Math 3280: Differential Equations & Linear Algebra

Fall 2014 - MWTHF SCC 21, T MonH209

Section 3: 10-10:50
Section 5: 11-11:50

Instructor: Diana Colt, PhD   Email: dcolt1@d.umn.edu   Phone: 726-6353

Office: SCC 72   Office hours: MF 1:30-3 W 1-3

Webpage: http://www.d.umn.edu/~dcolt1

Lab assistant: Evan Oman   Email: omanx094@d.umn.edu   Office: SCC 152


Prerequisites: Calculus II (Math 1297) with a C- or better

Course Content:

Matrices and matrix algebra, solutions of linear algebraic equations, determinants, matrix inversion, vector spaces, eigenvalues, eigenvectors, first, second, and higher order differential equations, Laplace transforms, systems of differential equations, and applications.

Homework:

Homework problems will be assigned at the end of each section. These will not be turned in but are expected to be completed as an essential part of mastering the material.

Homework Notebook:

It is highly recommended that a separate homework notebook be maintained by each student. **If you choose not to maintain one you will not be penalized. It is not a requirement.** If you choose to maintain one it must adhere to all conditions stated here. The notebook should be a single subject 8.5 X 11 inch **bound** notebook. Nothing else should be in the notebook besides assigned hw problems. The notebook should have your name, the class name, your section number, and time **written in permanent marker** on the front. Problems should be worked out on scratch paper and then re-written in final form in the notebook. You will be allowed to use your homework notebook on quizzes if you choose to maintain one. You are not allowed to use anyone else’s homework notebook on a quiz and you are not allowed to copy someone else’s work into your notebook (including from solutions manuals/online resources). All items in your notebook should be based on your own thought process and be your own work. Homework notebooks can be randomly collected with your quiz when they are used. If you have not abided by the rules of the notebook you will receive a zero on the quiz and will be subject to the student academic integrity policy/student conduct code.

Quizzes:

There will be regular quizzes that will serve as a check for student understanding of the class material. Quizzes will be based directly on the assigned homework and lecture notes. Again, if you choose to maintain a homework notebook that abides by the stated requirements you will be allowed to use it on the quizzes. Your lowest quiz score will be dropped.
Exams:

There will be 3 regular exams given during the semester and a comprehensive final exam will be given during finals week according to the University final exam schedule:

**Section 3 (10 a.m.):** Wednesday December 17th 10-11:55 in our usual room.
**Section 5 (11 a.m.):** Tuesday December 16th 10-11:55 in our usual room.

Absences:

Students are expected to attend all scheduled class meetings. It is the responsibility of students to plan their schedules to avoid excessive conflict with course requirements. However, there are circumstances that lead to an excused student absence from the classroom.

1. Students may not be penalized when legitimate and verifiable circumstances lead to their absence from attending class or taking a final exam in a credit bearing course. These are subpoenas, jury duty, military duty, religious observances, illness (this includes illness of a dependent in the student’s care), and bereavement for immediate family. NCAA varsity intercollegiate athletics are also considered legitimate and verifiable circumstances for excused absences. Student athletes must provide instructors the team schedule during the first week of the semester.

2. A student must notify instructors of circumstances identified above prior to the expected absence or as soon as the circumstance leading to the absence from class is known. Students must also provide written documentation to verify the reason for the absence.

If conditions in (1) apply and (2) is met the instructor will provide a make-up test that must be taken within a reasonable timeframe at the instructor’s discretion. In the case of missed quizzes, the lowest quiz score is dropped thus a student may miss one quiz without penalty. If more than one quiz is missed, the student will have to provide documentation that all missed quizzes are due to excused absence reasons. Only under this case will some alternative be offered.

Labs:

Computer lab assignments which involve the use of the computer software package MATHEMATICA will be completed with your Graduate Teaching Assistant during the reserved lab class period. Lab assignments will be collected during that reserved period by your t.a. and returned during that reserved period by your t.a. Your lowest lab score will be dropped.

Grading Weights:

For ethical reasons and fairness, grading is done uniformly. Extra credit is not available, and personal reasons as to why a score was low are not considered in grading. Scores will be available to you on egradebook. Grades are weighted as stated below:

Exams: 17% each * Final Exam: 24% * Labs: 6% * Quizzes: 15% * In-class Activities: 4%

Your final exam percentage (if higher) will replace your lowest exam percentage.

Grading Scale:

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<thead>
<tr>
<th>94-100% A</th>
<th>90-93% A-</th>
<th>87-89% B+</th>
<th>83-86% B</th>
<th>80-82% B-</th>
<th>77-79% C+</th>
</tr>
</thead>
<tbody>
<tr>
<td>73-76% C</td>
<td>70-72 C-</td>
<td>67-69% D+</td>
<td>60-66% D</td>
<td>59 and below F</td>
<td></td>
</tr>
</tbody>
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Communicating Devices:

Cellular telephones and other communication devices, including iPods, are prohibited during class. Do NOT have them visible. Please inform me of any circumstance that may need special consideration. Having any communicating device out during a quiz or exam will be considered cheating and result in an immediate zero.

Student Academic Integrity Policy:

Academic dishonesty tarnishes UMD's reputation and discredits the accomplishments of students. UMD is committed to providing students every possible opportunity to grow in mind and spirit. This pledge can only be redeemed in an environment of trust, honesty, and fairness. As a result, academic dishonesty is regarded as a serious offense by all members of the academic community. In keeping with this ideal, this course will adhere to UMD's Student Academic Integrity Policy, which can be found at http://www.d.umn.edu/conduct/integrity. This policy sanctions students engaging in academic dishonesty with penalties up to and including expulsion from the university for repeat offenders.

Student Conduct Code:

The instructor will enforce and students are expected to follow the Board of Regents Student Conduct Code found at http://regents.umn.edu/sites/regents.umn.edu/files/policies/Student_Conduct_Code.pdf. Appropriate classroom conduct promotes an environment of academic achievement and integrity. Disruptive classroom behavior that substantially or repeatedly interrupts either the instructor's ability to teach, or student learning, is prohibited. Disruptive behavior includes inappropriate use of technology in the classroom. Examples include ringing cell phones, text-messaging, watching videos, playing computer games, emailing, or surfing the Internet on your computer instead of note-taking or other instructor-sanctioned activities.

Special Needs:

Individuals who have a disability, either permanent or temporary, which might affect their performance in this course, are encouraged to inform me at the beginning of the semester. Adaptation of methods, materials or testing may be arranged in order to meet your needs. More information can be found at www.d.umn.edu/access.