



MAP 2302/5590 (Fall2019) Elementary Differential Equations

Instructor

Prof. Peter Sin

Time and Location

MWF Per. 3, Little 125.

Office Hours:

M4 T6 Little 362, and by appointment.

Description and Goals

Differential equations arise as mathematical models of physical phenomena. Students will learn how differential equations are derived from physical assumptions. They will also study the algebraic and analytical methods for solving a few types of important differential equation where an exact solution is possible, and gain a qualitative understanding of the solutions of equations that cannot be solved exactly.

Textbook

Fundamentals of Differential Equations, by Nagel, Saff and Snider (7th ed.)

You may use other editions of this book but, if you do, you need to be aware that problems may be numbered differently and it will be your responsibility to find the correct list of homework problems.

Course Calendar

[calendar2302-Fall2019.pdf](#)

Sample exams

[sample test 1](#)

[sample test 2](#)

[sample test 3](#)

[sample final questions \(from old exams — scoring is different\)](#)

[more sample final problems](#)

Homework

The list of homework problems appears below. You should try to solve **all** of the assigned problems.

Chapter 1:

Sect. 1.1: 1-17.

Sect. 1.2: 1,2,3,5,9,13,15,19,21,22,25,26,31

Sect. 1.3: 1,2,7,11,13

Sect. 1.4: 1,2,5,7,12.

Chapter 2:

Sect. 2.2: 1,5,7,8,13,19,21,22,23,29,34.

Sect. 2.3: 1,3,5,7,10,15,17,18,21,23,28,31.

Sect. 2.4: 1,7,10,11,15,17,22,23,25,27

Sect. 2.5: 1,3,5,7,9,11,13.

Chapter 4:

Sect. 4.1: 7,9

Sect. 4.2: 1,3,5,13,15,17,21,23,35,42,44,46.

Sect. 4.3: 1,3,5,9,11,13,15,21,23,25,32,33,34.

Sect. 4.4: 1,3,4,6,8,9,11,13,15,21,25,27,33.

Sect. 4.5: 1,3,5,7,9,11,14,18,19,25,29,35,38,41,43.

Sect. 4.6: 1,3,5,10,11,13,20.

Sect. 4.7: 1,2,3,5,11,15,30.

Sect. 4.8: 1,5,7,11

Sect. 4.9: 3,9,11

Sect. 4.10: 5,11.

Chapter 7:

Sect. 7.2: 1,3,5,7,11,13,15,19,21,23,25,27,29

Sect. 7.3: 1,3,5,7,9,11,13,15,17,19,21,23,25,29,31,36

Sect. 7.4: 1,3,5,7,11,13,15,17,21,23,25,27,29

Sect. 7.5: 1,3,5,7,9,11,13,15,17,25,35,37

Sect. 7.6: 1,3,5,7,9,11,13,15,17,21,23,25,27,29,31,33,34,36.

Sect. 7.7: 1,3,5,7,9,11,13,23,25,27.

Sect. 7.8: 1,3,5,7,9,11,13,15,17,19,21,23,25,27.

Chapter 8:

Sect. 8.2: 27, 28

Sect. 8.3: 1, 3, 7, 11, 13, 15, 19, 21, 27

Exams and Grading Policy

There will be three class exams (worth 25 points each) and a final (25 points). The dates and times appear in the course calendar. All exams, including the final, will take place in the usual classroom Little 125.

The final exam is on Monday, December 9th, 3 p.m.–5 p.m..

No make-up exams will be given except for documented special reasons, such as medical emergencies. Exams can be rearranged for student athletes only if I am notified at least three weeks in advance. It is the responsibility of each student to make sure that he or she is available to take every exam or, in the allowable cases, to inform me as soon as possible so that alternative arrangements can be made.

If you think that a score has been **computed incorrectly**, please bring the matter to my attention within one day of your work being returned.

If you think that your work has been **graded incorrectly**, please submit an appeal in writing within seven days of your work being returned, explaining your reasons in detail. Appeals may result in a higher, unchanged, or lower score, depending on the merit of the appeal. Decisions on appeals are final. The final exam cannot be appealed.

Grading Scale

Grades: A=90-100, A-=87-89, B+=83-86, B=78-82, B-=75-77, C+=70-74, C=65-69, C-=60-64, D=50-59, E=0-49

The UF regulations on grades are here: <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

The UF policy on minus grades is here: <http://www.isis.ufl.edu/minusgrades.html>.

Attendance and Late Policy

Attendance is mandatory, except for absences allowed by UF policies. I will check attendance frequently. Each noticed unexcused absence (after you are registered) carries a penalty of 1 point, subtracted from your score after the total (out of 100) has been computed.

The UF policy on attendance is here: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Special accommodations

Students requesting classroom accommodation must first register with the Dean of Student Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation.

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/sccr/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 Evaluations

Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria.

These evaluations are conducted online 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/>.

