

Fall 2019 MATH 135

General information for Tamás Darvas' students

Instructor: Tamás Darvas

Course Website: www.math.umd.edu/~tdarvas and select Teaching in the menu.

Email: tdarvas@math.umd.edu // Be sure to include "MATH 135" in the subject line.

Classes: TuTh 2 PM - 3:15 PM (in ARM 0131)

Office hours: Tu 1-2 PM, Th 3:25-4:25 PM (in my office MTH 4416), and by appointment. In addition, if you have questions, you can visit any TAs office hours. See the course website for information on hours and location.

Description: Introduction to a variety of mathematical topics most often arising in the biological sciences including probability, statistics, matrix and vector algebra with emphasis on models and techniques relevant to the life sciences.

Topics:

1. Descriptive Statistics (Chapters 1–4): Basic Descriptive Statistics, Visual Display of Data, Bivariate Data and Linear Regression, Exponential and Logarithmic Functions
2. Discrete Time Modeling (Chapters 5–9): Sequences and Discrete Difference Equations, Vectors and Matrices, Matrix Algebra, Long-Term Dynamics or Equilibrium, Leslie Matrix Models and Eigenvalues
3. Probability (Chapters 10–14): Probability of Events, Probability of Compound Events, Conditional Probability, Sequential Events, Population Genetics Models

Textbook: E. N. Bodine, S. Lenhart, L. J. Gross, Mathematics for the Life Sciences, ISBN 9780691150727. Since the class has no online component a used copy of the textbook is perfectly fine, just make sure the ISBN number is accurate.

Assignments: Lecture quizzes (5%), mathematics recitation quizzes (10%), biology group worksheets (10%), three in-class midterms (3 x 15%) and a comprehensive final exam (30%). At the end of the semester your 2 lowest quiz/worksheet scores will be dropped from each category.

Lecture quizzes: Starting the second week, I will administer 5 minute quizzes at the end of lectures, on average once a week. You will provide your answer using TurningPoint responsware. Please install the TurningPoint app on your smartphone/tablet/computer so you can submit your answer (we will not use 'clickers'). The app is freely available for all students of the University. Detailed instructions can be found at <https://www.math.umd.edu/~tdarvas/items/Fall2019/Clicker.pdf>.

Homework: your written homework will not be graded, however it is the most important component of the course. Without doing all the homework assigned (see course website) you will do poorly on the quizzes/worksheets/midterms, and you will likely fall behind. Try to do all the problems, assigned from your textbook, before attending the discussion sessions.

Discussion quizzes: at the end of each Monday discussion you can expect a 5-10 minute individual quiz on the topics that were covered during that discussion. Students that solve the assigned homework problems before the discussion will have a distinct edge over the ones that don't.

Biology worksheet: every Wednesday your TA will give you a worksheet at the start of the discussion session. Group work is encouraged, though each student needs to submit their work individually. At the end of each session the worksheets will be collected and graded.

Exams: we will have 3 in-class midterms, in addition to a comprehensive final exam.

Grade maintenance: see the ELMS page of this course.

Schedule of Discussions:

Section	Location	Math Discussion	TA	Bio Discussion	TA
0211	MTH 0405	M 8-8:50am	Wing Yan Yuen	W 8-8:50am	Priyanka Gandhi
0212	MTH 0403	M 8-8:50am	Hsin-Yi Lin	W 8-8:50am	Mengyu Liu
0221	MTH 0405	M 9-9:50am	Wing Yan Yuen	W 9-9:50am	Priyanka Gandhi
0222	MTH 0403	M 9-9:50am	Hsin-Yi Lin	W 9-9:50am	Mengyu Liu
0231	MTH 0405	M 11-11:50pm	Wing Yan Yuen	W 11-11:50pm	Mengyu Liu
0241	MTH 0405	M 12-12:50pm	Wing Yan Yuen	W 12-12:50pm	Mengyu Liu

Classroom ground rules: Use of electronic devices is forbidden during lectures and discussion (except for the duration of the lecture quizzes when you can use your smartphone/tablet/laptop to submit your answer).

Calculators: graphing calculators of any kind will not be allowed during quizzes or exams. You can have a non-graphing calculator with you at all times, however the use of your calculator smartphone app is forbidden. On some biology worksheet assignments your TA might ask you to use MATLAB. Please install this software on your computer/laptop at earliest convenience.

Absences: Excused absences will be given only with documentation and only for valid medical reasons, university business, or appearances in court. Absence for medical reasons on days when exams are scheduled requires documentation of the illness, signed by a health care professional. *The reason for absence must be unavoidable, documented, and reported to me at least 48 hours before the exam date.* In cases of emergency, contact me by email as soon as possible.

Students with disabilities: The University provides upon request academic accommodations for qualified students with disabilities. For more information see <http://www.counseling.umd.edu/ads>.

Academic integrity: At all times you are expected to abide the University's policy on academic integrity: <https://www.faculty.umd.edu/teach/integrity.html>. All cases of academic dishonesty will be referred to the Office of Student Conduct. Academic dishonesty includes cheating on quizzes and exams. Additionally, the University has a nationally recognized Honor Code, administered by the Student Honor Council. The pledge, approved by the University Senate, reads: "I pledge on my honor that I have not given or received any unauthorized assistance on this assignment/examination." Unless specifically advised to the contrary, the Pledge should be handwritten and signed on all tests in this course. In conjunction with the University's Code of Academic Integrity, allegations of academic dishonesty will be reported to the Honor Council.