Advanced Mathematical Analysis
Fall 2018

Monday	Tuesday	Wednesday	Thursday	Friday
Aug. 27	**28**	**29**	**30**	**31** Classes begin
Sept. 3 No Classes Labor Day	**4**	**5**	**6**	**7**
10	**11**	**12**	**13**	**14**
17	**18**	**19** Quiz 1	**20**	**21**
24	**25**	**26**	**27**	**28**
Oct. 1	**2**	**3**	**4**	**5**
8	**9**	**10** Exam 1	**11**	**12**
15	**16**	**17**	**18**	**19**

Monday	Tuesday	Wednesday	Thursday	Friday
22	23	24	25	26
29	30	31 Quiz 2	Nov. 1 Last day to withdraw	2
5	6	7	8	9
12	13	14 Exam 2	15	16
19	20	21 No Classes Thanksgiving	22 No Classes Thanksgiving	23 No Classes Thanksgiving
26	27	28	29	30
Dec. 3	4	5 Quiz 3	6	7
10	11	12	13 Last day of classes	14

Tentative Course Outline

Chapter	Section	Topic
1	1.1	Background
	1.2	Solutions and Initial Value Problems
	1.3	Direction Fields
	1.4	Approximation via Euler's Method
2	2.1	Motion of a Falling Body
	2.2	Separable Equations
	2.3	Linear Equations
3	3.5	Electrical Circuits
4	4.1	Mass-Spring Oscillator
	4.2	Homogeneous Linear Equations
	4.3	Auxiliary Equations with Complex Roots
	4.4	Method of Undetermined Coefficients
7	7.2	Definition of the Laplace Transform
	7.3	Properties of the Laplace Transform
	7.4	Inverse Laplace Transform
	7.5	Solving initial Value Problems
8	8.1	Taylor Polynomial Approximation
	8.2	Power series
10	10.3	Fourier series
	10.4	Fourier Sine and Cosine Series