COURSE DETAIL

ALGEBRAIC NUMBER THEORY

Country
Denmark

Host Institution
University of Copenhagen

Program(s)
University of Copenhagen

UCEAP Course Level
Upper Division

UCEAP Subject Area(s)
Mathematics

UCEAP Course Number
108

UCEAP Course Suffix

UCEAP Official Title
ALGEBRAIC NUMBER THEORY

UCEAP Transcript Title
ALGEBRAIC NUMBR THR

UCEAP Quarter Units
6.00

UCEAP Semester Units
4.00

Course Description

This course covers algebraic number fields and their rings of integers; trace, norm, and discriminants; prime decomposition in Dedekind domains and rings of integers; prime decomposition in quadratic and cyclotomic number fields; decomposition theory in Galois extensions; decomposition- and inertia groups and fields; quadratic reciprocity via decomposition theory; Frobenius automorphisms; the prime divisors of the discriminant and ramification; finiteness of class numbers; Dirichlet's unit theorem; the first case of Fermat's last theorem for regular primes.

Language(s) of Instruction
English

Host Institution Course Number
NMAK17011U

Host Institution Course Title
ALGEBRAIC NUMBER THEORY

Host Institution Campus

Host Institution Faculty
Science

Host Institution Degree
Master

Host Institution Department
Mathematical Sciences

Print