

**MATH 494 (MAST 699/MAST 833), Sec. C**  
Topics in Pure & Applied Mathematics  
Modular Forms  
*Fall 2025*

**Instructor:** Dr. C. David  
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**Office Hours:** TBA.

**Class Schedule:** Wednesdays & Fridays, 16:15-17:30 in room LB 928.  
**Mid-term break:** No classes from October 11 to October 17, 2025.

**Topics:** We will start the course with the basic theory of modular functions and modular forms, and study the space of cusp forms, the Hecke operators and the zeta functions of modular forms.

Using this material, we will cover some topics of complex multiplication elliptic curves, and complex multiplication theory.

**Textbook:** The following textbooks are good references for the course:

- G. Shimura, *Introduction to the Arithmetic Theory of Automorphic Forms*
- H. Iwaniec, *Topics in Classical Automorphic Forms*

**Evaluation:** Only assignments during the course, for Master and Undergraduate students.

Assignments during the course (75% of the final grade) and a presentation (25% of final grade) for Ph.D. 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.

**Student Services**

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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: <https://www.concordia.ca/conduct/academic-integrity.html>" [*Undergraduate Calendar, Sec 17.10.2*]

### **Behaviour**

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