MATH 202 - Differential Equations
Spring 2020-2021

Instructor: Yasemin Şengül (yasemin.sengul@sabanciuniv.edu, FENS-G010)
Lecture hours: Monday 10.40 - 11.30, Wednesday 14.40 -16.30
Recitation: Wednesday 17.40 - 18.30
Office Hours: By appointment.

Teaching Assistants: Nesibe Ayhan, Jiyan Baran Bükün, Muhammet Mustafa Etik, Nadeen Hossameldin Mohamed Hashem, Saina Farrokhpour Sani.

Course Objectives

Upon completing this course, students should understand the general theory of ordinary differential equations (ODE) and the basic techniques for solving differential equations involving one unknown function and one independent variable. Topics include first-order ODE, second and higher-order linear ODE, series solutions for second-order linear ODE, the Laplace transform and systems of first-order linear ODE.

Readings

- Elementary Differential Equations and Boundary Value Problems, Boyce & DiPrima, 11th Edition, Wiley, 2017.
- Differential Equations, Ross, 3rd Edition, Wiley, 1984.
- Fundamentals of Differential Equations and Boundary Value Problems, Nagle & Saff & Snider, Pearson, 2012.
- Elementary Differential Equations, Rainville & Bedient & Bedient, Prentice Hall, 1997.

Attendance

For lectures - not compulsory but highly recommended.
For recitations - compulsory.

Course Outline

- Week 1, 2: First order differential equations
- Week 3, 4, 5: Second order linear equations
- Week 6, 7: Higher order linear equations
- Week 8, 9: Series solutions of second order linear equations
- Week 10, 11: The Laplace transform
- Week 12, 13: Systems of first order linear equations

Grading Policies

- Final grade contributions will be from 1 midterm exam (35%), 1 final exam (35%), recitation attendance (15%) and in-class work (15%).
- There will be no make-up for the midterm exam and the final exam!
- If you miss 5 recitations, you will fail the course.
- If you do not sit the final exam, you will fail the course.

Academic Honesty

Academic dishonesty is not an acceptable way of conduct and it will not be tolerated. Cheating (e.g. copying answers from others, using unauthorized materials during an exam) and any other dishonest conduct will be immediately reported to the Dean's Office for disciplinary action in accordance with University's regulations. For more information visit https://www.sabanciuniv.edu/en/academic-integrity-statement