MATH 267
Introduction to Abstract Mathematics (4 units)

Course Outline

Chapters	Topics	# of weeks
1	**Problem Solving.**	0.5
2–5	**Logic:** Propositional logic; contrapositive and converse; quantifiers; proof techniques.	2.0
6–9	**Set Theory:** Sets; operations on sets; indexed families; power set and Cartesian product.	2.0
10–13	**Relations:** Relations; equivalence relations; order and completeness in $\mathbb{R}$.	2.0
14–17	**Functions:** Functions; one-to-one and onto functions; inverses; images and inverse images.	2.0
27–28	**Modular Arithmetic.**	1.5
18	**Mathematical Induction.**	1.0
19–20	**Sequences:** Definitions, convergence.	1.0
21–23	**Cardinality:** Equivalent sets; finite and infinite sets; countable and uncountable sets.	1.0
	Tests	1.0

Textbook: *Reading, Writing, and Proving*, 2nd edition, by U. Daepp and P. Gorkin.

Adopted: Spring 2008;   Revised: Spring 2015.