

Mathematics 788B, Introduction to Modular Forms

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Office hours: By appointment.

- **Course content:** This course introduces the theory of modular forms, beginning with basic definitions and examples. Later on, we will discuss applications to number theory and, when appropriate, open problems. We will follow Chapters III and IV of Koblitz' book (which are independent of Chapters I and II). This material will be supplemented with other sources as needed.
- **Class schedule:** MWF, 2:30 - 3:20, LeConte 310.
- **Text:** Koblitz, Introduction to Elliptic Curves and Modular Forms, 2nd ed., Springer-Verlag, Graduate Texts in Mathematics 97.

The following books, in addition to the course textbook, will be on reserve in the math library:

- (1) Diamond and Shurman, A First Course in Modular Forms, 1st ed., Springer-Verlag, Graduate Texts in Mathematics 228.
- (2) Ono, The Web of Modularity: Arithmetic of the Coefficients of Modular Forms and q-series, CBMS Regional Conference Series in Mathematics, 102. (Published by the Amer. Math. Soc., Providence, RI, 2004.)

- **Course Webpage:**

<http://www.math.sc.edu/~boylan/SCCourses/math788B/788B.html>

- **Homework:** Homework will be periodically assigned, say once every two weeks. Students taking the course for credit will be asked to turn in solutions to at least half of the problems from each assignment. However, all students are strongly encouraged to attempt all assigned problems. This is particularly true for students thinking about including this course on their comprehensive exam syllabus.
- **Exams:** There will be 1 in-class midterm exam (date TBA) and 1 final exam (Saturday, Dec. 16, 2 - 5 pm).
- **Grading:** (tentative)

Homework :	50%
Midterm Exam :	25%
Final Exam :	25%.

- Please do not hesitate to contact me at any time if you have questions or problems relating to this course. Best wishes for an enjoyable and productive semester!