## MA262 TTH Course Calendar

**TEXT**: *Differential Equations & Linear Algebra*, 4th edition, by Edwards, Penney, and Calvis, published by Pearson

Week 1:

Jan 11: Lesson 1: Sec 1.1 (Differential Equations and Mathematical Models) and Lesson 2: Sec 1.2 (Integrals as General and Particular Solutions) Jan 13: Lesson 3: Sec 1.3 (Slope Fields and Solution Curves) Jan 14: No quiz

Week 2:

Jan 17: Homework Due: Lessons 1,2 and 3. Jan 18: Lesson 4: Sec 1.4 (Separable Equations and Applications) and Lesson 5: Sec 1.5 (Linear First-Order Equations Jan 20: Lesson 6: Sec 1.5 (Linear First-Order Equations) Jan 21: Quiz 1 covers lessons 1, 2 and 3.

Week 3:

Jan 24: Homework Due: Lessons 4, 5 and 6. Jan 25: Lesson 7: Sec 1.6 (Substitution Methods and Exact Equations) and Lesson 8: Sec 1.6 (Substitution Methods and Exact Equations) Jan 27: Lesson 9: Sec 2.1 (Population Models) Jan 28: Quiz 2 covers lessons 4, 5 and 6.

Week 4:

Jan 31: Homework Due: Lessons 7, 8 and 9. Feb 1: Lesson 10: Sec 2.2 (Equilibrium Solutions and Stability) Feb 3: Lesson 11: Sec 2.4 (Numerical Approximation: Euler's Method) and Lesson 12: Sec 3.1 (Introduction to Linear Systems) Feb 4: Quiz 3 covers lessons 7, 8 and 9.

Week 5: Feb 7: Homework Due: Lessons 10, 11 and 12 Feb 8: Lesson 13: Sec 3.2 (Matrices and Gaussian Elimination) and Lesson 14: Sec 3.3 (Reduced Row-Echelon Matrices) Feb 10: Lesson 15: Sec 3.4 (Matrix Operations) Feb 11: Quiz 4 covers lessons 10, 11 and 12.

Week 6: Feb 14: Homework Due: Lessons 13, 14 and 15 Feb 15: Lesson 16: Sec 3.5 (Inverse of Matrices) Feb 17: Lesson 17: Sec 3.6 (Determinants) Feb 18: Quiz 5 covers lessons 13, 14 and 15.

Week 7: Feb 21: Exam 1 – 6:30 to 7:30 p.m. Covers lessons 1 to 14 Feb 22: Homework Due: Lessons 16 and 17 (notice unusual day) Feb 22: Lesson 18: Sec 4.1 (The Vector Space R<sup>3</sup>)
and Lesson 19: Sec 4.2 (The Vector Space R<sup>n</sup> and Subspaces)
Feb 24: Lesson 20: Sec 4.3 (Linear Combinations and Independence of Vectors)
Feb 25: No recitation (to compensate for the evening exam). No quiz.

## Week 8:

Feb 28: Homework Due: Lessons 18, 19 and 20 Mar 1. Lesson 21: Sec 4.4 (Bases and Dimension for Vector Spaces) Mar 3: Lesson 22: Sec 4.5 (Row and Column Spaces Mar 4: Quiz 6 covers lessons 16 to 20.

Week 9:

Mar 7: Homework Due: Lesson 21 and 22 Mar 8: Lesson 23: Sec 5.1 (Intro: Second-Order Linear Equations) Mar 10: Lesson 24: Sec 5.2 (General Solutions of Linear Equations) Mar 11: Quiz 7 lesson 21.

Week 10: Mar 14- Mar 18 – No Classes- Spring Break

Week 11:

Mar 21: Homework Due: Lessons 23 and 24 Mar 22: Lesson 25: Sec 5.3 (Homogeneous Equations with Constant Coeff) and Lesson 26: Sec 5.3 (Homogeneous Equations with Constant Coeff) Mar 24: Lesson 27: Sec 5.4 (Mechanical Vibrations) Mar 25: Quiz 8 covers lessons 23 and 24.

Week 12: Mar 28: Homework Due: Lessons 25, 26 and 27 Mar 29: Lesson 28: Sec 5.5 (Non-hom Eqns and Und. Coeff.) Mar 31: Lesson 29: Sec 5.5 (Non-homogeneous Equations Var. Par) Apr 1: Quiz 9 covers lesson 25, 26 and 27.

Week 13:

Apr 4: Exam 2- 6:30 p.m. to 7:30 p.m., covers lessons 15 to 27. Apr 5: Homework Due: Lesson 28, 29 (Notice unusual day) Apr 5: Lesson 30: Sec 6.1 (Introduction to Eigenvalues) Apr 6: Lesson 31: Sec 7.1 (First-Order Systems and Applications) and Lesson 32: Sec 7.2 (Matrices and Linear Systems) Apr 7: No recitation class (to compensate for the evening exam). No quiz. Apr 12: Lesson 33: Sec 7.3 (The Eigenvalue Method for Linear Systems) Apr 14: Lesson 34: Sec 7.6 (Multiple Eigenvalue Solutions) Apr 15: Quiz 10 covers lessons 28 to 32

Week 15: Apr 18: Homework Due: Lessons 33 and 34 Apr 19: Lesson 35: Sec 7.4 (A Gallery of Solutions Curves of Linear Systems) Apr 21: Lesson 36: Sec 7.4 (A Gallery of Solutions Curves of Linear Systems) Apr 22: Quiz 11. Covers lessons 33 and 34 Week 16:

Apr 25: Homework Due: Lessons 35 and 36. Apr 26: Review for the final exam Apr 28 Review for the final exam Apr 29: No quiz.

Week 17: Final exams. Final exam to be scheduled by Purdue. Exam covers lessons 1 to 36