MAP 2302 Elementary Differential Equations

Spring 2017

Section 022H
Period MWF 5th
Meeting Time 11:45 a.m. – 12:35 p.m.
Room LIT 201

Professor Alexandre Turull
480 Little Hall
(352) 392-0281 ext 243
turull@ufl.edu

Office Hours

<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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Also by appointment

- Calendar — Lecture topics and their approximate dates.
- Homework Problems — List of homework assignments.

Textbook:
Fundamentals of Differential Equations, by Nagle, Saff and Snider, eighth edition. We will cover most of chapters 1-4 and 6-8.

Content:
MAP 2302 is a 3 credit course which gives the basic elementary knowledge necessary for understanding, applying, and solving differential equations of the most usual types (Chapters 1, 2, 4, 6, 7, and 8 of the text).

This course is designed to serve students in engineering, physics, mathematics and related areas. It is taught in lecture format in small sections, with grading, computer usage and laboratory projects instructor dependent.

The course starts with an introduction to the concept of differential equations. It covers first order methods, including separability, exactness, integrating factors, first order linear equations, Bernoulli’s equations, and second order equations reducible to first order ones. It also includes applications, including mechanics.

The course continues with higher order methods for constant coefficient linear equations including particular solutions and general solutions by the method of undetermined coefficients. Applications include vibrating springs, resonance, and electrical circuits.

The course covers Laplace transform methods, including properties of the Laplace transform, solution of initial value problems, and applications.

The course also covers series solutions of differential equations, including the study of ordinary and singular points, and the method of Frobenius.

Format:
Lectures. Reading and homework will be assigned and discussed in class. You are expected to participate in classroom discussions. Homework will be assigned regularly and discussed in class. Homework will not be graded. There will be frequent quizzes.

Calculator policy:
There will be no calculator or computer allowed in any exam or quiz.

Tests:
There will be four 60-point tests and a cumulative final. All tests and the final will be in our regular classroom.

Test 1: Friday, February 3, Test 2: Friday, February 24, Test 3: Friday, March 24, Test 4: Monday, April 17.

Final: Thursday, April 27, 10:00 a.m. — 12:00 p.m.

Quizzes:
There will be frequent unannounced quizzes.

Final grade:

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<tr>
<td>4 tests</td>
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<tr>
<td>Final</td>
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<tr>
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<thead>
<tr>
<th>Grade</th>
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<tr>
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<tr>
<td>A-</td>
<td>≥ 346</td>
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<td>B+</td>
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<td>B</td>
<td>≥ 320</td>
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<td>C</td>
<td>≥ 280</td>
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<td>C-</td>
<td>≥ 266</td>
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<td>D+</td>
<td>≥ 253</td>
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<td>D</td>
<td>≥ 240</td>
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UF grading policies for assigning grade points
See https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Students with disabilities
Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, http://www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Attendance policy
Students are expected to attend class regularly. The UF policy on attendance is here: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

Honor Code
UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code.” On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (http://www.dso.ufl.edu/scor/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obliged to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor of this class.

Course evaluation:
Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results/

Website:
http://people.clas.ufl.edu/turull/s17-map2302-syllabus