Course Overview   Math 660

Week 1

Monday, June 20, 2011	Introduction to complex numbers (§1.1.1)
Tuesday, June 21, 2011	Analytic functions (§2.1.1, 2.1.2)
Wednesday, June 22, 2011	Polynomials and rational functions (§2.1.3, 2.1.4)
Thursday, June 23, 2011	Sequences and series (§2.2.1, 2.2.2, 2.2.3)
Friday, June 24, 2011	Power series (§2.2.4)
Problem set 1	Problems covering §1.1.1–2.2.4

Week 2

Monday, June 27, 2011	Abel's limit theorem (§2.2.5)
Tuesday, June 28, 2011	Exponential, trigonometric functions, logarithm (§2.3.1, 2.3.2, 2.3.3, 2.3.4)
Wednesday, June 29, 2011	Metric spaces (§3.1.1, 3.1.2, 3.1.3)
Thursday, June 30, 2011	Compactness (§3.1.4, 3.1.5, 3.1.6)
Friday, July 1, 2011	Closed curves (§3.2.1)
Problem set 2	Problems covering §2.2.5–3.2.1

Week 3

Monday, July 4, 2011	*Fourth of July*
Tuesday, July 5, 2011	Analytic functions in regions (§3.2.3, 3.2.4)
Wednesday, July 6, 2011	Linear transformations (§3.3.1)
Thursday, July 7, 2011	Cross ratio (§3.3.2)
Friday, July 8, 2011	Circles (§3.3.4, 3.3.5)
Problem set 3	Problems covering §3.2.3–3.3.5

Week 4

Monday, July 11, 2011	Level curves (§3.4.1)
Tuesday, July 12, 2011	Elementary mappings (§3.4.2)
Wednesday, July 13, 2011	Riemann surfaces (§3.4.3)
Thursday, July 14, 2011	Line integrals I (§4.1.1)
Friday, July 15, 2011	Line integrals II (§4.1.2, 4.1.3)
Problem set 4	Problems covering §3.4.1–4.1.3

Week 5

Monday, July 18, 2011	Cauchy's theorem (§4.1.4, 4.1.5)
Tuesday, July 19, 2011	Index of a point (§4.2.1)
Wednesday, July 20, 2011	Cauchy's integral formula (§4.2.2)
Thursday, July 21, 2011	Higher derivatives (§4.2.3)
Friday, July 22, 2011	**Midterm 1**
Problem set 5	Problems covering §4.1.4–4.2.3

Week 6

Monday, July 25, 2011	Removable singularities (§4.3.1)
Tuesday, July 26, 2011	Zeroes and poles (§4.3.2)
Wednesday, July 27, 2011	Local mapping (§4.3.3)
Thursday, July 28, 2011	The maximum principle (§4.3.4)
Friday, July 29, 2011	Homology (§4.4.1, 4.4.2, 4.4.3)
Problem set 6	Problems covering §4.3.1–4.4.3

Week 7

Monday, August 1, 2011	Cauchy's theorem (§4.4.4, 4.4.5)
Tuesday, August 2, 2011	Exact differentials (§4.4.6, 4.4.7)
Wednesday, August 3, 2011	Residue theorem (§4.5.1)
Thursday, August 4, 2011	Argument principle (§4.5.2)
Friday, August 5, 2011	Evaluation of definite integrals (§4.5.3)
Problem set 7	Problems covering §4.4.4–4.5.3

Week 8

Monday, August 8, 2011	Harmonic functions (§4.6.1)
Tuesday, August 9, 2011	Mean-value property and Poisson's formula (§4.6.2, 4.6.3)
Wednesday, August 10, 2011	Schwarz' theorem (§4.6.4)
Thursday, August 11, 2011	Reflection principle (§4.6.5)
Friday, August 12, 2011	Weierstrass' theorem (§5.1.1)
Problem set 8	Problems covering §4.6.1–5.1.1

Week 9

Monday, August 15, 2011	Taylor series (§5.1.2)
Tuesday, August 16, 2011	Laurent series (§5.1.3)
Wednesday, August 17, 2011	Partial fractions (§5.2.1)
Thursday, August 18, 2011	Infinite products (§5.2.2)
Friday, August 19, 2011	Gamma function (§5.2.4)
Problem set 9	Problems covering §5.1.2–5.2.4

Week 10

Monday, August 22, 2011	Zeta function (§5.4.1)