

CS 406 – DISCRETE MATHEMATICS 2 & STATISTICS

Spring 2022 Syllabus

INSTRUCTOR: Dr. Stephan Ohl

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OFFICE HOURS: via Zoom with appointment

COVID-19 PANDEMIC

In the midst of this pandemic, it is extremely important that you abide by public health regulations and University of Pittsburgh health standards and guidelines. While in class, at a minimum this means that you must wear a face covering and comply with physical distancing requirements; other requirements may be added by the University during the semester. These rules have been developed to protect the health and safety of all community members. Failure to comply with these requirements will result in you not being permitted to attend class in person and could result in a Student Conduct violation. For the most up-to-date information and guidance, please visit coronavirus.pitt.edu and check your Pitt email for updates before each class.

COURSE DESCRIPTION

CS 0406 is a course intended for Computer Science majors. It is the sequel to Math 0401 and will include advanced topics in Discrete Mathematics for Computer Science and topics in Probability and Statistics. Discrete Math topics will include graphs, Boolean algebras, finite state machines and logic. Topics in probability and statistics will include combinatorics, elementary laws of means, variances and standard deviations, expected value and descriptive statistics.

OBJECTIVES

This course provides the student with the opportunity to develop a productive attitude towards mathematical modeling in the solution to problems and a beginning knowledge of probability and statistics.

LEVEL

Students are required to take this course as a prerequisite for CS0445 and CS0045. This course is intended to give the student additional background in discrete math topics and an introduction to probability and statistics. For a more well-rounded mathematical background students should take a full mathematical statistics course.

PREREQUISITES

MATH 0401 (Grade C- or better)

TEXT

Online zyBook Textbook:

1. Sign in or create an account at learn.zybooks.com
2. Enter zyBook code: PITTMATH0401OhlSpring2022
3. Subscribe

CANVAS

Information about the class including syllabus, announcements, assignments, and class notes is available through Canvas via the my.pitt.edu portal.

COURSE REQUIREMENTS

The requirements for CS 0406 include regular class attendance, reading of text assignments, completion of assigned problems in the text or handouts, quizzes, hourly exams and a comprehensive final exam. All work must be completed and handed in on time unless there are extenuating circumstances, which must be discussed with your instructor. Late work is due by the class date following the due date and will be downgraded accordingly.

Also, there will be no make-up privileges on exams or quizzes unless there are extenuating circumstances. You must notify your instructor if you must miss an exam or quiz before the scheduled exam or quiz or within two days after the exam or quiz is given.

Students should check the class website regularly for information on assignments, tests and general matters.

PLAGIARISM

Any form of plagiarism which include copying or imitating the language, ideas, thoughts, or work of another person and passing off the same as one's own work discovered by the instructor will result in a zero for the first offense and an F for the course for any subsequent offense.

GRADING REQUIREMENTS

Scores in this class are weighted as follows:

Final course grades will be determined as follows:

Exam 1:	30%	92% - 100% A
Exam 2:	20%	82% - 88% B
Statistics Final Exam:	25%	72% - 78% C
zyBook Exercises:	5%	62% - 68% D
Homework/Quizzes:	20%	Below 60% F

Plus and minus grades will be awarded to scores on the borderline based on actual score, attendance, overall work, attitude.

WITHDRAWING FROM CLASS

There are several dates to keep in mind regarding dropping a class from your schedule.

- *January 21, 2022* marks the end of the Add/Drop period for classes.
- *March 18, 2022* is the last date that you can withdraw from an individual class, with a grade of W on your transcript. After that date, you must obtain a "Late Withdrawal" form the Office of Academic Affairs to receive permission. Permission for "Late Withdrawal" is allowed only under extreme circumstances outside of the student's control.

- *April 8, 2021* is the last day to withdraw from all of your classes.

For more information, please consult the University of Pittsburgh at Johnstown academic calendar 2021-2022.

DISABILITIES

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Office of Health and Counseling Services, G4 Student Union, 814-269-7119 as early as possible in the term. The Office of Health and Counseling Services will verify your disability and determine reasonable accommodations for this course.

2022-01-08

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Spring 2022 Schedule

WEEK	SECTION	TOPICS
1, 2, 3	zyBook 7	Graphs and Their Representations
4, 5	zyBook 8	Trees
6, 7	zyBook 9	Boolean Algebra
8	zyBook 10	Finite State Machines
	EXAM 1	
9	Notes 1	Introduction
	Notes 2	Listing and Grouping
10	Notes 3	Measures of Location
	Notes 4	Measures of Variation
11, 12	Notes 5, zyBook 11	Probability
	EXAM 2	
13	Notes 6	Discrete Random Variables
14	Notes 7	Continuous Random Variables
	FINAL EXAM ON STATISTICS	

Notes:

1. This schedule is provisional and subject to change.
2. No class on Monday January 17 (Martin Luther King Jr. Day)
3. No classes during week days 7-11 March (Spring Break).
4. Last day of class is Friday April 22.

2022-01-08