

# **MAP 2302: Elementary Differential Equations**

## **SUMMER B 2021 Section 4D15 (12156)**

### **SYLLABUS/CALENDAR**

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#### **Course Instructor**

Name: Dr. Alex York

Office Hours: MTWRF 11:00AM-12:00PM, through Zoom

Office Hours Zoom Link: TBD

Email: [a.york@ufl.edu](mailto:a.york@ufl.edu)

#### **Class Meetings:**

MTWRF Period 2 (9:30AM-10:45AM), through Zoom

Class Meeting Zoom Link is in Canvas

Course homepage is located on Canvas, <http://elearning.ufl.edu>.

# MAP 2302 – ELEMENTARY DIFFERENTIAL EQUATIONS

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MAP2302 Elementary Differential Equations: Calendar, Summer B 2021

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	June 28 <b>First Day of Classes</b> L1: 1.1 LQ1	29 L2: 1.2 LQ2	30 L:5 2.2 LQ5 HW1-2	July 1 L6: 2.3 LQ6 Q1(L1-2)	2 L7: 2.4 LQ7 HW5-6	3
4	5 <b>HOLIDAY</b>	6 L8: 2.5 LQ8 Q2(L5-6)	7 L9: 2.6 LQ9 HW7-8	8 L10: Apps/Review LQ10 Q3(L7-9) HW9	9 Exam 1 review <b>Exam 1 (L1-9)</b>	10
11	12 L11: 4.1 LQ11	13 L12: 4.2 LQ12	14 L13: 4.3 LQ13 HW10-11	15 L14: 4.4 LQ14 Q4(L11-13)	16 L15: 4.5 LQ15 HW12-13	17
18	19 L16: 4.6 LQ16	20 L17: 4.7 LQ17 Q5(L14-15)	21 L18: 7.2 LQ18 Q6(L16-17) HW14-17	22 Exam 2 Review <b>Exam 2 (L11-17)</b>	23 L19: 7.3 LQ19 HW18	24
25	26 L20: 7.4 LQ20	27 L21: 7.5 LQ21	28 L22: 7.6/7.7 LQ22 HW19-21	30 L23: 7.7/7.8 LQ23 Q7(L18-21)	30 L24: 7.9 LQ24 HW22-23	31
Aug 1 HW24 Q8(L22-24)	2 Exam 3 Review <b>Exam 3 (L18-24)</b> Exam 1-3 makeup	3 L25/L26: 8.1/8.2 LQ25/LQ26 Q9(L25-26)	4 L27: 8.3 LQ27 HW24-26	5 L28: 8.4 LQ28 Q10(L27-28)	6 <b>Last day</b> Exam 4 Review HW27-28 <b>Exam 4 (L1-9, 11-17, 18-24, 25-28)</b>	7

All dates listed are the final due dates for the quiz, homework, and exam. Work must be complete by 11:59PM.

\*Semester Exams must be completed using Honorlock. They will be available from 12:00PM-10:00PM EST (You must submit your exam by 10:00PM in order to not be late).

## 2. INTRODUCTION

**2a COURSE CONTENT:** In MAP2302 we will cover Chapters 1 (Introduction), 2 (First order ODEs), 4 (Second Order ODEs), 7 (Laplace Transforms), and some of 8 (Series Solutions). A prospective student should have foundational knowledge from MAC2311-MAC2313 concerning derivatives and partial derivatives, integrals and integration techniques, power series including Taylor series.

This is an ONLINE VERSION of MAP2302 – all content is delivered online. Students view 32 online lectures and complete lecture quizzes in the course management system Canvas, and complete online homework and quizzes through Canvas. Students are encouraged to post questions and answers on the course discussion board in Canvas. Three semester exams and a final are posted in Canvas and administered through Honorlock.

### **2b REQUIRED MATERIALS:**

**Textbook: Fundamentals of Differential Equations** by Kent Nagle, Edward B. Saff, and Arthur David Snider, ninth edition, ISBN-13: 978-0321977069, ISBN-10: 0321977068. You may use the eighth edition if you prefer. The text's main use is as a reference for material and optional homework questions.

**Computer access and requirements:** All assignments should be taken on a computer, not cell phone or tablet, since there may be compatibility issues with Canvas and WebAssign. Be sure you are using a browser that works with WebAssign. Please check for [WebAssign browser recommendations](#). Any WebAssign questions should be directed to your instructor and/or the [WebAssign Student Support](#) 1-800-955-8275. In particular it has been noted that Safari has some issues with Canvas, so it is recommended that you do not use Safari when accessing assignments on Canvas.

**2c COURSE CALENDAR:** Check the course calendar for due dates and plan your schedule accordingly.

**2d E-LEARNING IN CANVAS:** UF Online's course management system, is accessed through [elearning.ufl.edu](http://elearning.ufl.edu). All course information including the course homepage, syllabus, and exam information are posted on this site. In addition, there is a mail tool and discussion forum for communication.

All grades are posted in Canvas. You are responsible for verifying that those grades are accurate. **You have one week after a score has been posted to resolve any grade concerns by contacting Dr. York. Grade disputes are not considered at the end of the semester. Keep in mind that the end of a Summer A/B term is very close to when grades are due. You must have all assignments/examinations completed when they are due to have accurate grades.**

**Please note:** Important course information is clearly communicated in this course guide and assignments and course materials are easily accessible through the Canvas modules. If you cannot find your answer in the resources above, there is also a **Discussion Forum** available in Canvas. Please use this to post questions and to supply answers to your fellow students. Your instructor will check the discussion forum regularly.

**2e LECTURES AND LECTURE QUIZZES:** The lectures in the course will be administered through Zoom. They will be recorded so that students can watch them in the event they are unable to attend class. Attendance of class is very strongly correlated with doing well in any course, and so you are strongly encouraged to attend lecture, participate, ask questions, and attend office hours if need be.

Each lecture administered in the course (besides exam reviews) will have an accompanying lecture quiz. These will be due the same day of the lecture.

**Lecture notes outlines:** You can download and print them out from the corresponding lecture notes page in Canvas. It is not a guarantee that the notes will be followed exactly, but they are a general outline of the material along with examples.

**2f STUDENTS WITH LEARNING DISABILITIES:** Students requesting class and exam accommodations must first register with the Dean of Students Office Disability Resource Center (DRC), <https://disability.ufl.edu/>. The DRC will provide a documentation letter to the student to present to Dr. York. This must be done as early as possible in the semester, **at least one week before the first exam**, so there is adequate time to make proper accommodations and the accommodations are not retroactive.

**2g ACADEMIC HONESTY:** Remember that you committed yourself to academic honesty when you registered at the University of Florida by agreeing to the Honor Pledge below:

#### **The Honor Pledge**

We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty 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.”

**Academic Honesty Guidelines:** “All students are required to abide by the Academic Honesty Guidelines which have been accepted by the University. The academic community of students and faculty at the University of Florida strives to develop, sustain and protect an environment of honesty, trust and respect. Students are expected to pursue knowledge with integrity. Exhibiting honesty in academic pursuits

and reporting violations of the Academic Honesty Guidelines will encourage others to act with integrity. Violations of the Academic Honesty Guidelines shall result in judicial action and a student being subject to the sanctions in paragraph XIV of the Student Code of Conduct.”

The Mathematics Department expects you to follow the Student Honor Code. We are bound by university policy to report any instance of suspected cheating to the proper authorities.

You may find the Student Honor Code and read more about student rights and responsibilities concerning academic honesty at the link [www.dso.ufl.edu/sccr/](http://www.dso.ufl.edu/sccr/).

In addition, we remind you that lecture videos are the property of the University/faculty member and may not be used for any commercial purpose. Students found to be in violation may be subject to discipline under the Student Conduct Code.

### 3. TESTING

**3a SEMESTER EXAMS:** During the semester, four exams will be given on the dates shown on the course calendar. The exams will be given in Canvas and administered through Honorlock. You will be given a 120 minute time limit once you start each exam. Each exam will be scored on a scale of 0 to 100 points. Each exam is worth 18% of your grade.

**Average/Replace policy:** The lowest of the four semester exams will be replaced by the average of the four semester exams. This average/replace policy will help to minimize the impact of a single poor performance but it will not completely disappear.

**3b IMPORTANT EXAM POLICIES:** MAP2302 requires that students take exams through Honorlock online on the listed dates. There are no exceptions to this. Students with conflicts, including regularly scheduled classes or traveling, must make advance arrangements to be present at the test. We allow a large window of time (12:00PM – 10:00PM US Eastern Time so that you can arrange a fitting time slot that works for you.

**The following applies to all exams:**

- (1) Students are responsible for material covered in lectures, reading assignments, and homework problems. Questions will test mastery of concepts and include challenging calculation problems.
- (2) In order to use Honorlock and take the Exams you will need a computer/device, webcam, and stable internet access. You will need to be using the Google Chrome browser (<https://www.google.com/chrome/>) and download the Honorlock Extension for Chrome ([www.honorlock.com/extension/install](http://www.honorlock.com/extension/install)). You can see the Honorlock Student Guide linked below for information on how to download and use Honorlock.
- (3) Bring only the following while taking an exam with Honorlock: two picture IDs (UF Gator One card and another (e.g. driver's license)) with a **legible signature** and blank scratch paper (up to 10 sheets).

**Cell phones and other electronic devices must be turned off and out of sight. They cannot be on the working area while you are taking an exam. If any such device rings or buzzes, your test will be considered to be compromised.**

Please see the Honorlock Student Guide at [Honorlock Student Guide](#) and the best practices guide at [Honorlock Best Practices](#)

**See Section 4e for the Exam Make-up Policies.**

#### 4. GRADING

**4a COURSE GRADE:** Your course grade is based on the following percentages:

4 Semester Exams 17.5% each (lowest replaced by average)
Quizzes 8% (drop the two lowest scores)
Lecture Quizzes 10% (drop the three lowest scores)
Homework 12% (drop the three lowest scores)

**There will be no additional curve in this course, and extra assignments for individual students to improve a grade are NOT possible.**

A	90%-100%	C	70%-73.49%
A-	87%-89.49%	C-*	67%-69.49%
B+	84%-86.49%	D+	64%-66.49%
B	80%-83.49%	D	60%-63.49%
B-	77%-79.49%	D-	57%-59.49%
C+	74%-76.49%	E	0%-56.49%

**\*NOTE** A grade of C- DOES NOT give Gordon Rule or General Education credit!

Grades that are within 0.5% of the next cutoff will be rounded up. There will be NO discussion concerning grades that do not fall within the 0.5% cutoff.

For a complete explanation of current policies for assigning grade points, refer to the UF undergraduate catalog: [catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx](http://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx)

**4b HOMEWORK:** Doing homework is essential to success in this course and is one of the best ways to prepare for quizzes and tests. Online homework is completed in Canvas. Homework is worth 10% of the grade. The lowest three scores are dropped. Each homework has three attempts. Students who miss parts of a multiple-part question should feel free to ask about which parts were missed.

**4c QUIZZES:** There will be ten quizzes covering 2-4 lectures with one attempt each. The lowest two scores are dropped. Quizzes are worth 8% of the course grade. **DO NOT wait until the last minute to submit your quiz; we will NOT extend time for computer issues or internet connectivity issues.**

**4d EXAMS:** Four exams will be given through Honorlock on the dates shown in the calendar. The fourth exam is comprehensive. Each is worth 17.5% of your grade. A hardwired connection (not wireless) is strongly recommended when working on quizzes, exams and /or submitting assignments. It is the student's responsibility to have reliable internet connection, sufficient internet speed and cleared cache and cookies before each exam. Webcams are required for use of Honorlock.

**4e MAKE-UP POLICIES AND EXTENSIONS:**

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- **QUIZZES, LECTURE QUIZZES, AND HOMEWORK:** We offer 2 drops on quizzes, 3 drops on lecture quizzes, and 3 drops on homework, so we do not provide make-ups for these assignments. To allow time for computer issues, it is recommended not to wait until final hours on the due day to start your assignments.
- **MAKE-UP EXAMS:** Students must provide valid documentation for requesting a make-up exam due to a scheduling conflict **by the end of the second week to avoid penalty.** If illness or other extenuating circumstances force you to miss an exam, contact Dr. York as soon as possible (no later than 24 hours after the exam) for approval to schedule a make-up exam. We do not consider traveling or lack of internet access as a valid excuse for a make-up exam.

Make-Up Exams will be administered the last Monday of the Summer B semester (Aug 2)

## 5. GENERAL EDUCATION INFORMATION

MAP2302 has been designated a General Education course that can be counted towards the Mathematical Science (M) requirement.

**Course Objective** – The General Education Objectives for Mathematics courses:

“Courses in mathematics provide instruction in computational strategies in fundamental mathematics including at least one of the following: solving equations and inequalities, logic, statistics, algebra, trigonometry, inductive and deductive reasoning. These courses include reasoning in abstract mathematical systems, formulating mathematical models and arguments, using mathematical models to solve problems and applying mathematical concepts effectively to real-world situations.”

The primary goal of the course is to help students understand ordinary differential equations of different orders.

## 6. ONLINE COURSE EVALUATION

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance

on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

## 7. DIVERSITY AND INCLUSION

The Mathematics Department is committed to diversity and inclusion of all students. We acknowledge, respect, and value the diverse nature, background and perspective of students and believe that it furthers academic achievements. It is our intent to present materials and activities that are respectful of diversity: race, color, creed, gender, gender identity, sexual orientation, age, religious status, national origin, ethnicity, disability, socioeconomic status, and any other distinguishing qualities.

**This syllabus is subject to change. You will be notified if any changes are made.**

### Tentative Book HW for extra practice (NOT COLLECTED FOR A GRADE)

	9 <sup>th</sup> edition	(mechanical clock)	8 <sup>th</sup> edition	(apple)
Lct	Section	Problems	Section	problems
1	1.1	1-11 odds		Same
2	1.2	1-11 odds, 21-27 odds		Same
3	1.3	1-7 odds, 11-17 odds		Same
4	1.4	1,3,5 take two steps only		Same
5	2.2	1-25 odds		Same
6	2.3	1-21 odds		Same
7	2.4	1-25 odds		Same
8	2.5	1-11 odds		Same
9	2.6	1-27 odds		Same
10	1 <sup>st</sup> order apps	2.4 33, 3.2 23-25, 3.3 1-5 odds		Same
12	4.2	1-19 odds, 27-31 odds		Same
13	4.3	1-25 odds	4.3	1-17 odds, 21-25 odds
14	4.4	1-25 odds, 27-31 odds		Same
15	4.5	9-35 odds	4.5	11-19 odds, 23-25 odds
16	4.6	1-11 odds		Same
17	4.7	9-13 odds, 19-20, 41-44	4.7	9-13 odds, 19-20, 37, 39
18	7.2	1-19 odds		Same
19	7.3	1-9 odds, 13-17 odds, 25		Same
20	7.4	1-25 odds		Same
21	7.5	1-7 odds, 12, 15-23 odds, no sketch		Same
22	7.6	1-17 odds, 21-23 odds, no sketch	7.6	1-17 odds
23	7.8 (convolution)	1-21 odds, 23, 25	7.7 (convolution)	Same
24	7.9 (dirac delta)	1-17 odds, no sketch, 25, 27	7.8 (dirac delta)	Same
25	8.1	1-5 odds, 9a		Same
26	8.2	1-5 odds, 11-13 odds, 17-27 odds, 29, 33		Same
27	8.3	1-27 odds		Same
28	8.4	1-15 odds		Same