

The Department of Mathematics

2019–20–A term

Course Name Algebraic Geometry

Course Number 201.2.4111

Course web page

<https://www.math.bgu.ac.il/en/teaching/fall2020/courses/algebraic-geometry>

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Office Hours <https://www.math.bgu.ac.il/en/teaching/hours>

Abstract

Requirements and grading¹

Course topics

Generally speaking, algebraic geometry deals with geometric objects defined by polynomial equations. We will cover topics 1-3 below, and maybe one other topic, depending on the level of the students.

Topics

- .1 Topics from commutative algebra.
- .2 Algebraic varieties over an algebraically closed field: definitions and main properties.
- .3 Curves and their function fields.
- .4 Intersection Theory in the projective plane.
- .5 Vector bundles and coherent sheaves.
- .6 Picard group and projective embeddings.
- .7 Schemes: definitions, examples and basic properties.

¹Information may change during the first two weeks of the term. Please consult the webpage for updates