

The Department of Mathematics

2018-19-B term

Course Name Partial Dffierential Equations For Biotechnology

Course Number 201.1.9591

Course web page

https://www.math.bgu.ac.il//en/teaching/spring2019/courses/partial-differential-equations-for-biotechnology

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

Abstract

Requirements and grading¹

Course topics

- .1 Classflication of linear Partial Dfflerential Equations of order ,2 canonical form.
- .2 Fourier series (definition, Fourier theorem, odd and even periodic extensions, derivative, unfiorm convergence).
- .3 Examples: Heat equation (Dirichlet's and Newman's problems), Wave equation (mixed type problem), Potential equation on a rectangle.
- .4 Superposition of solutions, non-homogeneous equation.
- .5 Infinite and semi-infinite Heat equation: Fourier integral, Green's function. Duhamel's principle.
- .6 Infinite and semi-infinite Wave equation: D'Alembert's solution.
- .7 Potential equation on the disc: Poisson's formula and solution as series.

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