

Math 106L: Lab Calculus and Functions II

Instructor	Rann Bar-On	Email	rann@math.duke.edu
Class Times	MWF 10:20-11:10am or MWF 12-12:50pm	Lab Times	TTh 10:20-11:10am or TTh noon-12:50pm or TTh 3:20-4:10pm
Links	Main Course page: https://math.duke.edu/~rann/106Lmaterials/ Sakai: https://sakai.duke.edu/portal/site/106LSpring24 First year information: http://www.math.duke.edu/first_year/ Gradescope: https://www.gradescope.com/courses/671017		
Textbook	<i>Calculus</i> , seventh edition, by Hughes-Hallett, et al;		

Course Description 106L continues 105L. The class completes 105L's introduction to differential calculus. It then gives an introduction to integral calculus. It has a laboratory component. Topics include a review of trigonometry, mathematical modeling with trig functions, integrals and Riemann sums, antidifferentiation, applications of integration, and elementary differential equations. The class ends with an extensive module on applications of differential equations.

Online Course Structure 106L is divided into two separate components: classes (which take place MWF), and labs (TTh). For the Spring 2022 semester, all components will be in person, with one class session recorded and available on the main course webpage. There are two possible class times, and three lab times.

Classes Each class will consist of a lecture, which will take some or all of the class time. Each class has an accompanying class worksheet, linked from the course schedule on the course webpage. You may print the worksheet for each class/lab ahead of time, or you may work on it using a tablet. Regardless, you must have access to each day's worksheet in class/lab. Most class days, there will be time after the lecture. That time will be spent with students working through the remainder of the worksheet on their own or in small groups, with instructors and teaching assistants checking in on student work.

Labs Each lab will begin with a short introduction by the instructor. Following the introduction, students will work in pre-assigned groups of 3-5 on the lab. Labs are longer assignments that explore ideas from class in greater depth or apply them to data sets. Instructors and assistants will rotate between groups, checking in on student work and assisting them through the questions in the lab. All lab materials are linked to on the course website listed above.

Assessment and Homework Class worksheets will be handed in online (on Gradescope) the Monday after they are assigned in class. There will be a small number of other assessments for class work. Labs will often have group projects or other group assessment. There will also be three 'big assignments' spaced out through the semester. All assignments and worksheets are linked on the course webpage with their due dates. Assignments are due at 8am on their due dates. For more details, please see the Grading sheet.

Exams and Finals 106L will not have any midterm exams, and will not have a final exam.

Class and Lab Attendance Class attendance is mandatory. One class session will be recorded each day and posted on the course webpage. Lab attendance is mandatory. Since labs consist largely of group work, it is essential and required that all students attend their lab session. Students who cannot attend a class or lab session must submit a formal excuse form. Students who accumulate three or more unexcused absences will not be eligible to pass the class.

Textbook Use The textbook for the class provides background and supplemental material. Students are strongly encouraged to read the relevant section(s) of the textbook before or after a given class session. The problems at the end of each chapter are useful to do in addition to the worksheets, and solutions to all textbook problems are available on Sakai (under Resources → Documents → Solutions Manual).

Web page and Communication The main source for all course materials is the ‘Main page’ listed in the links above. All assignments, labs, worksheets, resources, due dates, etc. are listed on this page. The only resource Sakai will be used for is the textbook solutions. All class communication will take place by email to your Duke email addresses. Therefore it is imperative that you check those very regularly!

Calculator: Calculators will be useful. It is important to use your calculator as a support tool, not as a crutch. For example, you are expected to be able to do basic arithmetic and know the shapes of graphs of functions.

Laptops: We will use laptops in most labs and some classes. Please bring one. If you do not have a laptop, please let your teacher know as soon as possible, preferably on the first day of class. While using a laptop for class or lab, you absolutely may not be browsing social media, or using it for any purpose other than class or lab work.

Diversity and Inclusion This course is pledged to Duke’s Commitment to Diversity and Inclusion. Please assist me in making this class a secure and supportive learning environment for all.

Disability Accommodations Duke University is committed to providing equal access to students with documented disabilities. Students with disabilities may contact the Student Disability Access Office to ensure your access to the program. There you can engage in a confidential conversation about the process for requesting reasonable accommodations. Students should register with the SDAO as soon as they begin the program. Note that accommodations are not provided retroactively. More information can be found online at access.duke.edu. Please let me know as soon as possible if you have accommodations so that we may make arrangements for them to be met.

Duke Community Standard You are expected to know and abide by The Duke Community Standard, upholding the principles of honesty, fairness, respect, and accountability both in and outside of class. All people and ideas are welcome. Collaboration is mandatory in labs and encouraged in studying; quizzes must be completed individually and should not be discussed until returned. You are responsible for your own learning and for that of our community.

Policy Changes All policies listed above are subject to reasonable change at my discretion. In the event of a change, you will be given written and/or verbal notice and this document will be updated.

The Academic Resource Center The ARC offers free services to all students during their undergraduate careers at Duke. Services include Learning Consultations, Peer Tutoring, Learning Communities, ADHD/LD Coaching, Outreach Workshops, GRE/MCAT Prep, Study Connect, and more. Because learning is a process unique to every individual, we work with each student to discover and develop their own academic strategy for success at Duke. Contact the ARC to schedule an appointment.