

## Global Learning Semesters

### Course Syllabus

Course: MATH-201 Discrete Mathematics

Department: Engineering

Host Institution: University of Nicosia, Nicosia, Cyprus



Course Summary		
Course Code	Course Title	Recommended Credit Hours
MATH-201	Discrete Mathematics	3
Semester Offered	Contact Hours	Prerequisites
Please contact us	42-45	MATH-190A and COMP-152A
Department	Level of Course	Language of Instruction
Engineering	Lower Division	English

### Course Description

This course develops the student's ability to construct formal algorithms to solve problems in the areas studied. Major areas covered are counting, laws of sets, laws of logic, mathematical induction, relations and functions, Boolean algebra, introduction to graph theory.

### Prerequisites

MATH-190A and COMP-152A

### Topic Areas

1. Logic.
2. Set theory.
3. Combinatorics.
4. Algebraic structure.
5. Recurrence Relations.
6. Functions.
7. Networks.
8. Graph Theory.
9. Trees.
10. Finite fields.
11. Algorithms and algorithmic combinatorics
12. Boolean Algebra.

### Readings and Resources

#### Required Textbook

- Haggarty Rod, Discrete Mathematics for Computing, Addison Wesley, 2002 (ISBN: 0-201-73047-2).

#### Recommended Readings

- Ross K.A. and Wright C.R.B., Discrete Mathematics, Fifth Edition, Prentice Hall, 2003 (ISBN: 0-13-065247-4).