

## Computing Foundations II

1. **Class Hours:** Tuesday and Thursday (10:30-12:20)
2. **Recitation Hours:** Friday (Section 1: 12:30-1:20); (Section 2: 1:30-2:20)
3. *Course Objectives:* The course will provide a review of the fundamental concepts of computing. At the end of the course students should have a basic knowledge of Sets, Graphs, Patterns in Languages, Propositional and Predicate Logic.
4. *Prerequisites:* Students planning to enroll in this course should have taken CS2100 or Math 2770.
5. Topics: (1 week= Two classes of 110 minutes each)
  - (a) Week 1 Introduction and review of techniques for mathematical proofs
  - (b) Week 2 Computing Performance of Algorithms (Homework 1 Assigned)
  - (c) Week 3 Counting and Probability
  - (d) Week 4 Sets, Relations, Functions
  - (e) Week 5 Graph Theory
  - (f) Week 6 Review and Midterm
  - (g) Week 7 Automata: Regular Expression and Context Free Grammar (Homework 2 Assigned)
  - (h) Week 8 Propositional Logic
  - (i) Week 9 Predicate Logic
  - (j) Week 10 Review and Finals
6. *Suggested TextBook:* Online textbook Foundations of Computer Science by Alfred Aho and Jeffrey Ullman: <http://infolab.stanford.edu/~ullman/focs.html>
7. Instructor: Sanjukta Bhowmick  
Office: F201J  
Email: sbhowmick@unomaha.edu **Use this email for fastest response**  
Office Hours: Tuesdays and Thursdays 1-2 pm
8. TA: Prashant Venkata Yanambaka Office: F208  
Office Hours: Tuesdays and Thursdays 2-3 pm, Friday 2:30-3pm
9. Course Announcements and Assignments will be emailed and posted on Blackboard.
10. Evaluation: There will be a quiz every week on Thursday each worth 5%, anticipated 6 quizzes making a total of **30%**. There will be 2 assignments worth 20%, total of **40%**. There will be 2 exams (Midterm and Final) each worth 15%, total **30%**