MATH 204:   DIFFERENTIAL EQUATIONS
KOÇ UNIVERSITY,   FALL 2024

General Information

Instructors, Offices and Office Hours:

Arda Demirhan,   ,   TBA

Varga Kalantarov,   Sci 162,   TBA

Homepage: https://mysite.ku.edu.tr/vkalantarov/2022/12/19/math204_fall22/
Textbook: W. E. Boyce, R. C. DiPrima and D. B. Meade, Elementary Differential Equations and Boundary Value Problems, Global Edition (Requirred).

Topics to be covered: Introduction to differential equations, First order ordinary differential equations (ODEs), Second order ODEs, Power series solution of ODEs, The Laplace transform and applications, Systems of linear ODEs, Partial Differential equations and Fourier Series (PDEs).

Objective: To provide the student with a basic knowledge of ODEs and PDEs. This includes the general theory of and solution techniques for general first order ODEs, second order linear ODEs, systems of first order ODEs, Fourier series and initial boundary value problems for the heat and wave equations.

Homework: Suggested homework problems will be assigned regularly but not collected for grading. Students are required to solve these problems in order to gain a better understanding of the subject.

Evaluation method: Students' progress will be evaluated according to their performance in two midterm exams and the final exam which will cover all the material covered in this course. Each of the midterm exams will contribute as 30 % to the total grade while the final exam will have a 40 % weight.

Attendance: Students are advised to attend all the lectures and problem sessions.

Eligibility to take the Final Exam: Students will be permitted to take the final exam, only if they take at least one midterm exam and the average of their midterm exam grades is 20 or higher.

Make-ups: If a student misses a midterm exam and has a valid excuse, his (her) grade in the final exam will be substituted for the grade in the missed exam. If (s)he also misses the final exam, (s)he will be given zero in the midterm exam(s) that (s)he has missed regardless

of whether (s)he has a valid excuse or not. If a student misses the final exam and has a documented valid excuse accepted by the deans office , (s)he will be given a make-up exam at noon on the the first day of the makeup period (January 28. according tothe academic calender)

Suggested method of study: Reading the lecture notes and the books is necessary for grasping the subject, but it is by no means sufficient. Students must try to reproduce the definitions and proofs of the theorems, and apply the techniques to other problems.

Academic dishonesty: If a student is caught cheating in an exam, s/he will be punished according to the YÖK regulations. These consist of one or two semesters of prohibition from attending the university.