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 Course Details
https://kurser.ku.dk/course/nmak17011u/2023-2024

Host Institution Campus

Host Institution Faculty
Science

Host Institution Degree
Master

Host Institution Department
Mathematical Sciences

Course Last Reviewed
2023-2024

Print