

MATH 240.01-02
Differential Equations
Spring 2011-12

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Course web page : <http://www.fen.bilkent.edu.tr/~mugan/courses/math240/Math240-Generic.htm>

Text Books : **Main Textbook:**

William E. Boyce & Richard C. DiPrima
Elementary Differential Equations and Boundary Value Problems, 9th Edition
(John Wiley and Sons, 2010)

Supplementary Textbooks:

Rainville, Bredient & Bredient
Elementary Differential Equations, (Prentice Hall, 1997)
Ross
Differential Equations, (John Wiley and Sons, New York, 1986)

Exams : Quizzes, Homeworks and Attendance (15 %) **(NO MAKE-UP FOR QUIZES)**
Midterm Exam # 1 (25 %), **Date: March 15, 2012, Time:18:00-20:00,**
Place: To Be Announced
Midterm Exam # 2 (25 %), **Date: April 19, 2012, Time:18:00-20:00,**
Place: To Be Announced
Final Exam (35 %), **To be announced**
75 % ATTENDANCE IS OBLIGATORY

| Week | Subject | Exams |
|------------------|---|------------------------|
| 1. Feb. 6 | Introduction to Diff. Eq., First order Diff. Eq. | |
| 2. Feb. 13 | First order O.D.E., Integrating Factors | |
| 3. Feb. 20 | Homogenous D.E., | |
| 4. Feb. 27 | Mathematical Models, Application of 1st order ODE | |
| 5. Mar. 5 | Linear Dependence, Wronskian | |
| 6. Mar. 12 | Reduction of Order | Mar.15, 6:00 pm |
| 7. Mar. 19 | Method of Undetermined coefficients | |
| 8. Mar. 26 | Variation of Parameters | |
| 9. Apr. 2 | Application of 2nd order ODE | |
| 10. Apr. 9 | Inverse Differential Operators | |
| 11. Apr. 16 | Singularities of Differential Equation | Apr.19, 6:00 pm |
| 12. Apr. 23 | Series Solutions of Differential Equations | |
| 13. Apr. 30 | Series Solutions of Differential Equation | |
| 14. May 7 | Laplace Transform | |
| 15. May 14 | Laplace Transform | |
| May 17-30 | FINAL EXAMS | |