

COURSE INFORMATION: Fall 2020
MATH 100 Introduction to the Profession

Time and Place: 9:40-10:55am, Monday & Wednesday, at [Blackboard Live Classroom](#).

Instructor: [Hemanshu Kaul](#), kaul@iit.edu.

Discussion Forums: [Math 100 Discussion Forums at Blackboard](#).

Office Hours: Monday and Tuesday at 3:30-4:30pm on Google Meet (link will be shared through IIT Email and Calendar). And by appointment (send email).

Questions through the discussion forums (above) and through email are also encouraged.

TA Office Hours: Gunjan Sharma, Mon & Wed 4:30-6pm.
Accessible through [Virtual Math Learning Center](#).

Course Communication: <https://www.math.iit.edu/~kaul/TeachingFall20/Math100.html>
Check the course webpage regularly for a weekly log that includes Topics for discussion in class, Homework for submission, details related to the course activities, special lectures, and projects. I often send emails with comments regarding HW problems, projects, etc. Make sure your IIT email account is active and working.

Textbooks:

Lara Alcock, *How to Study as a Mathematics Major*.

Keith Devlin, *Introduction to Mathematical Thinking*.

[Moler's Experiments with MATLAB](#)

Course Description: This course is an introduction to the nitty-gritty of work and study in the mathematical sciences. Fresh applied math majors are introduced to undergraduate studies and careers in applied math; to the effect of ethics, diversity, and related social issues to work and study in mathematics; to the study of mathematical statements, logic, and proofs; to experimentation and computation in mathematics; and they work on a semester-long group project that investigates a mathematical topic.

Grade Break-down: Class participation (including attending class, participating in class activities, being ready for readings, etc.) worth 30%; HWs worth 40% total; Project worth 30%. The grading scale will be no more strict than A:89-100, B:78-88, C:67-77, D:55-66.

Weekly Schedule: On *Monday and Wednesday* of each week, we will hold the Live Classroom on Blackboard which will include discussion and other group activities. During each class, and possibly later that day on the course webpage or through email, a short reading HW might be assigned. On *Wednesday* evening, a weekly written HW, due a week later, will be uploaded to the course webpage.

Class Attendance and Participation: You are expected to attend the Live Classroom on Blackboard on Monday and Wednesday, and participate in the class discussions (with your video feed turned on whenever possible). You are also expected to read the appropriate textbooks and papers as assigned, and review topics done in class.

Multiple absences from the Live Classroom without permission from instructor will result in deductions from your 'Participation' score at the discretion of the instructor.

Group Project: Students will work in groups of two or three on a project. Projects are proposed and supervised by faculty. Students have to present work and turn in drafts by certain deadlines, while the final presentation and written work will be due at the end of the semester. See the course webpage for the various deadlines.

Homework Assignment: Homework problems for formal submission will be assigned once a week (typically on Wednesday evening) which will be due one week later. I will also assign reading HW from the textbooks or elsewhere. You have to be ready to discuss the assigned topics during future classes.

It is your responsibility to check the course webpage for assignments and their due dates. Homework needs to be submitted through the appropriate webpage on *Blackboard Assignment*. You will upload a PDF file of your submission - either typed solutions (use LaTeX), or a scanned copy of your handwritten solutions. For MATLAB HWs, you will upload a PDF file containing the programs you wrote and their outputs, as well as any relevant comments and descriptions in English.

Solutions for homework must be written clearly, legibly, and concisely, and will be graded for both mathematical correctness and presentation.

HW Discussion Rules: You are allowed to discuss homework problems **only with your classmates, course TA, and me**. However, the solutions should be written by you alone and, if you discussed HW problems with a classmate or TA, you have to **write their name at the top of the HW submission as a collaborator**. Any incident of plagiarism/ cheating (from a person or from any online resource) will be strictly dealt with according to University rules.

‘Why and How’ of Homework: Homework serves as an opportunity for students to practice communicating written mathematics with clarity of thought and language. It also requires you to spend time on careful reading of topics from your textbooks. **When reading** a mathematics textbook, you need to have a pencil and paper next to you so you can make note of any thoughts of confusion (or of clarity!) that strike you as you read, and you can scribble the details of examples and non-examples of the concepts you are reading.

To improve your mathematical writing quickly, start by writing draft solutions to the homework early. A day or two later after you have had time to forget what you wrote, read it. If it doesn't make sense or convince you, rewrite it. **Writing a solution** requires saying what you mean and meaning what you say. Be intellectually honest. Intellectual dishonesty includes: 1) stating a “reason” without understanding its relevance. 2) Claiming a conclusion when you know you haven't proved it. 3) Giving an example and claiming you have proved the statement for all instances. **Include enough detail in your solutions so that your explanation is convincing to someone who hasn't thought about the problem before.** The proofs/arguments should be presented so that your classmates could read them and follow the logic (step-by-step).

<p>Ask for Help: You are encouraged to ask questions during the <i>Live Class on Blackboard</i>, through the <i>Blackboard Discussion Forums</i>, during the <i>Google Meet Office Hours</i>, during the <i>TA office hours</i>, or through <i>Email to me</i>. If you are having trouble solving a homework problem, I will be glad to direct you in the right direction. The same goes for any reading in the book, or any concept you have difficulty understanding.</p>
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<p>Don't hesitate to ask for help! I cannot help you if you don't take the initiative.</p>

Accommodations through the Center for Disability Resources:

Reasonable accommodations will be made for students with documented disabilities. In order to receive accommodations, students must obtain a letter of accommodation from the Center for Disability Resources and email me to make an appointment to speak with me as soon as possible. See the [CDR website](#) for more details.

Illinois Tech's Sexual Harassment and Discrimination Information:

Sexual harassment, sexual misconduct, and gender discrimination by any member of the Illinois Tech community is prohibited. This includes harassment among students, staff, or faculty. Sexual harassment by a faculty member or teaching assistant of a student over whom they have authority or by a supervisor of a member of the faculty or staff is particularly serious. Such conduct may easily create an intimidating, hostile, or offensive environment.

Illinois Tech encourages anyone experiencing sexual harassment or sexual misconduct to speak with the Title IX Office for information on the resolution process and support options.

You can file a complaint [electronically](#), which may be completed anonymously. You may also file a complaint in-person by contacting the Title IX Coordinator, Virginia Foster at 312.567.5725/ foster@iit.edu or the Deputy Title IX Coordinator 312. 567.5726/ eespeland@iit.edu.

If you are not ready to file a formal complaint but wish to learn about your rights and options, you may contact Illinois Tech's Confidential Advisor service at 773.907.1062. You can also contact a licensed practitioner in Illinois Tech's Student Health and Wellness Center at 312.567.7550

For a comprehensive list of resources regarding counseling services, medical assistance, legal assistance and visa and immigration services, you can visit [the Title IX Office's website](#).