MATH 306: Matrix and Power Series Methods  Spring 2014

Lectures:  MWF 8:00 – 8:50 am, KIDD 364  
and  
MWF 9:00 – 9:50 am, WNGR 116

Instructor: Mathew Titus  
Office: 348 Snell  
e-mail: titusm@math.oregonstate.edu

Office Hours:  
M: 1 – 2  
W: 12 – 1  
F: 11 - 12  

MLC Hours:  
T: 3 – 4

Web Site:  http://www.math.oregonstate.edu/people/view/titusm


Topics:  MTH 306 will move at a fast pace. We plan to cover most of the textbook. Topics will include introduction to matrix algebra, determinants, systematic solution to linear systems, and eigenvalue problems. Convergence and divergence of series with emphasis on power series, Taylor series expansions, convergence tests for power series, and error estimates for truncated series used in practical approximations.

Grading:  

<table>
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<tr>
<th>Component</th>
<th>Points</th>
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<tbody>
<tr>
<td>Group Work</td>
<td>64</td>
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<tr>
<td>Quizzes</td>
<td>56</td>
</tr>
<tr>
<td>Midterm</td>
<td>120</td>
</tr>
<tr>
<td>Final</td>
<td>120</td>
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<td><strong>Total</strong></td>
<td>360</td>
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The course grades will not be ‘harder’ than:  
A-/A  90 – 100%,  
B-/B/B+  80 – 89%,  
C-/C/C+  70 – 79%,  
D-/D/D+  60 – 69%, and  
F  59% and under.

Homework will be consist of a set of suggested problems posted each week on the course website. The problems will not be due. See: http://people.oregonstate.edu/~titusm/teaching.html

The 8 group projects are worth 8 points each and are done during recitation each week for a possible total of 40 points. You must be present and participating in order to hand in the lab at the end of each recitation.

Quizzes will be about 3 to 4 questions long, each question being drawn from the suggested problems given that week. They will be administered during the final 20 minutes of recitation. Each is worth 8 points.
Test Dates:
Rooms will be announced in lecture, recitation, and on the web

<table>
<thead>
<tr>
<th></th>
<th>Time</th>
<th>Date</th>
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<tbody>
<tr>
<td>Midterm</td>
<td>8:30 – 9:50 pm</td>
<td>Tuesday, May 6th</td>
</tr>
<tr>
<td>Final</td>
<td>8:00 – 9:50 pm</td>
<td>Wednesday, June 11th</td>
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Quizzes, and tests are closed book. Two 3-by-5 inch notecards will be allowed on the midterm and final. No calculators are allowed on exams or quizzes. The final will not be cumulative.

Extensions will only be given if they are requested on or before due dates. Midterms and final tests cannot be rescheduled or taken early. There will be no ‘Incompletes’ given for this course.

Any requests for extensions/special accommodations must be made in advance, in writing (email), to Mathew Titus.

Save all returned work as any disagreement in scores posted on course web site can only be resolved by producing the graded work.

Any disagreement in scoring must be addressed within one week of the work being returned to you.

Please be considerate of other students by taking conversations out of the hall.

The Math Learning Center MLC in Kidder 108 is a great place to drop in for help. It’s open from 9am to 4 pm M-F from the second week of classes through the end of dead week.

I will be in the MLC at some point each week (time TBD).

Students with documented disabilities who may need accommodations, who have any emergency medical information the instructor should know of, or who need special arrangements in the event of evacuation, should make an appointment with the instructor as early as possible, no later than the first week of the term.

Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 737-4098.

http://ds.oregonstate.edu/home/index.php
**Prerequisite:** MTH 252

**Expectations** for students:

Students will attend all lectures and recitations.

Students will read through the section(s) being covered in lecture the night before.

Students will work on homework problems as the material is covered in class.

Students will search out and work out more problems from the text to get adequate practice.

Students will consider a topic mastered if they can set up and solve problems without using text, notes, homework, or other help.

Students will seek out help at the MLC, Collaborative Learning Center, TA and/or instructor office hours when they are having questions on the material, homework and labs.

You will be expected to conduct yourself in a professional manner. Academic dishonesty such as plagiarism and cheating will not be tolerated. Therefore, students are expected to be honest and ethical in their academic work. Academic dishonesty is defined as an intentional act of deception in one of the following areas:

* cheating- use or attempted use of unauthorized materials, information or study aids,
* fabrication- falsification or invention of any information,
* assisting- helping another commit an act of academic dishonesty,
* tampering- altering or interfering with evaluation instruments and documents, or
* plagiarism- representing the words or ideas of another person as one's own.

For more information about academic integrity and the University's policies and procedures in this area, please refer to the Student Conduct web site at: [http://www.orst.edu/admin/stucon/achon.htm](http://www.orst.edu/admin/stucon/achon.htm) and the section on Academic Regulations in the OSU Schedule of Classes.