COURSE INFORMATION

Instructor: Louiza Fouli
Office: WH 214
Email: lfouli@math.nmsu.edu
Telephone: 575-646-2201
Website: http://www.math.nmsu.edu/ lfouli
Course Website: http://www.math.nmsu.edu/ lfouli/courses/spring10/index.html
Class Time: Tues-Thu 2:35-3:50pm SH 111
Office Hours: Tuesdays 1:30-2:30pm
Wednesdays 2-3pm
Thursdays 10:30-11:30am
Or by appointment

COURSE OBJECTIVES:

We will combine ideas from graph theory and algebraic structures such as rings and monoids to investigate properties of graphs through the study of edge ideals. We will study the development of graphs, perfect graphs and their relation to linear optimization. We will spend a good part of the course discussing properties of graphs through the study of certain types of ideals called edge ideals.

PREREQUISITES:

Math 481, or Math 331 and Math 280, or Math 331 and Math 480. You should also have been introduced to the notion of a ring, polynomials, monomials and ideals. We will develop most of these notions as needed.

TEXTBOOK:

We will not be using a specific textbook. Notes will be developed as we go along and will be made available. Some reference books will be on reserve in the library.

ASSIGNMENTS, EXAMS AND GRADES:

HOMEWORK:

I will assign homework assignments on a weekly basis. Assignments will typically be due on Thursdays at the beginning of class. No late homework will be accepted. Graduate students will be asked to work extra problems as part of the homework assignments. The homework assignments will be announced in class and posted on the course website as well as blackboard: http://learn.nmsu.edu

EXAMS:

There will be two midterm exams given throughout the semester. The tentative dates for the exams are:

Exam 1: March 4th
Exam 2: April 22nd

If you have a conflict with the exam times, let me know immediately.
Final Exam:

The final exam will be cumulative. It is scheduled for Thursday, May 6th 2010, 3:30pm-5:30pm.

Grades:

I will use the following allocation for calculating your final grade:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>20%</td>
</tr>
<tr>
<td>2 Exams</td>
<td>25% each</td>
</tr>
<tr>
<td>Cumulative Final Exam</td>
<td>30%</td>
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Your final (letter) grade will be determined approximately by the usual 90-80-70-60 % cut-offs of a total numerical grade. The instructor reserves the right to modify the grading scale if considered appropriate. Changes (if any) would be in the students’ benefit. The grades will be posted on blackboard throughout the semester.

Graduate Students:

As mentioned above graduate students will be asked to work extra problems as part of the homework assignments. In addition they will present a lecture on one topic of their choice during the semester. Please see me in private to discuss the possible topics you could present. The presentation will be graded and will replace 5% of the final exam grade.

COURSE POLICIES:

Attendance:

It is your responsibility to attend class. I expect you to arrive on time and to remain for the full class period.

Withdrawals and Incompletes:

You have the primary responsibility for withdrawing from the course. I will authorize the secretary in the Math Office (SH 236) to sign drop slips for me, in case I am not available. The last day to drop a course online (not recorded on academic record) is January 27, 2010. The last date to drop with a “W” is March 9th, 2010. Under university policy the letter grade “I” is allowed only if a student has passed the first half of the course, and is precluded from completion of the second half of the course by a documented illness or family crisis.

Academic Misconduct:

It is assumed that you have familiarized yourself with the portion of the student handbook and catalog pertaining to academic misconduct. Please be aware that such misconduct, including but not limited to plagiarism, is subject to disciplinary action. Students should note that both intentional and unintentional plagiarism is prohibited. Students may refer to the following websites for more information. The current University definition of plagiarism can be found at:

http://www.nmsu.edu/%7Evpsa/SCOC/misconduct.html

Discrimination:

Feel free to call Gerard Nevarez, Director of Institutional Equity at 575-646-3635 with any questions you may have about NMSUs Non-discrimination Policy and complaint of discrimination, including sexual harassment.

Disabilities:

Feel free to call Student Accessibility Services at 575-646-6840 with any questions you may have on student issues related to the Americans with Disabilities Act (ADA) and/or Section 504 of the Rehabilitation Act of 1973. All medical information will be treated confidentially.