MATH 6723 INFORMATION
MWF 10:30 AM, HSCI 134

Instructor: David Wright, MS 527, 744-5775, FAX: 744-8275,
Email: wrightd@math.okstate.edu
Online Classroom (D2L): oc.okstate.edu (Main location of class resources and grades)
External website: http://klein.math.okstate.edu/~wrightd/6723

Office hours: MWRF 1:30–2:30 PM at MS 527 and by appointment. Please feel free to drop by or contact me to see if I am available at any time.

Text: *Algebraic Number Theory*, by A. Fröhlich and M. J. Taylor, Cambridge University Press, 1991.

Prerequisites: Math 5613/5623: modern algebra of groups, rings, fields, including Galois theory and tensor products.

Syllabus: Chapters I through VI of the textbook.

Exams: There will be two exams given during the weeks of Sept. 22 and Nov. 3. The exams will be checked out of the main office MSCS 401 and you may work on them for 3 hours and then return your work to the main office. The exams will be open book and open notes. There will also be a final exam on Wednesday, Dec. 10, at 10:00AM–11:50AM, in our classroom.

Homework: All students will be expected to complete and turn in written solutions to all the regularly assigned homework. Assignments and due dates will be announced in class. We will try to provide commentary and hints in written form.

Grading: Each exam will be worth 100 points, and the homework will be worth a maximum of 200 points. Students who achieve at least 80 % of the total score will receive an A. A score between 70 % and 80 % will merit at least a grade of B. Scores between 60 % and 70 % will correspond to at least a C, and students with scores above 50 % will be assured of passing. Depending on the median scores, these cutoffs may be lowered. Some discretion of the instructor may be used in deciding borderline cases.

STANDARD OPERATING PROCEDURE: Reading the textbook in as far advance as possible is absolutely critical for success in this course. Read the chapters thoroughly before attempting any homework problems.

Academic Honesty: It is a cornerstone of academic integrity that written work submitted under your own name should be prepared entirely by yourself. Informal discussion between students is permitted. You are also encouraged to seek help on the homework from myself during office hours. However, academic misconduct includes organized collaboration between students on homework assignments that involve, say, jointly writing solutions on the blackboard and then copying down the alleged solutions on each individual's paper. Also, examination of another student's written work before an assignment has been collected and graded is strictly forbidden.

Attendance Policy: Attendance of lectures is mandatory, but roll will not be taken every class.

Bibliography

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[3] H. M. EDWARDS, *The background of Kummer's proof of Fermat's last theorem for regular primes*, Arch. History Exact Sci., 14 (1975), pp. 219–236.

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[5] E. HECKE, *Lectures on the theory of algebraic numbers*, Springer-Verlag, New York, 1981.

[6] K. F. IRELAND AND M. I. ROSEN, *A classical introduction to modern number theory*, vol. 84 of Graduate texts in mathematics, Springer, New York, 1982.

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[9] S. LANG, *Algebraic Number Theory*, Addison-Wesley, 1970.

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[12] J. NEUKIRCH, *Algebraic Number Theory*, Grundlehren, Springer-Verlag, Berlin, Heidelberg, New York, 1999.

[13] S. WANG, *On Grunwald's theorem*, Ann. of Math. (2), 51 (1950), pp. 471–484.

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