

MA 26600 - Assignment Sheet - Fall 2021

TEXT: Differential Equations and Boundary Value Problems, 5th edition, by Edwards, Penney, and Calvis (Pearson)

- **Handwritten Problems** - The boxed boldface problems ONLY
- **MyLab Math Online Problems** - Accessed through Brightspace at <https://purdue.brightspace.com>

HW01 Sec 1.1 (Differential Equations and Math Models) 15, 19, 21, 23, 25, 31, 35

HW02 Sec 1.2 (Integrals as General and Particular Solutions) 1, 5, 7, 11, 13, 21, **35, 37**

HW03 Sec 1.3 (Slope Fields and Solution Curves) 3, 5, 22, 25, **27, 30**

HW04 Sec 1.4 (Separable Eqns and Appls) 1, 4, 6, 19, 22, 33, 35, **29, 49**

HW05 Sec 1.5 (Linear First Order Eqns) 2, 5, 6, 9, 13, 18, 24, **27**

HW06 Sec 1.5 (Linear First Order Eqns) 33, 36, **37, 45**

HW07 Sec 1.6 (Substitution Methods and Exact Eqns) 1, 5, 9, 15, 17, 19, 27

HW08 Sec 1.6 (Substitution Methods and Exact Eqns) 31, 35, 37, 39, 45, 46, **56, 59**

HW09 Sec 2.1 (Population Models) 1, 5, 17, 21, **30, 31**

HW10 Sec 2.2 (Equilibrium Solns and Stability) 1, 7, 15, **17, 19**

HW11 Sec 2.3 (Acceleration-Velocity Models) 1, 3, **9**

HW12 Sec 2.4 (Numerical Approx: Euler's Method) 1, 5, 27

Sec 2.5 (Closer Look at Euler's Method) 27, **28**

HW13 Sec 3.1 (Intro: Second Order Eqns) 1, 3, 9, 11, 33, 35, 39, 44, 45, 47, **51, 52, 54**

HW14 Sec 3.2 (General Solns of Linear Eqns) 1, 4, 5, 7, 13, 17, 38, **19, 41**

HW15 Sec 3.3 (Homog. Eqns Constant Coefficients) 1, 3, 5, 7, 11, 13, 25, 28, 39

HW16 Sec 3.3 (Homog. Eqns Constant Coefficients) 9, 17, 18, 23, 33, 35, 54, **58**

HW17 Sec 3.4 (Mechanical Vibrations) 3, 4, 13, 15, 17, 19, **35**

HW18 Sec 3.5 (Nonhomog. Eqns, Undetermined Coeff) 1, 2, 3, 4, 8, 10, 13, 15, 19, **21, 22, 24, 29**

HW19 Sec 3.5 (Nonhomog. Eqns, Undetermined Coeff) 49, 50, 51, 53, **54, 61**

HW20 Sec 3.6 (Forced Oscillations and Resonance) 1, 7, **11, 12**

HW21 Sec 3.6 (Forced Oscillations and Resonance) 17

HW22 Sec 4.1 (First Order Systems and Appls) 1, 3, 5, 7, 9, 13, 14

HW23 Sec 4.1 (First Order Systems and Appls) 28, **27, 30**

Sec 4.2 (Method of Elimination) 3, 9, 11, 13

HW24 Sec 5.1 (Matrices and Linear Systems) 1, 3, 4, 9, 11, 13, 15, **23, 32**

HW25 Sec 5.2 (Eigenvalues for Homog. Systems) 1, 3, 5, 7, **29**

HW26 Sec 5.2 (Eigenvalues for Homog. Systems) 17, 20, **8, 11, 24**

HW27 Sec 5.5 (Multiple Eigenvalues) 1, 5, 7, **2, 3, 4**

HW28 Sec 5.3 (Gallery of Solns for Linear Systems) 1, 5, 6, 9, 11, **19, 20, 27**

HW29 Sec 5.6 (Matrix Exponentials and Linear Systems) 10, 13, 15, 21, 25, **22, 26**

HW30 Sec 5.7 (Nonhomog. Linear Systems) 1, 9, 13, 21, **25**

HW31 Sec 7.1 (Laplace Transform and Its Inverse) 3, 4, 7, 13, 16, 17, 23, 27, **19, 29**

HW32 Sec 7.2 (Transformation and Initial Value Problems) 3, 5, 7, 8, 13, **19, 20, 23**

HW33 Sec 7.3 (Translation and Partial Fractions) 1, 3, 5, 9, 13, 15, 19, **31**

HW34 Sec 7.4 (Derivatives, Integrals and Products of Transforms) 3, 5, 7, 15, **8, 17, 19, 37**

HW35 Sec 7.5 (Periodic and Piecewise Continuous Input Functions) 1, 3, 5, 7, 11, 13, **17, 21**

HW36 Sec 7.6 (Impulses and Delta Functions) 3, 5, **7, 11**