Syllabus for MA 252-2A

Introductory Differential Equations -- Spring 2025

Instructor: Dr. Shannon Starr

Class Times: Tuesdays, Thursdays 8:00am – 9:15am

Class Room: Heritage Hall Building, Room 221

**Learning outcomes:** This course is an introduction to ordinary differential equations with extensive applications to mathematical modeling. First order differential equations (separable, linear, exact, and additional non-linear examples), modeling with first order ODE’s, examples of systems of first order ODE’s, theory of higher order linear DE’s (homogeneous and non-homogeneous, superposition of solutions, linear independence and general solutions, initial and boundary value problems), solution of constant coefficient homogeneous linear equations, variation of parameters will be covered in detail.

**Instructor email:** slstarr@uab.edu

Typical responses are 24 hours later on weekdays.

**Office hours:** Monday and Wednesday, 12-12:50pm in University Hall 4008, and by appointment. You may also attend via Zoom, on the Zoom link that I will put on the UAB canvas page, if you prefer that. During my office hours, I will have Zoom turned on. Priority will frequently be given to in-person students. But you make an appointment (for in-person or Zoom meeting) to insure a time.

**Required textbook:** Fundamentals of Differential Equations – MyLab. Authors: Nagle, Saff and Snider. 9th ed

 **Access Code:** The MyMathLab access code for the course is required and is available through Canvas with the
First Day access unless you opt out. Access is also available for purchase at the bookstore, but
more expensive.

**Grades:** There are 1000 total points possible in the course as follows: Homework - 300 points, In class questionnaires - 100 points, Midterms - 300 points, Final Exam - 300 points. Grading scale: 880 points needed for an A, 750 for a B, 620 for a C, 500 for a D, below 500 – F.

**Homework:** Homework will be assigned once a week (on Wednesdays), with due date the following Wednesday. These will be automatically graded on the MyMathLab platform (with 2 attempts per question), so make sure that you are fairly confident in your answers, before you input them.

**Questionnaires:** Each lecture day after the first lecture, there will be a questionnaire to fill out. You will be given credit for doing it. It must be completed and returned before the end of class.

**Midterms:** There will be 3 midterms each of which will be 50 minutes in length. They are scheduled for:

Midterm Exam I Monday, February 5th, in class

Midterm Exam II Monday, March 4th, in class

Midterm Exam III Wednesday, April 3rd, in class

**In person final**: Time and date: TBA. Duration: 150minutes.

**UAB Policies and Resources**

**Misconduct**

The University of Alabama at Birmingham expects all members of its academic community to function according to the highest ethical and professional standards. Students, faculty, and the administration of the institution must be involved to ensure this quality of academic conduct. Review the Academic Integrity Code linked below.

Academic misconduct undermines the purpose of education. Such behavior is a serious violation of the trust that must exist among faculty and students for a university to nurture intellectual growth and development. Academic dishonesty and misconduct includes, but is not limited to, acts of abetting, cheating, plagiarism, fabrication, and misrepresentation. Candidates are expected to honor the UAB Academic Honor Code as detailed in the most current UAB Student Catalog. Please consult this resource for additional information regarding the specific procedures to be undertaken when a student violates the UAB Academic Honor Code.

<https://www.uab.edu/one-stop/policies/academic-integrity-code>

**DSS Accessibility Statement**

Accessible Learning: UAB is committed to providing an accessible learning experience for all students. If you are a student with a disability that qualifies under Americans with isabilities Act (ADA) and Section 504 of the Rehabilitation Act, and you require accommodations, please contact Disability Support Services for information on accommodations, registration and procedures. Requests for reasonable accommodations involve an interactive process and consist of a collaborative effort among the student, DSS, faculty and staff. If you are registered with Disability Support Services, please contact DSS to discuss accommodations that may be necessary in this course. If you have a disability but have not contacted Disability Support Services, please call

 (205) 934-4205 (voice) (205) 934-4205 (TDD) (205) 934-8170 (Fax)

or consult their webpage

<https://www.uab.edu/students/disability/>

or visit their office located in Hill Student Center Suite 409, 1400 University Blvd., Birmingham, AL.

**Non-harassment, Hostile Work/Class Environment**

The UAB College of Arts and Sciences expects students to treat fellow students, their Course Instructors, other UAB faculty members and staff as adults and with respect. No form of hostile environment or harassment will be tolerated by any student or employee.

**Course Netiquette**

There are course expectations concerning etiquette on how we should treat each other online. It is very important that we consider the following values during online discussions and email: **respect**, **confidentiality**, **format** and **relevance**. Every person’s opinion is valued. During online discussions, be sure to state opposing views diplomattically. Do not insult people or their ideas, nor use negative, inappropriate language. When discussing topics, be sure to be discreet about how you discuss children, teachers and colleages. Do not use names of people or facilities. When posting online messages use proper grammar, spelling and complete sentences. Avoid using all capitals (which signifies yelling). Avoid shortcuts and abbreviations such as “cu l8r.” Instead say, “ See you later.” Think before you type. Keep posts relevant to the online discussion topic.