Math 485: Graph Theory - Fall 2015

Mo, We, Fri 11:15am-12:05pm, 009 Life Sciences

General Information
Instructor: Professor K. Eisenträger
Office: 330 McAllister Building
Office Phone: (814) 863-4127
Office hours: We 10-11, Th 1:45-2:45, and by appointment
Textbook: Introduction to Graph Theory by Douglas B. West, Prentice Hall, 2001
Course webpage: http://www.personal.psu.edu/kxe8/courses/math485

Course Topics: This is an introductory graph theory course. Graph theory is an area of mathematics that has a rich theory, as well as many applications to other areas of mathematics, computer science, and electrical engineering.

The goal is to cover parts of chapters 1-6 and 8 from the text. Some of the topics we will cover in this course include

- Trees, Spanning trees.
- Shortest paths.
- Matchings and coverings.
- Connectivity and network flow.
- Colorings of graphs.
- Planarity.

Homework: There will be twelve homework assignments which will be collected and graded. Homework is due at the beginning of class on the given due date. Any assignment that is not turned in during class must be placed in the instructor’s mailbox before class. Late homework will not be accepted. You are encouraged to discuss the homework assignments with other students in the class; however, if you do, you should write on your homework submission the names of the students with whom you discussed the assignment. You are required to write up your own solutions in your own words. Finding solutions to homework problems from any outside source (e.g. a person, the web, a book) is not allowed. The two lowest homework scores will be dropped at the end of the semester.
Midterm Exams: Two in-class midterm exams will be given. The first midterm will be on Monday, September 28, 2015. The second midterm will be on Friday, November 6, 2015.

Final Exam: The final examination in the course will be comprehensive. It will be given during the university’s final examination week, December 14-18, 2015. Do not make plans to leave the university before the end of this week. Travel plans do not constitute an official university excuse for missing an examination or for obtaining a conflict or makeup examination. Conflicts for the final exam are determined by scheduling, they cannot be scheduled through the Mathematics Department. A student with a potential final exam conflict must take action to request a conflict exam through e-lion between September 28 and October 18, 2015.

NOTE: If you miss an exam without an official excuse (such as illness or official university business), then you may be allowed to take a makeup exam, but with an automatic 25% deduction from the grade. To avoid this deduction, you must notify the instructor, with your official excuse, before the date and time of the exam. This notification may be performed in person or via e-mail.

Course Grades: Grades will be assigned on the basis of 500 points, distributed as follows:

- Midterm Exam 1 125 points
- Midterm Exam 2 125 points
- Homework 100 points
- Final Exam 150 points

Guideline for letter grades: ≥ 450 points guarantees an A or A-, ≥ 400 points guarantees a B+, B or B-, ≥ 350 points guarantees a C+ or C, ≥ 300 points guarantees a D, and below 300 points will get an F. Note that these ranges may be adjusted downward.

Academic integrity statement: All Penn State policies regarding ethics and honorable behavior apply to this course.

Disability Statement: Penn State welcomes students with disabilities into the University’s educational programs. Every Penn State campus has an office for students with disabilities. The Office for Disability Services (ODS) Web site provides contact information for every Penn State campus: http://equity.psu.edu/ods/dcl. For further information, please visit the Office for Disability Services Web site: http://equity.psu.edu/ods.