

Discrete Mathematics and Logic, Minor

The Minor in Discrete Mathematics and Logic

Overview

This minor develops the fundamentals of discrete mathematics and logic necessary to understand the mathematical foundations of many computer related disciplines.

Curriculum

Required Courses

	Units
21-228 Discrete Mathematics ¹	9
or 21-301 Combinatorics	
21-300 Basic Logic	9

¹ 21-127 Concepts of Mathematics is a prerequisite for 21-228.

Mathematical Sciences Electives (36 units)

Thirty-six units of Mathematical Sciences Electives, to be chosen from the following two groups (at least nine units from each group).

Logic

21-321	Interactive Theorem Proving	9
21-329	Set Theory	9
21-400	Intermediate Logic	9
21-602	Introduction to Set Theory I	12
21-603	Model Theory I	12
80-305	Game Theory	9
or 80-405	Game Theory	
80-311	Undecidability and Incompleteness	9
80-411	Proof Theory	9
80-413	Category Theory	9

Algebra and Discrete Mathematics

21-341	Linear Algebra	9
21-373	Algebraic Structures	9
21-374	Field Theory	9
21-441	Number Theory	9
21-484	Graph Theory	9
21-610	Algebra I	12
21-701	Discrete Mathematics	12

Double Counting

To avoid excessive double-counting, at least two mathematical sciences electives may not also count toward any other major or minor requirement.