

Syllabus: MA 16100
Plane Analytic Geometry and Calculus I, Fall 2023

As a Boilermaker pursuing academic excellence, I pledge to be honest and true in all that I do. Accountable together - we are Purdue.

Instructor: Dr. Mahesh Sunkula, MATH 842, msunkula@purdue.edu, 765-494-3621
Office Hours: 8:45 AM - 10:15 AM Monday, Wednesday, Friday (in MATH 842)
or by Appointment

Course Webpage: Course information and resources, lecture Boilercast recordings, lecture notes, announcements, important links, and MyLabMath should be accessed through your lecture and recitation course pages in Brightspace. <http://purdue.brightspace.com>. In addition, some general information is also posted on <https://www.math.purdue.edu/MA161>.

Class Meeting: 7:30 AM - 8:20 AM, Monday, Wednesday & Friday in BHEE 129
10:30 AM - 11:20 AM, Monday, Wednesday & Friday in WTHR 200
Both the lectures are the same, you are welcome to attend either, provided there is space in the class room. All lectures will be recorded and will be available for replay on Brightspace.

Recitation Sessions: Recitation sections are held on Tuesdays and Thursdays, list of the Teaching Assistants (TA) teaching the recitations and their email addresses are provided here:
<https://www.math.purdue.edu/MA161>.

Communication: 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 lecturer.

Attendance: Recitations meet in-person at the assigned time and location indicated on your class schedule. Quizzes and exams must be completed in-person as scheduled, and you must attend recitation(the entire period) to complete your quizzes. Quiz exemptions need to be verified by your TA. Alternate exams due to unusual circumstances need to be negotiated with the lecturer. Students more than 20 minutes late to an exam will not be allowed to take the exam. They will have to contact the lecturer immediately to request permission to take a make-up exam, and grade penalties are possible.

Required Materials: 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.

Course Objectives:

1. To compute limits and to apply limit laws.
2. To apply rules of differentiation to compute derivatives of elementary functions.
3. To sketch graphs of functions with the aid of differentiation techniques.
4. To find maxima and minima of functions and solve optimization problems.
5. To compute integrals of some elementary functions.
6. To apply the Fundamental Theorem of Calculus to compute areas of certain planar regions.

Homework: There are a total of 36 online assignments (numbered 0 - 35) using *MyLabMath*. *Pearson MyLabMath* is accessed through the course recitation (REC) page in Brightspace. 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 : 59^{pm}. and homework from the Wednesday lecture is due Thursday at 11 : 59^{pm}. 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 timed quiz in every recitation class with a few exceptions. Quizzes typically cover content related to the homework that was due the previous week.

Policy on Late Homework and Missed Quizzes: Late homework will not be accepted. No make-up quizzes will be given. At the end of the semester, the 3 lowest homework scores and the 2 lowest quiz scores will be dropped to account for the fact that in a course this size, we cannot adjudicate every circumstance. The assumption is that every student occasionally has an appointment, oversight, accident, illness, or emergency that causes him or her to miss class or a homework deadline, and these situations are covered by the universal “drop” policy. Students who are forced to miss class for an extended period of time should contact the Office of the Dean of Students and the lecturer. Quizzes that are missed due to absences approved by the Office of the Dean of Students (grief, military, jury duty, university athletics, or quarantine) may be exempted by your TA from the overall total.

Midterm Examinations: Three one-hour, multiple choice, midterm exams:

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| EXAM 1 – Thursday, September 21 | 8:00pm - 9:00pm. | Location: to be announced. |
| EXAM 2 – Thursday, October 19 | 8:00pm - 9:00pm. | Location: to be announced. |
| EXAM 3 – Thursday, November 16 | 8:00pm - 9:00pm. | Location: to be announced. |

More information will be announced closer to each exam.

Final Examination: There will be a two-hour final during final exam week. The time and place will be announced by the university registrar at a future date.

Important Dates:

Last day to drop the course without it being recorded: **Friday, September 1**

Last day to drop the course and receive a W: **Monday, November 27**

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

Grades: Individual homework scores, scores for quizzes, exams, overall homework, and the course total will be displayed in MyLab Math. Course grades will be determined from your overall score computed as follows:

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|------------------------------|------------|
| Quizzes | 15% |
| Homework | 15% |
| Three Midterm Exams 15% each | 45% |
| Comprehensive Final Exam | <u>25%</u> |
| | 100% |

Students who get at least 97% of the total points in this course are guaranteed an A+, 93% guarantees an A, 90% an A-, 87% a B+, 83% a B, 80% a B-, 77% a C+, 73% a C, 70% a C-, 67% a D+, 63% a D, and 60% a D-; 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.

TA Office Hours: You may attend any of the scheduled hours in the Math Resource Room (WTHR 313). 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: 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. 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: “Women in Science and Engineering Tutoring Program” offers free evening tutoring: www.purdue.edu/science/wisp/tutoring.

“COSINE” offers free evening tutoring for Math, Biology, and Chemistry in Shreve Hall’s University Residences Support Center: www.purdue.edu/science/Current_Students/cosine.

Here is a list of math tutors for hire: www.math.purdue.edu/academic/tutor/.

Academic Adjustments for Students with Disabilities: 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 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 <https://www.purdue.edu/drc/students/course-accessibility-letter.php>

CAPS Information: 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 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: 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: 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 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: 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: 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.

Advice to succeed in the class: I want each and every one of you to succeed and want to help you, but at the end of the day your learning is up to you. Take the initiative to be responsible for your own learning.

- **PREPARE.** Before each class, review material from last class & look at the new material in the book.
- **OWN IT!.** Take ownership of your own learning.
- **CHECK IT!.** We all make mistakes. Check your work & ask yourself, does your answer make sense?
- **PERSIST!.** Persist and work through perceived failure.
- **COLLABORATE.** Positive experiences working in groups have been shown to contribute to overall learning, retention, & college success. You gain valuable skills like how to explain concepts to others and you get a support network that can help you learn the material better.
- **PARTICIPATE ACTIVELY.** Don't be a passive learner just taking notes.
Ask questions. Chances are that others have the same question and will appreciate.
Stay focused. It is your responsibility
Answer questions. Posed by the instructor, TA, or other students.
- **ADDRESS ISSUES IMMEDIATELY!** Occasionally unexpected events may make it difficult to complete an assignment on time. Let your professor/ TA know right away if this happens to you. It is much easier to address an issue right away and then stay on top of material. If you wait until the end of the semester, then it is too late to make up work. No assignments can be completed, or extra credit done after classes end.