

MATH 4171 GRAPH THEORY

Spring, 2004

M W F 12:30 – 1:30 Lockett 132

Teacher: James Oxley, Lockett 370, 578 1577, oxley@math.lsu.edu

Office Hours: MWF 11:00 – 12:00 and by appointment.

Text: *Graphs and digraphs*, Third edition, G. Chartrand and L. Lesniak, Chapman & Hall/CRC, 1996. Please consult the teacher before buying the book.

Syllabus: This is an introductory course in graph theory that will cover a selection of topics from the following list, including the first eight:

1. Basic Definitions and Examples
2. Paths and Cycles
3. Trees
4. The Minimum Spanning Tree Problem
5. Eulerian Graphs
6. Hamiltonian Cycles
7. Shortest Paths
8. Planar Graphs
9. Flows in Directed Graphs
10. Connectivity and Menger's Theorem
11. Vertex Coloring
12. Matchings
13. Tutte's 1-Factor Theorem

Some sections of the book will be omitted and others will be augmented. If you miss class, you should be sure to get the class notes from someone as the material covered may not be in the book or may not be treated in the same way as in the book.

Assessment:

Three tests @ 20% each	60%
Quizzes/homework	10%
FINAL	30%

Exams and quizzes will include problems where **proofs are required**.

There will be no make-ups on quizzes. Everyone drops his/her worst quiz.

If you must miss a test, call the teacher (578 1577) or leave a message with the Math. Department secretary (578 1665) **on or before the test day**. It is the student's responsibility to contact the teacher in a timely fashion so that a make-up can be arranged.

Final Exam: This will be comprehensive, covering the whole course. It will be held

Friday, May 14, 2004, 7:30 – 9:30 PM.