

MAP 2302 Elementary Differential Equations
Spring 2022
Syllabus

Course Instructor: Dr. Nan Jiang

Online Office Hours in Zoom: Wednesday and Friday period 9

You must sign in your [UF Zoom](#) account to attend office hours.

Email: jiangn@ufl.edu

The course homepage is located in e-Learning CANVAS, <http://elearning.ufl.edu/>.

IMPORTANT: While taking this class online, you **MUST** take the exams with Honorlock on the dates shown on the course calendar and you **MUST** have steady internet access. You may receive a score of **ZERO** on the test if your internet connection drops during the test, for which a make-up exam may not be offered.

Course content: This course presents techniques for solving and approximating solutions to ordinary differential equations. We will cover the following topics: Introduction to Differential Equations (Ch 1), Methods for Solving First Order ODEs (Ch 2), Linear Second Order Equations (Ch 4), The Laplace Transform (Ch 7), and Series Solutions (Sections 8.1-8.4). Some applications will also be covered.

Course Objectives: This course is designed to serve students in engineering, physics, mathematics and related disciplines with the goal of understanding qualitatively, applying, and solving ordinary differential equations of the most usual types. After completing the course, students should be able to:

- identify different types of ordinary differential equations (linear, nonlinear, separable, linear, exact, homogeneous, Bernoulli),
- plot the direction field of a differential equation and use it to describe properties of solutions to initial value problems,
- use Euler's method to find numerical solutions to initial value problems,
- solve various types of first-order differential equations (separable, linear, exact, homogeneous, Bernoulli), initial value problems, and applications,
- provide the mathematical description of vibrating mechanical systems such as the mass-spring oscillator,
- use various methods to find general solutions and solve initial value problems of linear homogeneous and non-homogeneous second-order differential equations,
- compute the Laplace and inverse transforms of various functions,
- solve initial value problems and applications using the method of Laplace transforms,
- use the Convolution Theorem to find the Inverse Laplace transform,
- solve integral and integro-differential equations,
- find the transfer and the impulse response function for a differential equation,

- solve symbolic initial value problems,
- use some power series methods to solve ODEs and initial value problems.

This is an ONLINE VERSION of MAP2302—all content is delivered online. Students view 28 online **lecture videos** and complete **lecture questions/quizzes** in the course management system Canvas and complete **online homework** using MyLab Math. Students are encouraged to post questions and answers on the course **Discussion Board** in Canvas. **Three semester unit exams** and a **cumulative final exam** are posted in Canvas and administered through Honorlock.

Prerequisites: MAP2302 assumes that you have essential Calculus 2 (MAC2312) skills necessary to succeed in this course. Students should be able to do the work without a calculator. A grade of C in UF MAC2312 meets the minimum requirement for the course. We encourage students to review the prerequisite material to gain a strong knowledge in order to succeed in Differential Equations.

Required Materials: *Fundamentals of Differential Equations & Boundary Value Problems with MyLab Math* by R. Kent Nagle, Edward B. Saff and Arthur David Snider, 7th edition.

Please note that this course will be participating in the UF All Access program. Login at <https://www.bsd.ufl.edu/G1C0/IPay1f/start.aspx?TASK=INCLUDED> and Opt-In to gain access to your required course materials - UF All Access will provide you with your required materials digitally at a reduced price and the charges will post directly to your student account, allowing any available Financial Aid funds to cover the cost of your materials. This option will be available starting 1 week prior to the first day of classes and ending 3 weeks after the first day of class.

Course Communications and Technology: This section of MAP2302 is 100% online and asynchronous, meaning that there are no scheduled class meetings. Content will be delivered via pre-recorded lecture videos and assigned readings. Note that there are specific due dates for homework assignments, quizzes and exams, meaning that you will need to stay on track and complete assigned work on schedule to do well in this class. I will be available to assist you via online office hours. The preferred way to reach me outside office hours is via Canvas e-mail or direct e-mail. All students are expected to check the course web site on Canvas <http://elearning.ufl.edu> on a daily basis. In addition, I may use your UF e-mail for specific communications and, therefore, you should check it daily as well. You should enable Canvas notifications for this class, so that you are notified immediately about grading, assignment feedback, due date changes, announcements, etc.

Please review the [UF Resources and Policies](#) for available technical assistance, resources and UF policies.

You are responsible for having access to a working computer and have your work completed on time. Complete and submit your work early. If you wait and run into any difficulties to submit your work, you will be out of luck.

No calculators are allowed on quizzes or on the exams. A graphing calculator and Wolframalpha are useful as a study and learning tool when used appropriately, but are not essential.

Minimum technology requirements: The University of Florida expects students entering an online class to acquire computer hardware and software appropriate to his or her degree program. Most computers are capable of meeting the following general requirements. A student's computer configuration should include:

- Webcam
- Microphone
- Broadband connection to the Internet and related equipment (Cable/DSL modem)

All assignments should be taken on a computer, not cell phone or tablet, since there may be compatibility issues with CANVAS and MyLab Math. Be sure you are using a browser that works with MyLab Math.

Canvas: UF Online's course management system, is accessed through 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 me.** We will not consider these grade disputes at the end of the semester.

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.

Honorlock: Proctoring services are provided by Honorlock. Honorlock is an online proctoring service that allows students to take exams on-demand 24/7. There are no scheduling requirements. You will need a laptop or desktop computer with a webcam, a microphone, and a photo ID. The webcam and microphone can be either integrated or external USB devices. Honorlock requires that you use the [Google Chrome](http://Google.com) browser; furthermore, the Honorlock extension must be added to Chrome.

Beginning July 1, 2020, Honorlock has updated their minimum system requirements and will no longer support Windows 8, Windows 8.1, Mac OSX 10.11, or Mac OSX 10.12. After July 1, you can find the updated Minimum System Requirements, as well as a system compatibility test, at Honorlock's support page. Students are expected to review the Honorlock system requirements and use their compatibility tool before the end of the drop/add period by visiting <https://honorlock.com/support/> and scrolling down to the Simple Single-Click Test section of that page. The student guide to testing with Honorlock can be accessed via https://honorlock.com/wp-content/uploads/2019/09/Canvas_Student_Guide_Accessible.pdf. For further information, FAQs, and technical support, please visit [Honorlock](http://Honorlock.com).

Zoom: Zoom is an easy to use video conferencing service available to all UF students, faculty, and staff. You can find resources and help using Zoom at <https://ufl.zoom.us>.

Course Calendar: Check the course calendar for due dates and plan your schedule accordingly.

Lecture Videos: The lecture videos provide the main presentation of course material, and are accessed through the Canvas modules. To stay current with the course, we recommend watching the videos weekly following the schedule posted on the course calendar. **You should watch the lectures and answer the corresponding Lecture Quizzes before attempting homework.** You may contact me or post questions on the course discussion board if you need clarification of a topic.

It is possible to get ahead in this class if you complete each assignment early. If you have other commitments, adjust your schedule to **complete the assignments earlier rather than later.**

Lecture notes outlines: You can download and print them out from each module page in Canvas.

Grading: Your course grade is computed as follows:

Lecture Quizzes	10%
MyLab Math Homework	25%
Semester exams	45%
Cumulative Final exam	20%

The following grading scale applies.

A	≥ 90%	C	≥ 70%
A–	≥ 87%	C–	≥ 67%
B+	≥ 84%	D+	≥ 64%
B	≥ 80%	D	≥ 60%
B–	≥ 77%	D–	≥ 56%
C+	≥ 74%	E	< 56%

The current UF grading policies for assigning grade points is available here: <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

Grades will not be rounded and extra assignments for individual students to improve a grade are NOT possible. We will not review disputed points at the end of the semester. All grade concerns must be settled within one week of the submission.

Exams: There are three semester unit exams and a cumulative final exam given in Canvas on the dates shown on the course calendar and administered through Honorlock. Honorlock is an online proctoring service that allows you to take your exam from the comfort of your home. You DO NOT need to create an account, download software or schedule an appointment in advance. You will need a computer, a working webcam, and a stable Internet connection. To get started, you will need Google Chrome and to download the Honorlock Chrome Extension. You can download the extension at www.honorlock.com/extension/install. When you are ready to test, log into Canvas, go to your course, and click on your exam. Clicking "Launch Proctoring" will begin the Honorlock authentication process, where you will take a picture of yourself, show your ID, and complete a scan of your room. Step-by-step instructions can be found here: https://honorlock.com/wp-content/uploads/2019/09/Canvas_Student_Guide_Accessible.pdf. Honorlock will be recording your exam session by webcam as well as recording your screen. Honorlock also has an integrity algorithm that can detect search-engine use, so please do not attempt to search for answers, even if it's on a secondary device. Honorlock support is available 24/7/365. If you encounter any issues, you may contact them by live chat, phone (855-828-4004), and/or email(support@honorlock.com).

Note: You may NOT use a calculator or any other study aid for exams. Be sure to read the Honorlock student guide thoroughly to understand the exam procedures before you start a test.

Lecture Quizzes: MAP 2302 is organized into 28 lectures in Canvas, each lecture has an introductory page including the concepts to be covered, things you need to do for this lecture. From there, you may link to the **lecture videos** and a copy of the note outlines for each lecture. Viewing the video is an important aspect of the learning process. There are several **lecture questions** in **each Lecture Quiz** to be completed at the end of each lecture. You will earn points by completing lecture quizzes by the specified due date. You should work these problems after you watch the lectures and then enter your

answers directly in Canvas. We encourage you to use the text as well as the videos or the discussion board to help answer these questions. These questions pertain to the concepts recently covered. It is best to do them as soon as possible. Post questions on the course discussion board if you need clarification of a topic. The Broward Teaching Center at UF provides online tutoring support and is a valuable resource.

MyLab Math Homework: Online homework administered in MyLab Math is planned to review concepts and provide practice of the lecture material. The homework problems are graded by the software and you see your score immediately after submitting your work. You will have unlimited submissions for each problem, there are aids and a link to the e-text to help you solve questions. I want to encourage you to continue working on the homework so I will allow late submissions. However, keep in mind that you should stay on top of the homework due dates if you want to be successful in the exams. **All late submissions are due by Wednesday, April 20, 11:59pm.**

The MyLab Math Homework is open book and open note. If you are experiencing a problem with logging in, registration, or MyLab Math in general, please contact MyLab Math Support. Their contact information is on their homepage. Get the trouble shoot ticket number and email me after this.

Extra Credit: You may earn additional points in the following ways:

- **Syllabus Quiz:** In Canvas you will find the Course Orientation page. Read the syllabus and after you feel comfortable with the course policies listed, take the syllabus quiz posted in Canvas.
- **Exam Preparation:** Before each of the exams an Exam Review will be open in MyLab Math and a Practice Exam in CANVAS for practice and extra credit. You will have limited submissions per question and must be submitted by the due date. See the course calendar.

Make-up Policies and Extensions: Requirements for exams, assignments, and make-up work in this course are consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

- **Extensions for MyLab Math Homework:** While it is a much better strategy to work ahead, occasionally you may fall behind. I want to encourage to continue working on the homework so I will allow you to work on it even after the official due date with no penalty. **All late submissions are due by Wednesday, April 20, 11:59pm.** However, keep in mind that you should stay on top of the homework due dates if you want to be successful in the exams.
- **Make-up Lecture Quizzes:** Given the fact that lecture quizzes are open during an extended period of time, extensions will only be granted in case of documented serious illness, family emergencies, or other extenuating circumstances consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>
- **Make-up Exams:** Make-up exams will be allowed in the following cases:
 - In case of illness, upon receipt of a doctor's note or equivalent, or by following the procedure outlined here: <https://care.dso.ufl.edu/instructor-notifications>.
 - In case of religious holidays, by informing me via e-mail ahead of time.
 - In case of military duty, jury duty, participation in academic conferences, or participation in official university or UAA events, by providing appropriate evidence ahead of time.
 - In case of family emergencies or other extenuating circumstances, by following the procedure outlined here: <https://care.dso.ufl.edu/instructor-notifications>.

- **Other Make-ups:** There are no make ups and no extensions for the extra credit assignments.

We do not accept any late excuse documentation. Assignments and Exams will not be reopened, reviewed, offered or graded after the last day of the semester. You must immediately report to me any problems with any assignments. **Technical difficulties are not generally an excuse for missing a due date; students should have contingency plans in case any such issues arise.**

Students with Disabilities: Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center. Click [here](#) to get started with the Disability Resource Center. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Academic Honesty: 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 (<https://sccr.dso.ufl.edu/process/student-conduct-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor in this class.

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. 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 <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students <https://gatorevals.aa.ufl.edu/public-results/>.

Privacy Statement for Online Classes: Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

In addition, we remind you that *lectures and the course materials given in this class are the property of the University/faculty member and may not be taped/shared without prior permission from the lecturer and may not be used for any commercial purpose. Students found to be in violation may be subject to discipline under the Honor Code.*

Diversity Statement: I am committed to diversity and inclusion of all students in this course. I acknowledge, respect, and value the diverse nature, background and perspective of students and believe that it furthers academic achievements. It is my 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.

Campus Resources:**Health and Wellness**

U Matter, We Care: If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit <https://umatter.ufl.edu/> to refer or report a concern and a team member will reach out to the student in distress.

Counseling and Wellness Center: Visit <https://counseling.ufl.edu/> or call 352-392-1575 for information on crisis services as well as non-crisis services.

Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit <https://shcc.ufl.edu/>.

University Police Department: Visit <https://police.ufl.edu/> or call 352-392-1111 (or 9-1-1 for emergencies).

UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; <https://ufhealth.org/emergency-room-trauma-center>.

Academic Resources

E-learning technical support: Contact the UF Computing Help Desk at 352-392-4357 or via e-mail at helpdesk@ufl.edu.

Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.

Library Support: Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352-392-6420. General study skills and tutoring.

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