

JAMESTOWN COMMUNITY COLLEGE
State University of New York

INSTITUTIONAL COURSE SYLLABUS

Course Title: Discrete Mathematics

Course Abbreviation and Number: MAT 1670

Credit Hours: 3

Course Type: Lecture

Course Description: Students will master fundamental concepts of discrete mathematics that are essential for further studies in mathematics and computer science. Topics include symbolic logic and deductive reasoning, methods of proof, set theory, combinatorics, Boolean algebra, number theory, relations, and graph theory.

Prerequisite: MAT 1600 or high school Precalculus or equivalent.

General Education Requirements Met

SUNY

Math

Student Learning Outcomes:

Students who demonstrate understanding can:

1. Interpret and draw inferences from appropriate mathematical models such as truth tables, sets, graphs, and trees.
 2. Represent mathematical information using logic to write proofs using a variety of methods.
 3. Employ quantitative methods including set theory and sequences to solve problems.
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Topics Covered:

- The Logic of Compound Statements
 - The Logic of Quantified Statements
 - Elementary Number Theory and Methods of Proof
 - Sequences, Mathematical Induction, and Recursion
 - Set Theory
 - Graphs and Trees
 - Topics from (time permitting): Indirect Argument, Algorithms, Strong Mathematical Induction & Well Ordering Principle, Functions, Relations, The Pigeonhole Principle, Formal Languages and Regular Expressions, and Finite-State Automata
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Information for Students

- Expectations of Students
 - [Civility Statement](#)
 - [Student Responsibility Statement](#)
 - [Academic Integrity Statement](#)
- [Accessibility Services](#)
Students who require accommodations to complete the requirements and expectations of this course because of a disability must make their accommodation requests to the Accessibility Services Coordinator.
- [Get Help: JCC & Community Resources](#)
- [Emergency Closing Procedures](#)
- Course grade is determined by the instructor based on a combination of factors, including but not limited to, homework, quizzes, exams, projects, and participation. Final course grade can be translated into a grade point value according to the following:

A=4.0	B+=3.5	B=3	C+=2.5	C=2	D+=1.5	D=1	F=0
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- Veterans and active duty military personnel with special circumstances (e.g., upcoming deployments, drill requirements, VA appointments) are welcome and encouraged to communicate these to the instructor.
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Effective Date: Fall 2025