Spring 2019

**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 3 hours. Graded ABC/NC

**Class Time and Location:**  
Section 02: T, Th 4:30 – 5:45 pm  
ET A220

**Instructor:**  
Behzad Parviz  
Email: bparviz@calstatela.edu  
Office: ET A-312; Ext. 3–6696  
Office Hours: Tuesdays and Thursdays: 10:45 am- 12:15 pm.  
Prior Appointments: Wednesdays: 12 -2 pm

**Text:**  
By: Susanna S. Epp

**Chapters Covered:**  
1.2, 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 principle of counting, permutations and combinations  
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 sections

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

Tests:  
Two Midterms and one Final Exam

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

0 - 60  NC
61 - 80  C
81 - 90  B
91 - 105  A

Final Exam:  TBA

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!!!