## PMATH 740/440 Analytic Number Theory

This course is designed to introduce students to analytic number theory. The following topics will be covered: Möbius function, von Mangoldt function, Abel's summation, Riemann's zeta function, prime number theorem,  $\omega$  and  $\Omega$  functions, quadratic reciprocity, primitive roots, characters, L-functions, Dirichlet's Theorem and assorted topics.