1 Instructor
Instructor: Ritankar Mandal.
Email: rmandal@uwm.edu
Office Hours: TBA.

2 Discussion Sections
You must be enrolled in one of these sections for this class:

- DIS 601 1:00 PM-2:45 PM  W  PHY 146
- DIS 602 12:00 PM-1:45 PM  R  CHM 195
- DIS 603 12:00 PM-1:45 PM  F  EMS W110
- DIS 604 10:00 AM-11:45 AM  F  EMS W120

3 Textbook

4 Prerequisite
Math Placement A; grade of C or better in CS 250.

5 Objectives
CS 317 is a foundational class in Computer Science curriculum. It is a direct or indirect prerequisite to courses in Algorithms, Theory of Computation, Compilers, Artificial Intelligence, Data Security.

6 Outline of the syllabus
- LOGIC
  1.1 Propositional Logic, 1.2 Applications of Propositional Logic, 1.3 Propositional Equivalences, 1.4 Predicates and Quantifiers, 1.5 Nested Quantifiers.
- PROOFS
  1.6 Rules of Inference, 1.7 Introduction to Proofs, 1.8 Proof Methods and Strategy.
- SETS, FUNCTIONS, and RELATIONS
  2.1 Sets, 2.2 Set Operations, 2.3 Functions, 9.1 Relations and their properties, 9.5 Equivalence Relations
• PROOFS CONTINUED
  5.1 Mathematical Induction

• BASIC COUNTING
  6.1 Basics of Counting, 6.3 Permutations and Combinations, 6.5 Generalized Permutations and Combinations, 6.4 Binomial Coefficients

• DISCRETE PROBABILITY
  7.1 An Introduction to Discrete Probability, 7.2 Probability Theory, 7.3 Bayes’ Theorem, 7.4 Expected Value and Variance

• GRAPHS
  10.1 Graphs and Graph Models, 10.2 Graph Terminology and Special Types of Graphs, 10.3 Representing Graphs and Graph Isomorphism, 10.4 Connectivity, 10.5 Euler and Hamiltonian Paths, 10.8 Graph Coloring

7 Grading scheme
Quizzes 5%, Homeworks 20%, two Midterm exams 50%, Final exam 25%.

8 Academic Misconduct
Taking someone else’s work and calling it your own is Plagiarism. It is a form of academic misconduct and will be dealt severely. You are responsible for the honest completion and representation of your work, for the appropriate citation of sources and for respect of others’ academic endeavors. A more detailed description of Student Academic Disciplinary Procedures may be found at http://uwm.edu/academicaffairs/wp-content/uploads/sites/32/2015/02/uws14facdoc1686.pdf

9 Notes
In case of an emergency, contact the instructor at the earliest possible opportunity via e-mail or phone. No arrangements will be made for missed exams unless these rules are followed, and an acceptable evidence of legitimate emergency is submitted. If you will be needing any accommodation in this course for any reason, please contact the instructor.