

## Course Calendar- MWF sections

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

Week 1:

Aug 23: Lesson 1: Sec 1.1 (Differential Equations and Mathematical Models)

Aug 25: Lesson 2: Sec 1.2 (Integrals as General and Particular Solutions)

Aug 26: No quiz

Aug 27: Lesson 3: Sec 1.3 (Slope Fields and Solution Curves)

Week 2:

Aug 30: Homework Due: Lessons 1,2 and 3.

Aug 30: Lesson 4: Sec 1.4 (Separable Equations and Applications)

Sept 1: Lesson 5: Sec 1.5 (Linear First-Order Equations)

Sept 2: Quiz 1 covers lessons 1, 2 and 3. Handwritten homework 1 and 2 are due

Sept 3: Lesson 6: Sec 1.5 (Linear First-Order Equations)

Week 3:

Sept 6: No class – Labor Day

Sep 7: Homework Due: Lessons 4, 5 and 6.

Sept 8: Lesson 7: Sec 1.6 (Substitution Methods and Exact Equations)

Sept 9: Quiz 2 covers lessons 4, 5 and 6. Handwritten homework 3,4 and 5 are due.

Sept 10: Lesson 8: Sec 1.6 (Substitution Methods and Exact Equations)

Week 4:

Sep 13: Homework Due: Lessons 7 and 8.

Sept 13: Lesson 9: Sec 2.1 (Population Models)

Sept 15: Lesson 10: Sec 2.2 (Equilibrium Solutions and Stability)

Sep 16: Quiz 3 covers lessons 7 and 8. Handwritten homework 6 and 7 are due.

Sept 17: Lesson 11: Sec 2.4 (Numerical Approximation: Euler's Method)

Week 5:

Sep 20: Homework Due: Lessons 9, 10 and 11

Sept 20: Lesson 12: Sec 3.1 (Introduction to Linear Systems)

Sept 22: Lesson 13: Sec 3.2 (Matrices and Gaussian Elimination)

Sep 23: Quiz 4 covers lessons 9, 10 and 11. Handwritten homework 8 and 9 are due.

Sept 24: Lesson 14: Sec 3.3 (Reduced Row-Echelon Matrices)

**Week 6:**

Sep 27: Homework Due: Lessons 12, 13 and 14

Sept 27: Lesson 15: Sec 3.4 (Matrix Operations)

Sept 29: Lesson 16: Sec 3.5 (Inverse of Matrices)

Sep 30: Quiz 5 covers lessons 12, 13 and 14. Handwritten homework 10,11 and 12 are due

Oct 1: Review for exam 1

**Week 7:**

Oct 4: Lesson 17: Sec 3.6 (**Also Exam 1 - 8-9 p.m. Exam covers lessons 1 to 16**).

Oct 5: Homework Due: Lessons 15 and 16 (notice unusual day)

Oct 6: Lesson 17: Continuation

Oct 7: No recitation (to compensate for the evening exam). No quiz.

Oct 8: Lesson 18: Sec 4.1 (The Vector Space  $\mathbf{R}^3$ )

**Week 8:**

Oct 11: Homework Due: Lessons 17 and 18

Oct 11: No Class—October break

Oct 13: Lesson 19: Sec 4.2 (The Vector Space  $\mathbf{R}^n$  and Subspaces)

Oct 14: Quiz 6 covers lessons 15 to 18. Handwritten homework 13 to 17 are due.

Oct 15: Lesson 20: Sec 4.3 (Linear Combinations and Independence of Vectors)

**Week 9:**

Oct 18: Homework Due: Lesson 19 and 20.

Oct 18: Lesson 21: Sec 4.4 (Bases and Dimension for Vector Spaces)

Oct 20: Lesson 22: Sec 4.5 (Row and Column Spaces)

Oct 21: Quiz 7 lesson 19 and 20. Handwritten homework 18 is due.

Oct 22: Lesson 23: Sec 5.1 (Intro: Second-Order Linear Equations)

**Week 10:**

Oct 25: Homework Due: Lessons 21, 22 and 23

Oct 25: Lesson 24: Sec 5.2 (General Solutions of Linear Equations)

Oct 27: Lesson 25: Sec 5.3 (Homogeneous Equations with Constant Coeff)

Oct 28: Quiz 8 covers lessons 21, 22 and 23. Handwritten homework 19 and 20 are due.

Oct 29: Lesson 26: Sec 5.3 (Homogeneous Equations with Constant Coeff)

**Week 11:**

Nov 1: Homework Due: Lessons 24, 25 and 26

Nov 1: Lesson 27: Sec 5.4 (Mechanical Vibrations)

Nov 3: Lesson 28: Sec 5.5 (Non-hom Eqns and Und. Coeff.)

Nov 4: Quiz 9 covers lesson 24, 25 and 26. Handwritten homework 21 and 22 are due.

Nov 5: Review for exam

**Week 12:**

Nov 8: Lesson 28- Continuation (**Also exam 2, 8-9 p.m- Exam covers lessons 17 to 27**)

Nov 9: Homework Due: Lesson 27, 28 (**Notice unusual day**)

Nov 10: Lesson 29: Sec 5.5 (Non-hom Eqns Var. Par)

Nov 11: No recitation class (to compensate for the evening exam). No quiz.

Nov 12: Lesson 30: Sec 6.1 (Introduction to Eigenvalues)

**Week 13:**

Nov 15: Homework Due: Lessons 29 and 30

Nov 15: Lesson 31: Sec 7.1 (First-Order Systems and Applications)

Nov 17: Lesson 32: Sec 7.2 (Matrices and Linear Systems)

Nov 18: Quiz 10 covers lessons 27 to 30. Handwritten homework 23 to 26 are due.

Nov 19: Lesson 33: Sec 7.3 (The Eigenvalue Method for Linear Systems)

**Week 14:**

Nov 22: Homework Due: Lessons 31, 32 and 33

Nov 22: Lesson 34: Sec 7.6 (Multiple Eigenvalue Solutions)

Nov 24 -Nov 26- No class. Thanksgiving break.

**Week 15:**

Nov 29: No Homework Due

Nov 29: Lesson 34: Sec 7.6 Continuation

Dec 1: Lesson 35: Sec 7.4 (A Gallery of Solutions Curves of Linear Systems)

Dec 2: No quiz. Handwritten homework 27 and 28 are due

Dec 3: Lesson 36 : Sec 7.4 (A Gallery of Solutions Curves of Linear Systems)

**Week 16:**

Dec 6: Homework Due: Lessons 34, 35 and 36.

Dec 6: Review for the final exam

Dec 8: Review for the final exam

Dec 9: No quiz. Handwritten homework 29 to 31 are due

Dec 10: Review for the final exam

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