## Jason Harrington Department of Mathematics

College of Liberal Arts and Sciences

Home

Courses

MAD 4401

MAD 2502

**Publications** 

MAD 2502

# MAD 4401

### MAD 4401 Introduction to Numerical Analysis Spring 2021

Days	Period	Room	Section Number	
M W F	6 <sup>th</sup> (12:50-1:40pm ET)	FAC 127	14945	
MWF	6 <sup>th</sup> (12:50-1:40pm ET)	ONLINE	27092	
M W F	8 <sup>th</sup> (3-3:50pm ET)	LIT 217	14956	
M W F	8 <sup>th</sup> (3-3:50pm ET)	ONLINE	27098	

Instructor:

- Dr. Jason Harrington
- Email: mathguy@ufl.edu
- Website: https://people.clas.ufl.edu/mathguy/

#### **Teaching Assistant:**

- Jason Flynn
- Email: jasonmflynn@ufl.edu

**Course Description:** MAD 4401 is a 3-credit course covering numerical approximation techniques. Topics will include Numerical integration, nonlinear equations, linear and nonlinear systems of equations, differential equations and interpolation.

**Prerequisites:** MAS 3114 or MAS 4105 with a minimum grade of C and experience with a scientific programming language.

**Recommended Textbook:** <u>Numerical Analysis</u> by R. Burden, D. Faires, A. Burden, 10<sup>th</sup> Edition

ISBN-13: 978-1-305-25366-7

**Office Hours:** Monday 4<sup>th</sup> Period, Tuesday 6<sup>th</sup> Period, and Friday 7<sup>th</sup> Period on Zoom (Please see Canvas for the link). You may schedule extra office hours by e-mail.

**Grades:** Your course grade is based on 3 exams worth 45% total, a final exam worth 20%, homework will count 20% total, Labs will count 15% total. We will use the following scale:

A [90,100]; A-[87,90); B+[83,87); B [80,83); B-[77,80); C+[73,77); C [68,73); C-[64,68); D+[62,64); D [57,62); D-[55,57); E [0,55)

Your grade is your responsibility. You have exactly one week once your assignment has been returned to you to discuss that grade. After that week, the grade is final. No additional points will be awarded to "boost" your grade.

**Homework:** Homework will be assigned regularly and selected problems will be collected and graded. Credit will be taken off on any late assignment unless there is an acceptable excuse as judged by the instructor. Some of the assignments will include programming problems to be solved using a computer; any language will be acceptable as long as comments are included.

**Exams:** There will be three exams in class. The three exams dates provided on the schedule are TENTATIVE. Exam 1: February 10<sup>th</sup>, Exam 2: March 17<sup>th</sup>, and Exam 3: April 7<sup>th</sup>.

#### Final Exam Date: April 28, 2020. Time: 3:00-5:00PM

**Honor Code:** On all work submitted for credit by students, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

**Attendance Policy:** Registration in this course obligates the student to be regular and punctual in class attendance. All late work will be penalized. Students will **NOT** be given the opportunity to complete old assignments at the end of the semester to improve their grades. Excused absences are consistent with university policies in the undergraduate catalog (https://catalog.ufl.edu/UGRD/academicregulations/attendance-policies/) and require appropriate documentation.

**Calculator Policy:** You may need a scientific calculator, or graphing calculators to help with homework questions. Graphing calculators will be permitted on exams. You will also need to be familiar with computer software packages like Mathematica or Matlab.

**Computer Projects:** You will need to familiarize yourself with Mathematica and Excel. Mathematica and Excel is available to all UF students for free use at https://info.apps.ufl.edu/. You will be assigned a randomly generated group within Canvas.

**Online course evaluation:** 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

**Academic Honesty:** 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 UF honor code is available here: https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/

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

**Resources:** Free tutoring is available at the Teaching Center that is located on the ground level of SW Broward Hall. The regular hours are Monday-Friday, 8am-5pm. Please check the website http://www.teachingcenter.ufl.edu/ for any changes.

**Zoom Statement**: 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.

**Face-to-Face Statement**: We will have face-to-face instructional sessions to accomplish the student learning objectives of this course. In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.

- You are required to wear approved face coverings at all times during class and within buildings. Following and enforcing these policies and requirements are all of our responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.
- This course has been assigned a physical classroom with enough capacity to maintain physical distancing (6 feet between individuals) requirements. Please utilize designated seats and maintain appropriate spacing between students. Please do not move desks or stations.

- Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.
- Follow your instructor's guidance on how to enter and exit the classroom.
  Practice physical distancing to the extent possible when entering and exiting the classroom.
- If you are experiencing COVID-19 symptoms (Click here for guidance from the CDC on symptoms of coronavirus), please use the UF Health screening system and follow the instructions on whether you are able to attend class. Click here for UF Health guidance on what to do if you have been exposed to or are experiencing Covid-19 symptoms.
- Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work. Find more information in the university attendance policies.

\* I reserve the right to update this syllabus if needed. Please check canvas for changes.



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