Math 2710 - Transition to Advanced Mathematics

Spring 2017

General Info

Instructor: Damir Dzhafarov
Office: MONT 441
Email: damir@math.uconn.edu
Office hours: Mondays 2pm–3pm, and by appointment.
Lectures: Mondays, Wednesdays, Fridays, 12:20–1:10pm, in MONT 314.
Text: *Introduction to Mathematical Thinking: Algebra and Number Systems* (1st Edition) by Will J. Gilbert and Scott A. Vanstone.

Tentative schedule

(Subject to change. Please check back frequently.)

Week 1: Sections 1.1-1.6.

Week 2: Sections 1.5, 1.6, 2.1.

Homework 1 due Monday, January 30. Text, p. 20: 1, 5, 6, 9, 12, 26, 28, 33, 37, 39, 45, 62, 66, 71.

Week 3: Sections 2.1, 2.2, 2.3.

Homework 2, due Monday, February 6. Text, p. 50: 2, 5, 7, 10, 11, 12, 27, 28.

Week 4: 2.3, 2.5.

Homework 3, due Monday, February 14. Text, p. 50: 9, 19, 21, 22, 24, 49, 70, 71, 74, 83.

Week 5: 2.5, 3.1, 3.3, 3.4.

Homework 4, due Monday, February 21. Text, p. 82: 2, 3, 4, 5, 6, 8, 9, 10.

Week 6: 3.4, 3.5, review.

Homework 5, due Monday, February 27. (Extra credit, worth one homework assignment.) Text, p. 82: 22, 24, 25, 26, 29, 30, 42, 44, 45, 48.

Midterm exam information. Make sure you have read and understood Sections 1.1–1.6, 2.1, 2.2 (excluding the extended Euclidean algorithm), 2.5, 3.1, 3.3, 3.4, and 3.5, including the proofs of all theorems. Review all past homework assignments. I will have additional office hours on Friday, 3:30–4:30pm.

Review exercises. p. 22: 73, 76, 78. p. 50: 14, 16, 18. p. 52: 74, 83. p. 82: 1, 5, 7, 23, 27. p. 84: 56.

Midterm 1 Solutions.

Week 7: Midterm exam. 4.1, 4.2.

Homework 6, due Monday, March 6. p. 105: 11, 12, 17, 18, 20, 21, 22, 27, 29, 30.

Week 8: 4.2, 4.3, 5.1.

Week 9: Spring recess.

Week 10: 5.1, 5.2, 5.4, 6.1.

Week 11: 6.1, 6.2, 6.3, 6.4.

Week 12: 6.5, 6.6, review.

Week 13: Midterm exam. 6.6, 8.1.

Week 14: 8.1, 8.2, 8.3.

Week 15: 8.5, 8.6, 8.8 (proof of fundamental theorem of algebra, in class).

Week 16: Final exam.

Homework

Exercises from the text will generally be assigned every Monday or Friday and be due at the beginning of the lecture one week later. Students are encouraged to work together, but every assignment should be written up individually, and any collaborations should be indicated.

Exams

There will be two midterm exams: one on Monday, February 27, covering roughly Chapters 1-3; and the other on Monday, April 10, covering roughly Chapter 4-6. There will also be a cumulative final exam (date TBA).

Grading

The course grade will be the average of the homework (25%), the two midterm exams (25% each), and the final exam (25%). If your score on the final exam is higher than this average, your final exam score will count as your grade. Your lowest homework score will be dropped.

Policies

No make-up exams will be given and no late homework will be accepted. All students are expected to abide by the University's Community Standards at all times.