

The Department of Mathematics

2017–18–A term

Course Name Ordinary Differential Equations for ME

Course Number 201.1.9461

Course web page

<https://www.math.bgu.ac.il/en/teaching/fall2017/courses/ordinary-differential-e>

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

Abstract

Requirements and grading¹

Course topics

First order equations: separable equations, exact equations, linear equations, Bernoulli equations. Existence and uniqueness. Second order equations. Reduction of order. Linear homogeneous equations, fundamental solutions and Wronskian. Inhomogeneous equations, variation of parameters. Equations with constant coefficients and the method of undetermined coefficients. Linear equations of higher order. Euler equations. Systems of differential equations. Laplace transform and its properties. Solution of initial value problems with discontinuous forcing functions. Impulse functions. Convolution.

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