Pries: 619 Complex Variables II: Fall 2019 Tentative Syllabus

Week	Starts	Topics
		Complex tori and complex elliptic curves
1	8/26	Complex tori - elliptic functions, complex multiplication
2	9/4	Complex elliptic curves - Weierstrauss p-function, Eisenstein series
3	9/9	Divisors and 1-forms on complex elliptic curves
4	9/16	integration of 1-forms, periods, Abel-Jacobi map
5	9/23	Abelian surfaces
		Abelian varieties and theta functions
6	9/30	Divisors and 1-forms, embeddings in projective space
7	10/7	The Picard group and Jacobian of a complex curve
8	10/14	Lattices and complex abelian varieties
9	10/21	Riemann form and theta functions
10	10/28	polarizations and isogenies
		Moduli problems
11	11/4	Hyperbolic geometry; quotients of the upper half plane
12	11/11	Moduli of elliptic curves; Modular curves
13	11/18	Moduli of abelian surfaces
		Fall break
14	12/2	Schottky problem - which abelian varieties are Jacobians
15	12/9	Presentations