

	Time	Location
Lecture	MWRF 9:00-9:50am	Eng. 1 Bld. 241
Maple Lab	R 3:15-4:30pm	Siegel Hall 237

Instructor: Robert Ellis, Assistant Professor of Applied Mathematics

Office Info: Eng. 1 Bldg. Rm. 105C, 567-5336, rellis@math.iit.edu (with appropriate modification)

Office hours: M 1:30-2:30pm General Office hour
 R 2:00-3:00pm *Math 454 Priority* Office hour
 R 4:45-5:45pm *Math 152 Priority* Office hour

Otherwise, request an appointment or send detailed questions by email. I encourage you to request joint appointments so that more people can benefit from the discussion. Any changes to office hours will be posted on the course homepage.

Graduate Teaching Assistant: To be announced

Course Home Page: <http://math.iit.edu/~rellis/152F05/> **Assignments posted here, check often!**

Prerequisites: Math 151 or Math 149 (Calculus I), or Advanced Placement

Text: Calculus, 5th Ed., James Stewart, Brooks/Cole Publishing Co.

Topics: Chapter 7: Transcendental Functions
 Chapter 8: Techniques of Integration
 Chapter 10: Differential Equations
 Chapter 11: Parametric Equations & Polar Coordinate
 Chapter 12: Infinite Series
 Appendix G: Complex Numbers

Course Objectives. Credit: 5. The course objective is to master the material in the above topics and be able to employ concepts therefrom to solve problems in a clear and concise way. Effective written communication in presentation of solutions will be emphasized. The computer algebra Maple will be used extensively for laboratory exercises and projects which use and illustrate material presented in the lectures. At least one substantial writing project based upon a Maple exercise will be required.

Punctuality. All homework must be submitted by the official start time of lecture in order to be accepted. Similarly, labs must be submitted by the official start time of lab. Attendance is determined by presence at start time. It is recommended that you arrive a couple of minutes early to all exams in order to guarantee the whole time is available for work.

Grade break-down and Exams. Your grade will be determined according to the following break-down between homework, Maple Labs, three midterms, and a final exam:

Homework	Maple Labs	Midterm 1	Midterm 2	Midterm 3	Final
15%	15%	15%	15%	15%	25%

Midterm 1 will be either September 28th or 29th. The time and date will be announced, as will be for Midterms 2 and 3. The final exam is Wednesday, December 14th from 8-10am, in E1 241. If your final is higher than your lowest exam, the lowest exam score will be replaced with the smaller of the final and the second lowest exam. Two homework grades and one Maple lab grade will be dropped in computing your final course grade.

Homework. Homework will be due at the start of each lecture whenever a new section is started, beginning August 29th. Two types of problems will comprise a typical homework:

- (1) easy, basic conceptual problems due **on the day a section is started**, and
- (2) regular problems due in the second or third lecture after the section/subsection is finished.

Type (1) is to encourage a first reading of the section and basic understanding of *some* of the material to be covered before coming to the lecture. Type (2) is to encourage mastery of the concepts and more difficult problems after the lecture on the material has occurred. It is the instructor's intention to encourage and reward preparedness for class and keeping up with the material. Type (1) problems should be viewed as an easy way to pick up class points. Assignments and due dates will be maintained on the **course web page**. Due to the frequency of homework turned in, you must clearly label the top of your homework with your **name**, the **due date**, and the **problems submitted**.

Homework Collaboration. You are encouraged to discuss homework problems but only with another student in **this** section (003), the TA, an IIT ARC tutor, or the instructor. When you **write up** the solution, however, **you must not consult any notes or other aids from these discussions.** Then you may only use the textbook, lecture notes, calculator, or Maple, but not pre-written calculator programs or Maple worksheets. For example, if you start to write the solution, get stuck, and consult someone half-way, you must start the solution over without referring to the first attempt. Use your common sense to extrapolate from these guidelines or contact the instructor regarding uncertainties. You are recommended not to use a calculator or Maple as a crutch for solving problems as you will not have access to these during exams.

Maple Labs and Collaboration. Maple labs will be due roughly once a week at the beginning of lab starting September 8th. Lab assignments and due dates will be maintained on the course web page. Maple labs may be and are encouraged to be done in groups of (at most) 2. The collaboration policy for Maple labs is as above for homework except that your partner can always be consulted. The group work is intended to improve communication skills.

Grading Policy. Solutions for homeworks, labs and exams must be written clearly but concisely and will be graded on mathematical **correctness** and **presentation**. Points will be deducted for sloppiness, incoherent or insufficient explanation, or for lack of supporting rationale. The solutions should be presented so that your fellow students could read them and follow both the calculations and logic. Most Maple labs will require a couple of lines of text explanations between calculations, but there will be at least one Maple lab for which a full written report is required. A final course average of at least 90, 80, 70 or 60 will guarantee a course grade of A, B, C or D, respectively; the instructor reserves the right whether or not to relax this scale.

Attendance. Attendance will be taken each lecture and class and will be submitted to the Provost, according to IIT policy. The instructor should be notified of all absences as soon as possible.

Academic Integrity. By writing your name on your work you certify that you have adhered to the homework and lab policy, and that all exam work is your own without any unauthorized assistance or aids. The Code of Conduct on pp.32–37 of the IIT Student Handbook applies, and violations will be prosecuted accordingly.

Missed Work. Assignments/exams/labs cannot be made up except as approved by the instructor (e.g., due to health or family emergency). A Midterm missed for an excused reason must be made up promptly upon the student's return, the time frame being at the discretion of the instructor.

Office hours and IIT ARC tutoring. As a rule of thumb, staying ahead and asking questions early will tend to improve your grade (the converse is near-axiomatic). Come to office hours, organize study sessions or get help from **free tutors** at the IIT Academic Resource Center in Galvin Library (<http://arc.iit.edu/>).

Disability Assistance. IIT and this instructor are committed to accommodating students with disabilities. Students desiring such consideration must immediately contact the Center for Disability Resources and Educational Development at 567-5744. (Their approval must be had for any exceptions regarding exam guidelines.)

Some brief parting shots. You can submit your own suggestions for the next class!

1. Read the section before class.
2. No work = no credit.
3. Good solutions require good writing.
4. A question not asked is a missed exam problem.
5. Office hours and free IIT tutoring come before pay tutoring!
6. Partial credit is an unworthy goal.
7. Repetition is the mother of learning (do all required & suggested homework!).
8. Every absence reduces your final grade.
9. Labs drive home the concepts – they're worth the time.
10. TA's and tutors are great, but always ask your hardest questions of the professor.