

MATH-I 165 Analytic Geometry and Calculus I
Spring 2025 Semester (MWF 12-1:15PM, LD136)

Instructor

- Keshav Dahiya, Graduate Student, Department of Mathematical Sciences, IU Indianapolis.
- *Office:* LD225, *Email:* kkeshav@iu.edu
- *Office Hours:* MW 10:45-11:45PM by appointment using email. Location: MAC.

Course Description

- 4 credits.
- The first course in a 3-course sequence for Math, Science, and Engineering majors.
- *Topics:* Limits of functions, continuity, differentiation of algebraic and trigonometric functions, implicit differentiation, applications of differentiation, anti-derivatives and the indefinite integral, the definite integral and fundamental theorem of calculus, areas, volumes.
- *Prerequisite:* MATH-I 153 and MATH-I 154 or equivalent each within the last 3 terms with a grade of C or better or ALEKS placement score within last 12 months of 80 or better. ALEKS test score may be compared against SAT/ACT math scores. Additional testing may be required.
- *Textbook:* Calculus, 8th Edition, by James Stewart, Thompson Publishing Co. (Chapters 1-5) e-text is available on Canvas.

Attendance and Grading

- *Lecture Attendance:* It is recommended to **attend all lectures**. Students will be taken at their word when they communicate the reason for missing a class. However, students will be subject to disciplinary action under the Student Code if they are not truthful about the reason for their absence.
- *Recitations:* The students are expected to attend the recitation sessions which take place on **Tuesday every week**. These sessions are meant to help students solve the weekly homework problems.
- *Calculators and Technology:* No calculators or other forms of technology can be used on in-class, closed-books assessments (quizzes, tests, final exam). A scientific calculator is strongly recommended for doing homework. However, no calculators are permitted on quizzes, tests or the final examination for this course.
- *Homework:* Homework will be assigned on Friday every week. The Homework will contain a set of problems out of which 4 problems (indicated with *) would be graded. The graded problems are **to be submitted to the recitation instructor** on every Tuesday (except for first week). See syllabus timeline for homework deadlines. **Each homework is worth 20 points.**
- *Quizzes:* There will be a **quiz every Wednesday** in the last 10-15 minutes of class, except in the first week or if there is a test scheduled that week (see syllabus timeline). **Each quiz is worth 10 points** and there would be a **total of 11 quizzes**. The problems appearing on the quiz would be based on the homework problems assigned in the previous week.

- *Tests:* There will be **3 tests given in LD136 during lecture hours** (see syllabus timeline). **One must get prior permission for a make-up test.** No make-ups will be allowed after the test is returned. No technology of any kind can be used on the tests. Note that if use of technology is found during a test, especially cell phones, it will result in a grade of 0.
- *Final Examination:* There will be a Common Department Final Exam on Saturday, May 03, 2025 from 3:30PM to 5:30PM. **One must pass the Final Exam to pass this course.**
- *Grading Policy:* The scores of the best 10 quizzes, the best 12 homework, the 3 tests, and the score in the final exam, will be considered for the final grade. The following weightage will be assigned to each graded component while calculating the final grade.

Assignment	Homework	Quizzes	Tests	Final Exam
Weightage	15%	15%	40%	30%

Percentage	90%	80%	70%	60%
Grade	A-	B-	C-	D-

- *Note:* There will be no more work to earn credit for this course after the final exam is given unless arrangements are made with the instructor prior to the final exam.
- *Make-up Policy:* Instructors don't have to give students make-ups unless there are legitimate excuses. In order to avoid prolific and unnecessary make-ups, **any make-ups granted by me would be much harder than regular tests** and there would be 20% deduction of points.

Engagement and Withdrawal

- *Withdrawal Deadline:* Last day to drop the course with an automatic W grade is **March 16**.
- *Math Assistance Center:* Tutoring/mentoring is available at the Math Assistance Center (MAC). The MAC is located in Taylor Hall (UC), Room B001. To find more about the tutoring/mentoring schedule and other general information about the MAC, check out the MAC web page: <https://science.indianapolis.iu.edu/math/academics/academic-support/mac.html>.
- *Student Engagement Roster:* This semester I will be using the Student Engagement Roster to provide feedback on your performance in this course. Periodically throughout the semester I will be entering data on factors such as your class attendance, participation, and success with coursework, among other things. This information will provide feedback on how you are faring in the course and offer you suggestions on how you might be able to improve your performance. You will be able to access this information via the View Grades app in One.IU.
- *Administrative Withdrawal:* A basic requirement of this course is that you will participate in all class meetings and conscientiously complete all required course activities and/or assignments. Keep in touch with me if you are unable to attend, participate, or complete an assignment on time. If you miss more than half of the required activities within the first 25% of the course without contacting me, you may be administratively withdrawn from this course. Administrative Withdrawal may have academic, financial, and financial aid implications. Administrative Withdrawal will take place after the full refund period, and if you are administratively withdrawn from the course you will not be eligible for a tuition refund.

- *Email Correspondence:* All email correspondence relating to this course should be sent to my IU Indianapolis email account directly. All email correspondence should be sent to university faculty using your university e-mail account and not from a non-university email provider such as yahoo, gmail, Hotmail, etc. You can use Canvas to email me.
- *Online Lectures:* The syllabus, in-person format, timelines and assignments may change with 24 hour notice based on university best-practice guidelines. If it becomes necessary, all components of this course will go on-line via Zoom delivery.

Accommodations and Conduct

- *Accommodations:* IU is committed to maintaining an inclusive and accessible environment across all its campuses. The Americans with Disabilities Act (ADA), the Indiana Civil Rights Act, and IU policy prohibit discrimination against qualified individuals with disabilities in educational programs and employment. Students at IU Indianapolis may request ADA accommodations through Accessible Educational Services (AES). AES uses an interactive process to determine if a student qualifies for an accommodation, approves reasonable accommodations, and ensures the implementation of those accommodations whenever possible. The AES office is in Joseph Taylor Hall (UC 100) on the Indianapolis campus. You can call the office at 317-274-3241 or email to aes@iu.edu. If you have a documented medical condition that may affect your attendance, contact the AES. <https://diversity.indianapolis.iu.edu/offices/aes/index.html>.
- *Dishonesty and Student Misconduct:* Cheating will result in a minimum penalty of receiving a grade of F in the course. You must uphold and maintain academic and professional honesty and integrity. You are responsible for your behavior and expected to respect the rights and dignity of others. The IU Code of Student Rights, Responsibilities, and Conduct defines academic misconduct as any activity that tends to undermine the academic integrity of the institution. Procedures for imposing academic and disciplinary sanctions are outlined in the Code. The Code can be accessed at: <https://studentcode.iu.edu/>.
- *Discrimination, Harassment and Sexual Misconduct:* As your instructor, one of my responsibilities is to create a positive learning environment for all students. IU policy prohibits discrimination, harassment, and sexual misconduct in any form, including sexual harassment, sexual assault, stalking, sexual exploitation, and dating and domestic violence. Indiana University prohibits discrimination on the basis of age, color, disability, ethnicity, sex, gender identity, gender expression, genetic information, marital status, national origin, race, religion, sexual orientation, or veteran status. If you feel like you have been discriminated against, please contact IU Indianapolis' Office of Institutional Equity, located in the Bryce Building, 986 Indiana Avenue, Suite B310, Indianapolis, IN 46202. <https://oieindy.iu.edu/report-incident/report-to-oeo.html>.

Incompletes

- Grades of Incomplete will only be given in accordance with the university policy available at <https://indianapolis.iu.edu/academics/records-grades/grades/incomplete.html>. Specifically, students must be passing at the 3/4 mark of the semester to qualify for assigning an incomplete. The instructor must agree that an incomplete is appropriate and it must be approved by the Associate Chair of the Department of Mathematical Sciences.