PALOMAR COLLEGE
MATHEMATICS 245-70889
Discrete Mathematics
SYLLABUS
Fall 2021

Course time & date: MW   11:10AM-12:35PM
Location: Zoom https://palomar-edu.zoom.us/j/95210782734

Instructor: Heydar Zahedani
Email : hzahedani@palomar.edu
Office Hours: by appointment only

Course description:

The study of prepositional and predicate logic, number theory and methods of proof, elements of set theory, relations and functions, the Pigeonhole Principle, sequences, infinite sets, basic counting techniques, permutations, combinations, graphs and trees, and applications directed to the field of computer science.
Prerequisite: A minimum grade of 'C' in MATH 130 or MATH 140, and CSCI 112
Transferability: CSU; UC

Student Learning Outcomes:
Upon successful completion of the course the student will be able to:

•	Mathematical Proofs	Prove a statement using one of the basic methods of proof or disprove it using a counter example.
•	Minimum Spanning Tree	Use a standard algorithm to find a minimal spanning tree for a given graph.

1. **Textbook: Discrete Mathematics with Applications, 5th edition by Susanna Epp.**

Homework:
To succeed in this class, you must do your homework. Homework will be assigned throughout the semester and **will be collected on the same day as the quizzes. Late homework will not be accepted.**

Quizzes:
There will be four quizzes given during the lecture on certain days. Each quiz will consist of at least two problems taken directly from the assigned homework and you will be allowed

forty-five minutes to complete each quiz. Your cumulative quiz grade will be based on the best 3 of the 4 quizzes. **There will be no makeup quizzes.**

. **Exams:**
There will be **3 exams** administered throughout the semester, each worth 100 points. You can drop one exam (not the final) and therefore **there will be no make-up exams.**
. **The final exam for this class is on Wednesday December 15, 2021, at 11:10AM-01:10PM**

Technical organization of the exams and quizzes. I will post the ZOOM link for the exam. You are supposed to log in at the assigned time. The exam problems will be posted on Canvas under the Assignments. You can either print the problems or read them from the screen. **During the exam you must have your camera on and pointing to your work area.** You can use your computer or phone camera. You cannot use any notes or formula cards. Usage of notes will be considered a breach of academic honesty. When you are done, please scan your papers using a scanner or phone scanning app (e.g., Genius or CamScanner) and upload your work to Canvas in a pdf format. Do not leave the ZOOM meeting before getting confirmation that I received your completed exam. **No e-mail submission will be accepted.**

Attendance:
Students are strongly encouraged to attend the lectures (in ZOOM format) with the microphone muted. This is the best way to stay on schedule, get a chance to ask questions and to actively participate in our class community. I will post the ZOOM recordings for your reference in case you miss any lecture. Only students who are officially registered may participate in this class. **A student may be dropped for: lack of prerequisite, disruptive behavior or cheating on exams.** It is your responsibility to make sure that you are dropped by delivering the appropriate drop form to Admissions and Records

Disabled Student Services:
Students with disabilities who require reasonable accommodations must be approved for services by the Office of Disability Resource Center (DRC) and should meet with me during my office hours.

Academic Honesty statement,

> "Students are responsible for honest completion of their work including examinations. There will be no tolerance for infractions. If you believe there has been an infraction by someone in the class, please bring it to the instructor's attention. The instructor reserves the right to discipline any student for academic dishonesty, in accordance with the general rules and regulations of the college. Disciplinary action may include the lowering of grades and/or the assignment of a failing grade for an exam, assignment, or the class."

Grading:

Here are the total points possible for this course:

Grading Scale:

Quizzes	**60 points**		
Homework	**40 points**	**90%-100%**	**A**
Exams	**200 points**	**80%-89%**	**B**
Final Exam	**150 points**	**70%-79%**	**C**
Total	**450 points**	**60%-69%**	**D**
		Below 59%	**F**

Quizzes and Exams Schedule

Wednesday, 9/8/2021	**Quiz#1**
Wednesday, 9/22/2021	**Test#1**
Wednesday, 10/6/2021	**Quiz#2**
Wednesday, 10/20/2021	**Test#2**
Wednesday, 11/3/2021	**Quiz#3**
Wednesday, 11/17/2021	**Test#3**
Wednesday, 12/8/2021	**Quiz#4**
Wednesday, 12/15/2021	**Final exam**

Math 245-Tentative Assignments

1.2   1, 3, 5, 7, 9, 11, 13, 15

1.3   1, 3, 5,7,11

2.1   5, 6, 8, 12, 13, 16, 17, 18, 19, 20, 24, 26, 27, 30, 31, 32, 35, 41, 43, 44, 45

2.2   1, 5, 7, 9, 13, 16, 17, 20, 22, 23

2.3   1, 3, 6, 9, 11, 21, 25, 26, 27, 29

3.1   1, 3, 4, 5, 9, 11, 13, 14, 19

3.2 1, 4, 9, 13, 22

3.3 2, 4, 12, 15, 16, 18, 21, 41.

4.1 11, 12, 13, 27, 28, 29, 30.

4.7 3, 4, 5, 6, 7, 8, 9, 11, 12

4.8 6, 8, 10, 11, 13, 15, 17, 18

1.4 1, 3, 5, 7, 9, 15, 17

4.9 1, 3, 5, 7, 9, 17, 23

5.1 1, 3, 11, 12, 14, 19, 27, 33, 35, 37,41

5.2   3, 6, 8, 10, 11, 12

5.3   3, 6, 8, 10, 11, 12, 14

5.4 1, 5, 6, 7

5.6 1, 3, 5, 7, 9, 11, 13

5.7 3, 5, 10, 12, 26, 50

5.8 1, 3, 5, 6, 8, 9, 11, 13, 15

5.9 5, 6, 9, 11

6.1 1, 10, 27, 28, 30, 31.

8.2 1-17 odd numbers

8.3 2, 3, 4, 5, 6, 7, 10, 11, 12

9.2 1, 3, 8, 9, 14,32, 35, 37, 39, 40, 41

9.3 3, 6, 11, 33, 35, 37