric Substitution
- 7.4 Integration of Rational Functions by Partial Fractions
- 7.5 Strategy for Integration
- 7.8 Improper Integrals

CHAPTER 8 - FURTHER APPLICATIONS OF INTEGRATION

- 8.1 Arc Length
- 8.3 Applications to Physics and Engineering (*not covered every semester*)

CHAPTER 10 - PARAMETRIC EQUATIONS AND POLAR COORDINATES

- 10.1 Curves Defined by Parametric Equations
- 10.2 Calculus with Parametric Curves
- 10.3 Polar Coordinates
- 10.4 Areas and Lengths in Polar Coordinates

CHAPTER 11 - INFINITE SEQUENCES AND SERIES

- 11.1 Sequences
- 11.2 Series
- 11.3 The Integral Test
- 11.4 The Comparison Tests
- 11.5 Alternating Series
- 11.6 Absolute Convergence and the Ratio and Root Tests
- 11.7 Strategy for Testing Series
- 11.8 Power Series
- 11.9 Representations of Functions as Power Series
- 11.10 Taylor and Maclaurin Series
- 11.11 Applications of Taylor Polynomials