Fall 2017

CS2148: Discrete Structures Prerequisites: CS 2012, MATH2120. An introduction to discrete mathematics with applications to Computer Science; fundamentals of logic and set theory, counting techniques, relations, induction and recursion; graphs and trees; probability theory. Lecture 75 minutes. Graded ABC/NC

Class Time and Location: M, W 13:40 – 14:55 pm ET A210

Instructor: Yuqing Zhu
Email: yuqing.zhu@calstatela.edu
Office: ET A-327
Office Hours: Mondays and Wednesdays: 9:00 am - 11:00 pm.

By: Susanna S. Epp

Alternative Textbooks for reference
by David J. Hunter

Chapters Covered: 1.2, 1.3 and 2.1, 2.2, 2.3 and 3.1, 3.2, 3.3, 3.4 and 4.1, 4.2, 4.3, 4.4, 4.6, and 5.1, 5.2, 5.6, 5.7 and 6.1 and 7.1, 7.2 and 8.1, 8.2, 8.3 and 9.1, 9.2, 9.3, 9.4, 9.5, 9.8, 9.9 and 10.1, 10.5 (as time permits)
Student learning outcomes:

- Students who successfully complete this course will be able to:
  - Create truth tables for symbolic statements in propositional logic
  - Translate English statements into symbolic logic
  - Determine whether an argument is valid or not
  - Solve simple problems in set theory involving basic set operations
  - Use Venn diagrams to solve real world problems involving sets
  - Understand the basic concepts of probability theory
  - Solve problems in probability theory, including conditional probability
  - Understand the concept of independent events and solve problems involving independent events
  - Understand the concepts of number theory, methods of proof, sequences, mathematical induction, and recursion
  - Understand the concepts of functions and relations
  - Understand the basic concepts of graphs and Trees
  - Find the mode, median, and mean of a set of data
  - Understand the concept of variance
  - Find the variance and standard deviation of a set of data
  - Understand the normal distribution

This course satisfies General Education Area A4

Homework:

Homework are mandatory and will be assigned for every section

NOTE: If you miss any mandatory problem set, you will lose up to 20 points of your final grade.

Tests:

TBA

Grading:

This course is graded ABC/NC

- Midterm Exams: 20 points each
- Final Exam: 40 points
- Homework: 20 points
- Attendance: 5 points (you lose one point, up to five points, for any missing lecture)

Total: 105 points

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<th>Grade</th>
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<tr>
<td>NC</td>
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<td>61 - 80</td>
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Final Exam:

Wednesday, December 6th, 1:30 – 3:30 pm ET A210
ADA statement: Reasonable accommodation will be provided to any student who is registered with the Office of Students with Disabilities and requests needed accommodation.

Academic honesty statement: Students are expected to do their own work and to abide by the University Policy on academic honesty, which is stated in the Schedule of Classes. Copying the work of others, cheating on exams, and similar violations will be reported to the University Discipline Officer, who has the authority to take disciplinary actions against students who violate the standards of academic honesty.

Student responsibilities: Students are responsible for being aware of all announcements that are made in class, such as changes in exam dates, due dates of homework and papers, and cancellation of class due to instructor’s absence. Students are responsible for announcements made on days that they are absent.

Students must check their CSULA email account regularly for information from the instructor and the Department. Failure to do so may result in missed deadlines or other consequences that might adversely affect students. Note that you can forward this email account to any other account of your choosing.

**NO MAKE-UP EXAMS, NO LATE HOMEWORK, AND NO INCOMPLETES!!!**