

# Syllabus: MA 161 (Flipped)

## Plane Analytic Geometry and Calculus I, Fall 2024

### Course Description

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This section of Calculus I is designed in a flipped style. Instead of 150 minutes per week with the lecturer, you will only have 75 minutes. The class will meet on Tuesdays for a 75-minute session devoted to group work, active learning, and problem solving. There will also be recitation sections twice a week. An important difference from traditional calculus is that these 75-minute sessions will not “cover” the material; instead, you will watch pre-recorded lecture videos posted on Brightspace. The purpose of the 75-minute active learning sessions is to help students understand difficult concepts, engage in critical thinking, and learn together with your TA and Professor Sunkula.

### Course Objectives

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1. Solve exponential, logarithmic, and trigonometric equations.
2. Compute limits and apply limit laws.
3. Apply rules of differentiation to compute derivatives of elementary functions.
4. Sketch graphs of functions using differentiation techniques.
5. Find maxima and minima of functions and solve optimization problems.
6. Compute integrals of some elementary functions.
7. Apply the Fundamental Theorem of Calculus.
8. Compute areas of certain planar regions.

### Meeting Times & Attendance Policy

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Instructor	Session Type	Day	Time	Location
Dr. Mahesh Sunkula	Active Learning	Tuesday	7:30 am - 8:45 am	WALC 2087
TBD	Recitation	Wednesday, Friday	8:30 am - 9:20 am	Phys 111
TBD	Recitation	Wednesday, Friday	9:30 am - 10:20 am	Phys 111
TBD	Recitation	Wednesday, Friday	10:30 am - 11:20 am	SCHM 316
TBD	Recitation	Wednesday, Friday	10:30 am - 11:20 am	SCHM 316

Attendance is mandatory for this class as it is structured around active learning. Excuses must be approved by Professor Sunkula. Recitations will be held on Wednesdays and Fridays, run by Teaching Assistants. You are also expected to attend every recitation session as there will be a quiz each session.

## Instructor's Contact Information

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Instructor's contact information and office hours are listed below. Note that office hours are subject to change and will be announced on Brightspace.

Instructor	E-mail	Office Location	Office Hours
Dr. Mahesh Sunkula	<a href="mailto:msunkula@purdue.edu">msunkula@purdue.edu</a>	MATH 842	TBA

## Communication

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Due to the large number of students in this class, for most questions (in particular for questions about deadlines, grading disputes, or technical issues) it is recommended that you email your TA first. If the TA cannot answer your question, they will forward it to the instructor.

## Course Webpages & Calendar

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Course information and resources such as lecture Boilercast recordings, lecture notes, announcements, important links, and MyLabMath should be accessed through your Brightspace course page at <http://purdue.brightspace.com>. Additionally, general course information and a detailed course calendar can be found on the following webpages:

<https://www.math.purdue.edu/MA16100I>

<https://sites.google.com/view/msunkula/teaching/ma161/f24/calendar-flipped>.

## Required Materials

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Students are required to have an access code for the *Pearson MyLabMath* platform. A physical textbook is NOT required. A digital version of the textbook is included in MyLabMath. For reference, the textbook is *Calculus, Early Transcendentals, (Third Edition) by Briggs, Cochran, Gillett, Schulz*. There is a two week grace period before you must purchase an access code. If you have taken more than one semester of calculus, the full access code (multi-semester) is good for all the Calculus courses (MA 16100, MA 16200, MA 16500, MA 16600, and MA 26100) since they use the same textbook.

## Grades

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Course grades will be determined from your overall score computed as follows:

Participation & In-class activities	13%
Homework	13%
Quizzes	13%
Midterm Exam 1	13%
Midterm Exam 2	13%
Midterm Exam 3	13%
Final Exam	22%

The maximum percentages to get each grade are:

A+	97%
A	93%
A-	90%
B+	87%
B	83%
B-	80%
C+	77%
C	73%
C-	70%
D+	67%
D	60%

For each of these grades, it's possible that at the end of the semester a somewhat lower percentage will be enough to get that grade. (In other words, the lowest percentage to get, for example, an A could be lower but will not be higher than 93%.)

## Assessments

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### Participation & In-class activities

You have the opportunity to earn up to 130 points out of a possible 160 points throughout the semester. Each week, you can earn 10 points by attending the in-person flipped session on Tuesday and actively participating in group activities and problem-solving sessions. In addition, you can earn some points by filling out surveys sent out during the semester. It is important to note that this component of your grade is significant, equivalent to one midterm grade. Your active involvement and consistent attendance are essential for your success in this course

### Homework

There are a total of 36 online assignments (numbered 1 - 36) using *MyLabMath*. *Pearson MyLabMath* is accessed through the [Brightspace](#) course page. Due dates and times are listed in the MyLab Math system and on the course calendar. Generally, homework from the Friday and Monday lectures are due Tuesday at 11:59pm and homework from the Wednesday lecture is due Thursday at 11:59pm.

Students have unlimited attempts on each question. However, after three incorrect tries, the coefficients in the question will change. Note that incorrect submissions do not result in a loss of points. Contact your TA if you have unresolved concerns over how a homework problem was scored.

There are many questionable resources (excessive calculator use, online solvers, answer-sharing websites, etc.) that you may be tempted to utilize when completing the homework; availing yourself of these shortcuts means you are not only missing the opportunity to internalize the problem-solving concepts, but also disregarding chances to self-assess your understanding and computational fluency. Poor homework habits will show up in poor quiz and exam results.

## Quizzes

There will be a quiz during recitation every Tuesday & Thursday (except the first and the last weeks of the semester or when an evening exam falls on the same day as a recitation). Quizzes typically cover content related to homework that was due the previous recitation. Please see the webpage <https://sites.google.com/view/msunkula/teaching/ma161/f24/calendar-flipped> for quiz schedule.

## Exams

There will be three midterm exams and a final. Dates, times & locations of midterm exams are listed below:

Exam	Date	Time	Location
Exam 1	September 19	8:00pm - 9:00pm	TBD
Exam 2	October 10	8:00pm - 9:00pm	TBD
Exam 3	November 12	8:00pm - 9:00pm	TBD

Details about the final exam will be announced later in the semester by the registrar's office.

All exams are course-wide, multiple-choice and machine-graded. There is no partial credit on the exams, only what is marked on the scantron will be graded. You are not permitted to use calculators, books, notes, electronic devices, websites, or to consult a peer or any other person on the exams. Exam scores are final and there are no exam re-takes.

## Policy on Missed Homework, Quiz & Exam

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Timely submission of homework is required; late submissions will not be accepted. No makeup quizzes will be provided. To accommodate the challenges of a course of this scale, at the conclusion of the semester, the three lowest homework scores and two lowest quiz scores will be omitted. This accounts for unforeseen circumstances such as appointments, oversights, accidents, illnesses, or emergencies that may cause students to miss class or a homework deadline, aligning with the universal "drop" policy.

Students compelled to miss class due to approved absences by the Office of the Dean of Students should promptly reach out to the office of the Dean of Students, the lecturer, and the TA. Quizzes missed due to approved absences may be exempted by the TA from the overall total. Please visit the webpage: <https://www.purdue.edu/advocacy/students/absences.html> to see the list of approved absences.

Negotiations for alternate exams due to exceptional circumstances should be conducted with the lecturer, with in 24 hours of the exam start time. Students arriving more than 20 minutes late to an exam will not be permitted to take it. They must immediately contact the lecturer to seek permission for a makeup exam, and grade penalties may apply.

## Important Dates

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Last day to drop the course without it being recorded: **Friday, August 30**

Last day to drop the course and receive a W: **Tuesday, November 19**

Please see the [Purdue University Academic Calendar](#) for other important dates.

## Transfers

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If you transfer recitation sections of MA 16100, it is your responsibility to notify the TA of the new section so that he or she can ensure that your MyLabMath scores are transferred.

## Calculators

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Calculators are not allowed on exams or quizzes. It is important that you learn to do simple manipulations by hand.

## TA Office Hours

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You may attend any of the [scheduled hours](#) in the Math Resource Room. The purpose of the MRR is to foster student learning. The MRR is a space for students to work collaboratively and for instructors to answer questions over course material and go through similar homework problems. The instructors will not do your exact homework problems. Instead, they will go through a similar problem with you to give you another example to work through. This is more beneficial for you, since it better prepares you for quizzes and exams.

## Supplemental Instruction:

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There are Supplemental Instruction (SI) study sessions available for this course. These study groups are open to anyone enrolled in this course who would like to stay current with the course material and understand the material better. Attendance at these sessions is voluntary, but extremely beneficial for those who attend weekly. Times and locations for the study session can be found here: [www.purdue.edu/si](http://www.purdue.edu/si). Students who attend these interactive sessions will find themselves working with peers as they compare notes, demonstrate and discuss pertinent problems and concepts, and share study and test-taking strategies. Students are asked to arrive with their student ID card, lecture notes and questions to these informal, peer-led study sessions.

## Tutoring

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“[Women in Science and Engineering Tutoring Program](#)” offers free evening tutoring. “[COSINE](#)” offers free evening tutoring for Math, Biology, and Chemistry in Shreve Hall’s University Residences Support Center. Here is a list of math tutors for hire: [www.math.purdue.edu/academic/tutor/](http://www.math.purdue.edu/academic/tutor/).

## Academic Adjustments for Students with Disabilities

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Purdue University strives to make learning experiences accessible to all participants. If you anticipate or experience physical or academic barriers based on disability, you are welcome to let your instructors know so that we can discuss options. You are also encouraged to contact the Disability Resource Center at: [drc@purdue.edu](mailto:drc@purdue.edu) or by phone: 765-494-1247. If you have been certified by the Disability Resource Center (DRC) as eligible for accommodations, you should contact your recitation TA to discuss your accommodations as soon as possible. You should send your Course Accessibility Letter to your recitation TA and also to the professor; here are instructions for how to do this [www.purdue.edu/drc/students/course-accessibility-letter.php](http://www.purdue.edu/drc/students/course-accessibility-letter.php)

## CAPS Information

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Purdue University is committed to advancing the mental health and well-being of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of support, services are available. For help, such individuals should contact Counseling and Psychological Services (CAPS) at (765)494-6995 and [www.purdue.edu/caps](http://www.purdue.edu/caps) during and after hours, on weekends and holidays, or by going to the CAPS office, room 224 of the Purdue University Student Health Center (PUSH) during business hours.

## Commercial Note Taking in Classes

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Notes taken in class are generally considered to be “derivative works” of the instructor’s presentations and materials, and they are thus subject to the instructor’s copyright in such presentations and materials. No individual is permitted to sell or otherwise barter notes, either to other students or to any commercial concern, for a course without the express written permission of the course instructor. See University Senate Document 03-9, April 19, 2004.

## Academic Dishonesty

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Academic integrity is one of the highest values that Purdue University holds. Individuals are encouraged to alert university officials to potential breaches of this value by either emailing [integrity@purdue.edu](mailto:integrity@purdue.edu) or by calling 765-494-8778. While information may be submitted anonymously, the more information that is submitted provides the greatest opportunity for the university to investigate the concern.

Purdue prohibits “dishonesty in connection with any University activity. Cheating, plagiarism, or knowingly furnishing false information to the University are examples of dishonesty.” [Part 5, Section III-B-2-a, University Regulations] Furthermore, the University Senate has stipulated that “the commitment of acts of cheating, lying, and deceit in any of their diverse forms (such as the use of substitutes for taking examinations, the use of illegal cribs, plagiarism, and copying during examinations) is dishonest and must not be tolerated. Moreover, knowingly to aid and abet, directly or indirectly, other parties in committing dishonest acts is in itself dishonest.” [University Senate Document 72-18, December 15, 1972]. For more details about the Purdue Policy on academic dishonesty see: <http://www.purdue.edu/odos/academic-integrity/>

## **Course and Instructor Evaluations**

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During the last two weeks of the semester, you will be provided an opportunity to evaluate this course and your instructor(s) through online course evaluations. On Monday of the 14th week of classes, you will receive an official email from evaluation administrators with a link to the online site. You will have two weeks to complete this evaluation. Your participation in this evaluation is an integral part of this course. Your feedback is vital to improving education at Purdue University. We strongly urge you to participate in the evaluation system.

## **Other Issues**

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In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances beyond the instructor's control. To get information about changes in this course please check Brightspace regularly.