MA 26600 - Assignment Sheet - Spring 2020

TEXT: *Differential Equations and Boundary Value Problems, 5th edition By Edwards, Penney, and Calvi, published by Pearson*

Handwritten Problems(*The bolded problems ONLY) and Projects:* Turn in at class time.

Online homework problems: through blackboard at https://www.mycourses.purdue.edu

HW01 Sec 1.1 (Diff. Eqns 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 (Substituion 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) 1, 5, 27
Sec 2.5 (Closer Look at Euler) 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**, **Project 1**

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

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

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

HW21 Sec 3.6 (Forced Osc. and Resonance) 17, **Project 2**

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

HW23 Sec 4.1 (First Order Sys and Appls) 28, **27, 30**
Sec 4.2 (Method of Elimination) 3, 9, 11, 13

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

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

HW26 Sec 5.2 (Eigenvalue for Homog. Systems) 17, 20, **24**

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

HW28 Sec 5.3 (Gallery of Solns for Linear Sys) 1, 5, 6, 9, 11

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

HW30 Sec 5.7 (Nonhomog Linear Sys) 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**

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**

[1]**Note: Problems in Chapter 5 on the final exam will be limited to 2×2 systems.**