CSCI 006: Discrete Structures *(3.0 Units)*

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Office Hours: M/W/F: 10 am – 11 am
T/Th: 12 pm – 1 pm

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Welcome: Welcome to CSCI 006 – Discrete Structures. This course is an introduction to the discrete structures used in Computer Science with an emphasis on their applications. Topics covered include: Functions, Relations and Sets, Basic Logic, Proof Techniques, Basics of Counting, Graphs and Trees, and Discrete Probability.

How to Succeed: This course is a little unique compared to some of your other classes. ZyBooks is a system that contains an interactive textbook full of labs, interactive activities, and exercises. The material in this course is very diverse, which will require a lot of work on both my end, and your end. On that note, it is recommended you spend approximately 3 hours per unit outside of the course working on the homework and reading the ZyBooks. There will be a lot of discovery on your own, through these assignments. Some weeks will require more work, and some will require significantly less.

Text: Discrete Structures ZyBook (Instructions Below)

SLO's:
- Students will be able to use symbolic logic to model real-life situations in computing contexts.
- Students will be able to apply Bayes Theorem to dependent events.
- Students will be able to use traversal methods for trees and/or graphs.
- Students will be able to demonstrate an understanding of recursive relationships.

ZyBooks: This course will be utilizing the ZyBooks software. This is an interactive textbook designed to engage the student with the content at a deeper level than what is seen in a traditional classroom. This course will be utilizing this software for homework and labs (if time permits). I will distribute the access codes in class and walk through how to enroll into the ZyBook.

Overleaf This course will require homework to be completed in Overleaf. Overleaf is an online text editor for the LaTeX typesetting language. You can make an account here at Overleaf.

Homework: There will be weekly homework assignments consisting of 3-5 problems. These problems will be a mix of exploratory problems that will require some deeper thought, and some computational exercises or additional content not directly covered in lecture as a follow-up. The homework will be graded in the following way: 1-2 problems will be graded in detail where the other problems will be graded to completion. This will be chosen at random. There may also be some programming assessments. A .pdf and .tex file will be posted every Monday and a pdf of your typeset work is due the following Sunday at 11:59 PM on Canvas.

Exams: There will be 2 exams plus a final exam. (*Note: Partial credit will be given, so you must show all work.*) *Exams will be taken in class.*

Project: This class will have a project due by the final. This will be discussed more on Week 4. You can form a group with up to 2 total members and must be communicated to me by the end of Week 4. Upon discussion of the project, you will be given a list of topics and guidelines.

Evaluation:

		Scale:		
Assignments	15%		90-100%	A
Quizzes	10%		80-89%	B
Exams	40%		70-79%	C
Final Exam	20%		60-69%	D
Final Project	15%		Below 59%	F

Attendance: This class is an in-person class. Although I will not be taking attendance, there will be quizzes that are used to make sure you are keeping up with the reading and assignments.

Late Policy Because of the content in this course, and attention to detail needed in order to properly grasp theoretical mathematics and proofs, there will be no late homework accepted except under special circumstances. Please alert me by email at 7:00 PM the day prior to the due date in order to get an extension.

The reason for a strict late policy is that solutions will be posted the morning after the homework assignment is due. These concepts require care and the sooner you are able to tackle the content and solutions, the easier the course will become.

Conduct: Please refer to the Catalogue or Student Handbook for Code of Student Conduct. Cheating is a violation of the Code of Student Conduct and will not be tolerated in class; to do so may result in a grade of "F". It can lead to permanent expulsion from this college. Cheating includes allowing someone to copy from your work.
**You may not use a Calculator that has a Qwerty keypad on the exams.