

MATH 465 NUMBER THEORY SPRING 2009 SYLLABUS

Instructor: Bob Vaughan
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Office Hours: MWR 2:30–3:30 and otherwise by arrangement.
Class: MWF 11:15–12:05 116 Osmond.
Schedule #: 194728
Text: LeVeque, Fundamentals of Number Theory
Dover, ISBN–10:0486689069, ISBN–13:978-0486689067.
For background reading see: Davenport, The Higher Arithmetic
CUP, ISBN–10:0521722365, ISBN–13:978-0521722360
Homework: Homework due Mondays or first class in the week when
Monday is a holiday, starting Wednesday 21st January.
Grading:
Homework 35%,
Mid-term Exams,
 Wednesday 11th February 10%,
 Wednesday 25th March 20%,
Final Exam 35%,

Topics

Mathematical systems, Chapter 1.
Unique factorisation, Chapter 2.
Congruences, Chapter 3.
Primitive roots, Chapter 4.
Quadratic residues, Chapter 5.
Number theoretic functions and prime number theory, Chapter 6.
Sums of squares, Chapter 7.
Diophantine equations and algebraic number theory, Chapter 8.
Diophantine approximation, Chapter 9.

Late homework will not be accepted unless prior permission is granted. No homework will be accepted after the graded ones have been returned to the students.

No makeup exams are available except by prior arrangement in extenuating circumstances.

All Penn State Policies (see <http://www.psu.edu/ufs/policies/>) regarding ethics and honorable behavior apply to this course.