

**MATH 494 (MAST 699/833), Sec. D**  
Topics in Algebra  
*Fall 2019*

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**Office Hours:** By appointment.

**Class Schedule:** Mondays & Wednesdays, 9:30-11:00 AM LB 759-6.

**Textbook:** Diamond & Shurman, A First Course in the Modular Forms, Springer GTM 228 (not compulsory).

**Topics:** This course will be an introduction to the theory of modular forms over the complex number. We shall cover the following topics: the modular group and the upper half-plane, Eisenstein series, Hecke operators, L-functions, modular curves, geometric interpretation of modular forms. If time allows it, further topics (Galois representations or Eichler--Shimura relations) will be considered. Knowledge of complex analysis, Riemann surfaces, and sheaves is useful but not necessary. Further reading on p-adic or Drinfeld modular forms will be available for motivated students.

**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*]