8701 (Complex Analysis) Syllabus Part II – Fall 2013

This second part of the syllabus covers the time up to the integration quiz.

III. Further properties of analytic functions

17.	M	Oct. 21	Maximum modulus principle (A 3.3)
18.	W	Oct. 23	Applications of the maximum principle (A 3.4)
19.	F	Oct. 25	General statement of Cauchy's theorem (A 4.1-4.4)
20.	M	Oct. 28	Proof of Cauchy's theorem (A 4.5-4.7)
21.	W	Oct. 30	Further discussion of Cauchy's theorem (Conway, 6.4)

IV. Singularities and Residue Calculus

22.	F	Nov. 1	Classification of Singularities (A 4.3.2 pp 127–129)
23.	M	Nov. 4	Laurent expansions (Conway, Sect. 5.1, A 5.1.3)
24.	W	Nov. 6	The residue theorem (A 4.5.1)
25.	F	Nov. 8	The argument principle (A 4.5.2)
26.	M	Nov. 11	Contour integration I (A 4.5.3)
27.	W	Nov. 13	Contour integration II (A 4.5.3)
28.	F	Nov. 15	Review for integration quiz
	M	Nov. 18	**INTEGRATION QUIZ (In-class)**

A = Ahlfors' Complex Analysis (Another good source: Conway's "Functions of One Complex Variable I")