

MATH 1180
MATHEMATICS FOR LIFE SCIENTISTS
Spring Semester, 2017

Time and Place: MWF 9:40 a.m., LS 107
Computer Lab: Tuesdays as assigned in LCB 115
Instructor: Professor F. Adler
Office Hour: TBA
Offices: 304 LCB and 319 South Biology
Phone: 1-6848 and 5-6202
Web: <http://www.math.utah.edu/~adler/math1180/index.html>
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Lab TA: Chris Miles, miles@math.utah.edu
Text: F. R. Adler, *Modeling the Dynamics of Life: Third Edition*

The Course. Math 1180 is the second semester of a full year calculus sequence designed to teach the mathematics necessary to do biology in this quantitative age.

Computer Labs. We will meet for one hour weekly for a computer lab in LCB 115. Lab assignments will be due promptly on the following Monday and will account for 15% of your grade. The material covered in labs will be fair game for tests.

Homework. Written homework will be due weekly, usually on Mondays, with selected problems from the current sections. The problems are listed below and changes will be posted on the web page.

Exams. There will be three mid-terms (each with three or four problems), weekly quizzes (5 “super-easy” questions each, plus extra credit), and a comprehensive final (five problems, weighted toward Chapter 8).

Midterm 1 (Chapter 6)	Monday, February 6
Midterm 2 (Beginning of chapter 7 and new material)	Friday, February 24
Midterm 3 (Most of chapter 7)	Monday, March 27
Final Exam (Chapters 6-8)	Tuesday, May 2, 8:00 a.m.

Grading. Grades will be weighted according to the following scheme. You can drop your lowest midterm or give the final only half weight, and drop your worst two quizzes.

Each midterm	10%
Quizzes	10%
Final Exam	30%
Written homework	15%
Computer lab write-ups	15%

ADA policy The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union, 1-6020. CDS will work with you and the instructor to make arrangements for accommodations.

Accommodations policy. The instructor does not grant content accommodation requests as the course content fulfills legitimate pedagogical goals

Date	Sections covered	Homework Problems	Due
January 9	Stats experiment	TBD	Jan 18
January 11	6.1	4, 8, 10, 14, 18, 22, 28	Jan 18
January 13	6.2	2, 4, 10, 16, 24, 28, 38, 50	Jan 18
January 16	MLK Day		
January 18	6.3	2, 6, 10, 22, 32, 40	Jan 23
January 20	6.4	2, 6, 10, 14, 28, 30, 34, 38	Jan 30
January 23	6.5	2, 6, 10, 16, 22, 24, 26, 30	Jan 30
January 25	6.6	4, 8, 20, 24, 28, 30, 34, 38	Jan 30
January 27	6.7	4, 10, 16, 24, 28, 34, 40	Feb 3
January 30	6.8	4, 12, 14, 16, 28, 30, 40, 44	Feb 3
February 1	6.9	4, 16, 22, 30, 32, 36, 42	Feb 3
February 3	Review		
February 6	Midterm 1		
February 8	7.1	2, 6, 16, 24, 26, 30, 36	Feb 20
February 10	7.2	2, 6, 10, 22, 24, 34, 36	Feb 20
February 13	Vectors	1.1; 1.2c,d; 1.3b; 1.5c,d; 1.8c,d; 1.12	Feb 22
February 15	Vector dynamics	2.1b,d; 2.3b; 2.4b,d; 2.5	Feb 22
February 17	Matrices	3.1; 3.4; 3.5c,d; 3.6; 3.7	Feb 22
February 20	President's Day		
February 22	Markov Chains	4.1; 4.2; 4.4	Feb 24
February 24	Midterm 2		
February 27	7.3	2, 6, 10, 34, 36, 40, 42	March 6
March 1	7.4	4, 10, 20, 24, 36, 46, 48, 50, 52	March 6
March 3	7.5	2, 6, 22, 24, 26, 28, 40	March 20
March 6	7.6	2, 8, 12, 16, 40, 48, 58	March 20
March 8	7.7	2, 6, 12, 16, 20, 24, 42, 46, 50	March 20
March 10	Birth/death processes	New material	March 20
March 20	7.8	4, 8, 10, 32, 36, 38	March 24
March 22	7.9	4, 10, 12, 28, 30, 38, 40	March 24
March 24	Review		
March 27	Midterm 3		
March 29	8.1	10, 14, 20, 30, 36, 40	April 3
March 31	8.2	6, 10, 14, 20, 40, 46	April 10
April 3	8.3	4, 8, 12, 16, 20, 24, 44, 48	April 10
April 5	8.4	8, 14, 18, 20, 22, 24	April 10
April 7	8.5	2, 6, 10, 14, 26, 30, 32	April 17
April 10	8.6	6, 10, 14, 18, 22, 38, 42, 44	April 17
April 12	8.7	18, 32, 40	April 17
April 14	8.8	6, 12, 22, 28, 32	April 24
April 17	8.9	2, 4, 6, 8, 10, 12, 14, 32	April 24
April 19	More regression	New material	April 24
April 21	Data Science	New material	April 24
April 24	Review or catch-up		
May 2	Final		8:00 - 10:00 a.m.