

Math 2070 Section 1 Daily Schedule

| Class | Date | Topic | Section | Suggested Problems |
|------------|----------------|--|-------------------|---|
| 1. | Aug 24 | Matrix Operations | 8.1 | 1 - 21 (Odd) |
| 2. | Aug 25 | Linear Equations-1 | 8.2 | 1 - 25 (Odd) |
| 3. | Aug 26 | Linear Equations-2 | | |
| 4. | Aug 27 | Invertible Matrices | 8.3 | 1 - 15 (Odd) |
| 5. | Aug 31 | Determinants | 8.4 | 1 - 15 (Odd) |
| 6. | Sept 1 | Intro to Diff Equations/Direction Fields | 1.1, 1.2 | 1.1: 1, 5, 7, 11, 13, 17, 19, 25, 27, 33; 1.2: 5-13 (Odd) |
| 7. | Sept 2 | Separable Differentiable Equations | 1.3 | 11, 14, 15, 17, 19, 25, 27, 34, 35 |
| 8. | Sept 3 | Linear First Order Equations | 1.4 | 1, 3, 5, 9, 13, 16, 17, 18, 21, 23, 25 |
| 9. | Sept 8 | First Order Models: Mixing and/or First Order Circuits | 1.4, Circuit Sup. | 1.4: 27, 29, 31; Circuits: 1, 3, 5 |
| 10. | Sept 9 | Laplace Transform Method | 2.1 | 1 - 13 (Odd) |
| 11. | Sept 10 | Basic Laplace Transform Formulas | 2.2 | 1 - 35 (Odd) |
| 12. | Sept 14 | Review for Exam 1 | | |
| 13. | Sept 15 | Exam 1 | | |
| 14. | Sept 16 | Partial Fractions I | 2.3 | 13, 15, 19, 23, 25, 27, 31, 33, 35, 37 |
| 15. | Sept 17 | Partial Fractions II | 2.4 | 7, 9, 11, 13, 17, 19 |
| 16. | Sept 21 | Laplace Inversion | 2.5 | 3, 5, 7, 9, 11, 13, 15, 19, 21, 23, 25, 27, 29, 31, 35, 36 |
| 17. | Sept 22 | The spaces \mathcal{E}_q : Special Cases | 2.6 | 1 - 25 (Odd) |
| 18. | Sept 23 | The spaces \mathcal{E}_q : General Case | 2.7 | 1 - 27 (Odd) |
| 19. | Sept 24 | Convolution | 2.8 | 1 - 27 (Odd) |
| 20. | Sept 28 | Basic Constant Coefficient Linear DE | 3.1, 4.1 | 3.1: 1 - 19 (Odd); 4.1: 1 - 11 (Odd) |
| 21. | Sept 29 | Linear Independence | 3.2 | 1 - 25 (Odd) |
| 22. | Sept 30 | Linear Homogeneous DE | 3.3, 4.2 | 3.3: 1-15 (Odd); 4.2: 1 - 11 (Odd) |
| 23. | Oct 1 | Undetermined Coefficients | 3.4, 4.3 | 3.4: 1-27 (Odd); 4.3: 1 - 7 (Odd) |
| 24. | Oct 5 | Spring Systems I | 3.6 | 1 - 15 (Odd) |
| 25. | Oct 6 | Spring Systems II/ RCL Circuits | 3.7 | 1 - 4 |
| 26. | Oct 7 | Review | | |
| 27. | Oct 8 | Exam 2 | | |
| 28. | Oct 12 | Existence/Uniqueness for Second Order Linear DE | 5.1 | 1 - 23 (Odd) |
| 29. | Oct 13 | Homogeneous Equations | 5.2 | 1 - 9 (Odd) |
| 30. | Oct 14 | Cauchy-Euler Equations | 5.3 | 1 - 15 (Odd) |
| 31. | Oct 15 | Reduction of Order | 5.5 | 1 - 11 (Odd) |
| 32. | Oct 19 | Variation of Parameters | 5.6 | 7 - 15 (Odd) |
| 33. | Oct 20 | Discontinuous Functions | 6.1 | 1 - 8 |
| 34. | Oct 21 | Heaviside Class | 6.2 | 9-23 (Odd), 29-41 (Odd) |
| 35. | Oct 22 | Laplace Transform Method II | 6.3 | 1 - 11 (Odd) |
| 36. | Oct 26 | Dirac Delta Function | 6.4 | 1 - 9 (Odd), 15, 17 |
| 37. | Oct 27 | | | |
| 38. | Oct 28 | Linear Systems of DE | 9.1, 9.2 | 7, 9, 11, 13, 17, 19, 27, 29, 31, 33, 35 |
| 39. | Nov 2 | Review | | |
| 40. | Nov 3 | Exam 3 | | |

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|--------------|---------------|--|----------------|---------------------|
| 41. | Nov 4 | Matrix Exponential and Laplace Transform | 9.3 | 1, 3, 9, 11, 13, 15 |
| 42. | Nov 5 | Fulmer's Method | 9.4 | 1 - 19 (Odd) |
| 43. | Nov 9 | | 9.4 | |
| 44. | Nov 10 | Constant Coefficient Linear Systems | 9.5 | 1 - 15 (Odd) |
| 45. | Nov 11 | Periodic Functions | | 1 - 23 (Odd), 28 |
| 46. | Nov 12 | Fourier Series | | 1 - 15 (Odd) |
| 47. | Nov 16 | Convergence of Fourier Series | | 1 - 13 (Odd) |
| 48. | Nov 17 | Fourier Sine and Cosine Series | | 1 - 11 (Odd) |
| 49. | Nov 18 | Operations on Fourier Series | | 1 - 5 |
| 50. | Nov 19 | Applications of Fourier Series | | 1 - 9 (Odd) |
| 51. | Nov 23 | Review | | |
| 52. | Nov 24 | Exam 4 | | |
| 53. | Nov 25 | Separation of Variables for PDE | | |
| 54. | Nov 30 | One Dimensional Heat Equation | | |
| 55. | Dec 1 | Laplace Equation | | |
| 56. | Dec 2 | Review | | |
| 57. | Dec 3 | Review | | |