

COURSE DETAIL

ALGEBRAIC STRUCTURES

Country

Sweden

Host Institution

Lund University

Program(s)

Lund University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Mathematics

UCEAP Course Number

120

UCEAP Course Suffix**UCEAP Official Title**

ALGEBRAIC STRUCTURES

UCEAP Transcript Title

ALGEBRAIC STRUCTURS

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

The course covers Number theory including the fundamental theorem of arithmetic, and modular arithmetic; Group definition, basic examples of groups, subgroups, normal subgroups, factor groups, isomorphisms and homomorphisms, Lagrange's theorem, permutation groups, symmetric and alternating groups, finitely generated Abelian groups; Ring definition, basic examples of rings, isomorphisms and homomorphisms, ideals, factor rings, polynomial rings, factorization of polynomials as products of irreducible polynomials; and Field characteristic, simple field extensions, and finite fields. For admission to the course, English 6 is required and at least 60 credits in Natural Science or Engineering studies, of which at least 30 credits in mathematics, including the courses MATA32 Algebra and Vector Geometry, 7.5 credits and MATB32 Linear algebra, 7.5 credits or equivalent courses.

Language(s) of Instruction

English

Host Institution Course Number

MATC31

Host Institution Course Title

ALGEBRAIC STRUCTURES

Host Institution Course Details

<https://kursplaner.lu.se/pdf/kurs/en/MATC31>

Host Institution Campus

Lund

Host Institution Faculty

Science

Host Institution Degree

Host Institution Department

Mathematics

Course Last Reviewed

2025-2026

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