

MATH 495
GRAPH THEORY

Nicholls State University, Summer 2011

Instructor: Dr. Brian Heck
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My office hours are 9:00-10:00 am and 3:30-4:30 pm M-Th. Please contact me (by phone, by email, or in person) during these times if you have any questions. If you need assistance at a different time, contact me and we'll work something out.

Prerequisite: Math 358.

Text: There is no required text. We will use class notes.

Course Description: We will cover the basics of graph theory including notations and terminology, simple graphs, bipartite graphs, planar graphs, cycles, digraphs, trees, paths, matchings, colorings, and Eulerian circuits. We'll also cover important theorems such as Min-Max Theorem, Tutte's 1-Factor Theorem, Menger's Theorem, Turan's Theorem, and Kuratowski's Theorem (as time allows).

Course Objectives: At the completion of this course, a student will be able to:

- Demonstrate knowledge of the vocabulary of graph theory
- Prove graph theoretical propositions using definitions and theorems
- Communicate results orally and in writing
- Use theorems of graph theory to solve problems

Grading Structure: There will be four equally weighted components to this course: problem sets, online assignments, midterm exam, and final exam. These will be described fully below.

Problem Sets/Online Assignments: Several times throughout the semester (maybe 4-7 times), I will assign problems to be turned in within a couple of days. Additionally, as a hybrid course, you will regularly have online assignments. These will be discussions of topics covered in class and further explorations of selected problems.

Exams: We will have a midterm exam and a final exam. Both exams will be in class, required, and comprehensive.

At the conclusion of the semester, letter grades will be assigned based on the usual 10% grading scale (A: 90-100%, B: 80-89%, C: 70-79%, etc). Late problem sets or past due online work will not be accepted unless there are VERY unusual circumstances, and make-up exams will only be administered if the student provides a valid excuse. The instructor decides which excuses are valid. Academic dishonesty (i.e. cheating, plagiarism, etc.) will not be tolerated. Sanctions for such behavior are outlined in the *Code of Student Conduct* (Section 1.9).

Special Note: Section Five of the Code of Student Conduct, 'Academic Dishonesty and Disruptive Behavior,' includes a requirement that faculty file a charge complaint statement with their respective dean whenever a student is confronted or disciplined for cheating. The Office of Academic Affairs will maintain these records, and any student confronted and/or disciplined for multiple offenses of academic dishonesty will be brought before the Academic Affairs Integrity Committee for further review and potential sanctions. Please read the Code of Student Conduct for further details regarding this policy."

Important Dates

'W' Day – Friday, July 8, 2011

Attendance: I will not include attendance as part of your course grade. I do, however, expect you to attend class everyday. You are responsible for all material covered in class.

Academic Grievances: The proper procedure for filing grade appeals or grievances related to academic matters is listed in Section 5 of the *Code of Student Conduct* and at the following link: www.nicholls.edu/documents/student_life/code_of_conduct.pdf.

Continued Learning following an Extreme Emergency: In order to make continued learning possible following an extreme emergency

students are responsible for:

- reading regular emergency notifications on the NSU website;
- knowing how to use and access Blackboard (or university designated electronic delivery system);
- being familiar with emergency guidelines;
- evacuating textbooks and other course materials;
- knowing their Blackboard (or designated system) student login and password;
- contacting faculty regarding their intentions for completing the course.

faculty are responsible for:

- their development in the use of the Blackboard (or designated) software;
- having a plan for continuing their courses using only Blackboard and email;
- continuing their course in whatever way suits the completion of the course best, and being creative in the continuation of these courses;
- making adjustments or compensations to a student's progress in special programs with labs, clinical sequences or the like only in the immediate semester following the emergency.

Americans with Disabilities Act (ADA) Students with a documented disability are entitled to classroom accommodations under the ADA. To receive accommodations, contact the Office of Disability Services at (985) 448-4430 or 158-A Shaver Gym. Additional information can be found at www.nicholls.edu/disability.

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Hybrid Class Schedule

<u>Date</u>	<u>In-Class</u>	<u>Online</u>
Thursday, June 2	X	
Monday, June 6	X	
Tuesday, June 7	X	
Wednesday, June 8		X
Thursday, June 9	X	
Monday, June 13		X
Tuesday, June 14		X
Wednesday, June 15	X	
Thursday, June 16	X	
Monday, June 20		X
Tuesday, June 21	X	
Wednesday, June 22	X	
Thursday, June 23	X	**Midterm Exam**
Monday, June 27		X
Tuesday, June 28		X
Wednesday, June 29		X
Thursday, June 30		X
Monday, July 4	<i>NO CLASS</i>	<i>Happy Independence Day!</i>
Tuesday, July 5	X	
Wednesday, July 6		X
Thursday, July 7	X	
Monday, July 11		X
Tuesday, July 12	X	
Wednesday, July 13		X
Thursday, July 14		X
Monday, July 18	X	
Tuesday, July 19		X
Wednesday, July 20	X	
Thursday, July 21	X	
Monday, July 25		X
Tuesday, July 26	X	
Wednesday, July 27	X	
Thursday, July 28	X	**Final Exam 6:00-8:00pm**