

The Department of Mathematics

2018–19–A term

Course Name Solving Equations

Course Number 201.1.0381

Course web page

<https://www.math.bgu.ac.il/en/teaching/fall2019/courses/solving-equations>

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

Abstract

Requirements and grading¹

Course topics

Goal: To teach the basic methods of numerical algebraic geometry that allow to find all solutions to a system of polynomial equations over the complex numbers and applications of these methods Topics: Polynomials in several variables, The zero set, Resultants, Elimination and Bezut theorems, The Newton method in several variables, Homotopy continuation and finding isolated solutions, Computation of higher dimensional components, Applications in robotics and elsewhere.

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