

**MATH 494 (MAST 699/MAST 833), Sec. E**  
Topics in Pure & Applied Mathematics  
*Winter 2020*

**Instructor:** Dr. C. David, Office: LB 927-9 (SGW), Phone: (514) 848-2424, Ext. 3227  
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**Schedule:** Wednesdays & Fridays, 16:15-17:30.

**Office Hours:** TBA

**Text:** *The Distribution of Prime Numbers*, by D. Koukoulopoulos.

**Evaluation:** Assignments and presentation by the students.

If the grading scheme for this course includes graded assignments, a reasonable and representative subset of each assignment may be graded. Students will not be told in advance which subset of the assigned problems will be marked and should therefore attempt all assigned problems.

**Topics:** This is an introduction to analytic number theory and L-functions. We will cover some elementary methods, and their generalisations to Dirichlet's proof that there are infinitely many primes in arithmetic progressions. We will then proceed to prove the prime number theorem providing an asymptotic for the number of primes, with an explicit error term.

**Academic Integrity and the Academic Code of Conduct**

This course is governed by Concordia University's policies on Academic Integrity and the Academic Code of Conduct as set forth in the Undergraduate Calendar and the Graduate Calendar. Students are expected to familiarize themselves with these policies and conduct themselves accordingly. "Concordia University has several resources available to students to better understand and uphold academic integrity. Concordia's website on academic integrity can be found at the following address, which also includes links to each Faculty and the School of Graduate Studies: [concordia.ca/students/academic-integrity](http://concordia.ca/students/academic-integrity)." [Undergraduate Calendar, Sec 17.10.2]