אוניברסיטת
בן-גוריון בנגב

The Department of Mathematics
2022–23–B term

Course Name Calculus 2 for Biotechnology

Course Number 201.1.9571

Course web page
> https://www.math.bgu.ac.il//en/teaching/spring2023/courses/
> calculus-2-for-biotechnology

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

Abstract

Requirements and grading[1]

Course topics

Analytic Geometry: planes and lines, quadric surfaces, cylinders.Vector functions: derivatives and integrals.Partial derivatives: functions of two or more arguments, chain rules, gradient, directional derivatives, tangent planes, higher order derivatives, linear approximation, dffierential of the first and higher order, maxima, minima and saddle points, Lagrange multipliers.Multiple integrals: double integrals, area, changing to polar coordinates, triple integrals in rectangular coordinates, physical applications.Vector analysis: vector and scalar fields, surface integrals, line integrals and work, Green's theorem, the divergence theorem, Stokes's theorem.Infinite series: tests for convergence of series with nonnegative terms, absolute convergence, Alternating series, conditional convergence, arbitrary series.Power series: power series for functions, Taylor's theorem with remainder: sine, cosine and e , logarithm, arctangent, convergence of power series, integration, dffierentiation.

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