Ders izlence Formu

Dersin Kodu ve İsmi	MTH315 Differential Equations
Dersin Sorumlusu	Prof. Dr. Fatma Karakoç
Dersin Düzeyi	Bachelor's Degree
Dersin Kredisi	Credits: 4 ECTS: 6
Dersin Türü	Compulsory
Dersin İçeriği	Classification of differential equatios, initial and boundary value problems, Existence and uniqueness theorems, Separable equations, Homogeneous equations and equations reducible to this form, Exact differential equations, Integrating factor, Linear, Bernoulli and Riccati differential equations, Substitution, Clairaut and Lagrange equations, Applications of first order differential equations, Theory of higher order linear differential equations, Higher order linear homogeneous equations with constant coefficiens , The method of undetermined coefficients, Operator method, The method of variation of parameters.
Dersin Amacı	The goal of this course is to introduce differential equations, to teach solving methods, to study existence and uniqueness of the solutions of initial value problems, to find exact solutions and to examine these solutions.
Dersin Süresi	4 hours in a week
Eğitim Dili	English
Ön Koşul	-
Önerilen Kaynaklar	1. William E. Boyce, Richard C. DiPrima, Elemantary Differential Equations and Boundary Value Problems, John Wiley and Sons, Inc., New York, 2005. 2. Shepley L. ROSS, Differential Equations, Third Edition, John Wiley and Sons, Inc., New York, 1984. 3. Richard Bronson, Schaum's Outline of Theory and Problems of Differential Equations, McGraw Hill Professional, 1994. 4. R. Kent NAGLE, Edward B. SAFF, Arthur David SNIDER, Fundementals of Differential Equations and Boundary Value Problems, Boston, 2004. 5. Bruce P. CONRAD, Differential Equations, Prentice Hall, 2003. 6. William F. TRENCH, Elementary Differential Equations, Brooks/Cole-Thomson Learning, 2000. 7. Stanley J. FARLOW, Differential Equations and Their Applications, McGraw-Hill Co., 1994. 8. Werner KOHLER, Lee JOHNSON, Elementary Differential Equations with Boundary Value Problems, Pearson Addison Wesley, 2004. 9. Ravi P. AGARWAL, Donal O' REGAN, An Introduction to Ordinary Differential Equations, Springer, 2008.
Dersin Kredisi	Credits: 4 ECTS: 6
Laboratuvar	-
Diğer-1	-