

Course Notes
for
MS4111
Discrete Mathematics 1

R. Gaburro

Contacts:

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Office hour: Tuesday 2.30pm-4pm

Syllabus:

- Review of sets;
- Propositional logic;
- Predicate logic (application to mathematical proof);
- Cartesian product of sets and relations;
- Functions;
- Numbers (natural numbers \mathbf{N} , integers, rationals, reals) and axioms for \mathbf{N} ;
- Proof by induction;
- Recurrence relations;
- Representations of \mathbf{N} (binary, octal, etc..);
- Introductory combinatorics, permutations, combinations.

PRIME TEXT:

1. Johnsonbaugh R. (1997), Discrete Mathematics 4th Ed, Prentice-Hall.

OTHER RELEVANT TEXTS:

2. Gersting JL (1993),
Mathematical Structures for Computer Science, 3rd Ed, Computer Science Press.
3. Grimaldi RP (1994) Discrete and Combinatory Mathematics, 3rd Ed, Addison-Wesley.

TYPE OF EVALUATION: 100% exam at the end of the term.