Fall 2020

**Math 2450:** Discrete Mathematics: Prerequisite: MATH 2110. Preliminary introduction to the basic mathematical notation, vocabulary, and reasoning used in advanced mathematics courses. Logic; elementary set theory; proof techniques; recursion; induction; equivalence relations; counting techniques; graphs and trees.

**Class Time and Location:**
Section 02: T, Th 12:15 – 1:30 pm   ET A331

**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, 1.4 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, 4.7, and 5.1, 5.2, 5.6, 5.7 and 6.1, 6.2 and 7.1, 7.2, 7.3 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, 10.4 (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

**Homework:**
All black and non-stared odd numbered exercises. Homework are mandatory.

**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 ABCDF

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 - 50 F
51 - 60 D
61 - 80 C
81 - 90 B
91 - 105 A

Final Exam: Tuesday May 12th, 12 – 2 pm

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!!!