

**Math 784, Algebraic Number Theory**  
**Spring 2010.**

**Instructor:** Matthew Boylan.  
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**Office hours:** Mon. 1:30 - 2:30, Tues. 2 - 3, Fri. 9 - 10, and by appointment.

- **Course Webpage:**

<http://www.math.sc.edu/~boylan/SCCourses/784Sp10/784.html>

- **Text:** Marcus, Daniel A. Number Fields, Universitext. Springer-Verlag, New York-Heidelberg, 1977. viii+279 pp.

- **Course content:** This course is an introduction to algebraic number theory, a theory that serves as the foundation for much of modern number theory. Topics will include rings of integers, Dedekind domains, factorization of prime ideals, finiteness of the class number, Dirichlet's unit theorem, and selected topics from class field theory, time permitting.

- **Class schedule:** MWF 12:20 - 1:10 LeConte 310.

- **Exam schedule:**

**Midterm Exam :** Wednesday, March 3 12:20 - 1:10 LeConte 310

**Final Exam :** Friday, April 30 2:00 - 5:00 LeConte 310

- **Homework:** 6-8 homework assignments will be given.

- **Grading:** (tentative)

**Homework :** 75%

**Midterm Exam :** 10%

**Final Exam :** 15%

- **Collaboration:** Collaboration is allowed and encouraged on the homework. However, you must write and understand your own homework solutions; you may not share written solutions. If you solve a problem by talking to a classmate or looking it up in a book, you should cite the source in your homework write-up.
- Please do not hesitate to contact me at any time if you have questions or problems relating to this course. I will make adjustments if it is brought to my attention that I am going too fast or too slow, that the course is too easy or too hard, etc. Best wishes for an enjoyable and productive semester!