

COURSE DETAIL

ALGEBRAIC GEOMETRY

Country

Korea, South

Host Institution

Yonsei University

Program(s)

Yonsei University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Mathematics

UCEAP Course Number

106

UCEAP Course Suffix**UCEAP Official Title**

ALGEBRAIC GEOMETRY

UCEAP Transcript Title

ALGEBRAIC GEOMETRY

UCEAP Quarter Units

4.50

UCEAP Semester Units

3.00

Course Description

This is an introductory course on algebraic geometry. We cover affine/projective varieties, Zariski topology, Hilbert's Nullstellensatz, regular morphisms, Zariski tangent spaces, etc. Topics include Polynomial Rings, Varieties and Ideals, Irreducibility of Affine Varieties, Coordinate Rings, Polynomial Maps, Proof of the Nullstellensatz, Dimension of Affine Varieties, Tangent Spaces and Smoothness, Projective Varieties, Maps of Projective Varieties, Quasiprojective Varieties, and Further Quasiprojective Topics.

Prerequisites: Modern algebra (1), (2), Topology (1)

Language(s) of Instruction

English

Host Institution Course Number

MAT4331

Host Institution Course Title

ALGEBRAIC GEOMETRY

Host Institution Course Details

<https://underwood1.yonsei.ac.kr/>

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Course Last Reviewed

2025-2026

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