

**Course Schedule APPM 4360/5360:**

	<b>Sections in text book; topics</b>	<b>Related sections in Ablowitz-Fokas</b>
Week 1:		
W 1/18	1.1, 1.2 Complex numbers	1.1
F 1/20	1.2, 1.3 Complex numbers, Stereographic projection	1.2, 1.2
Week 2:		
M 1/23	2.1 Analytic functions: derivative, C-R equations	2.1
W 1/25	2.2 Elementary functions , 2.9 Codes	1.2, -
F 1/27	2.2 Elementary functions	1.2
Week 3:		
M 1/30	2.3 Introduction to Taylor expansions	3.2
W 2/01	2.4 Singularities	3.5
F 2/03	2.5 Multivalued functions	2.2
Week 4:		
M 2/06	2.5 Multivalued functions	2.2
W 2/08	3 Analytic continuation	3.5.1, -
F 2/10	3 Analytic continuation	-
Week 5:		
M 2/13	3 Analytic continuation	-
W 2/15	4.1 Contour integration	2.4-2.6
F 2/17	4.1 Contour integration	2.4-2.6
Week 6:		
M 2/20	<b>Midterm 1</b>	
W 2/22	4.1 Contour integration	2.4-2.6
F 2/24	4.1,4.2 Taylor and Laurent series	3.2-3.3
Week 7:		
M 2/27	4.2 Revisit singularities	
W 3/01	4.3 Residue calculus	4.1-4.4
F 3/03	4.3 Residue calculus	4.1-4.4
Week 8:		
M 3/06	4.3 Residue calculus	4.1-4.4
W 3/08	4.3 Residue calculus	4.1-4.4
F 3/10	4.3 Residue calculus	4.1-4.4

Week 9:

M 3/13	4.3 Residue calculus	4.1-4.4
W 3/15	4.4 Infinite sums	-
F 3/17	4.5 Analytic continuation with contour integration	-

Week 10:

M 3/20	3.2 3.3 Gamma, zeta, and related functions	
W 3/22	4.6 Weierstrass products and Mittag-Leffler expansions	3.6
F 3/24	4.6 Weierstrass products and Mittag-Leffler expansions	3.6

Week 11: **Spring break**

Week 12:

M 4/03	5 Conformal mappings	Ch. 5
W 4/05	5 Conformal mappings	Ch. 5
F 4/07	5 Conformal mappings	Ch. 5

Week 13:

M 4/10	<b>Midterm</b>	
W 4/12	5 Conformal mappings – applications	Ch. 5
F 4/14	6 Elliptic functions	-

Week 14:

M 4/17	7.1 Fourier transform	4.5
W 4/19	7.1 Fourier transform	4.5
F 4/21	7.2 Laplace transform	4.5

Week 15:

M 4/24	7.3 Other transforms (Hilbert, etc.)	-
W 4/26	8 Special functions defined by ODEs	-
F 4/28	8 Special functions defined by ODEs	-

Week 16:

M 5/01	Project presentations	
W 5/03	Project presentations	
F 5/05	Project presentations	