

MATH 574. DYNAMICAL SYSTEMS.

Credits: 4

Offered by: Mathematics and Statistics (Faculty of Science)

This course is not offered this catalogue year.

Description

Dynamical systems, phase space, limit sets. Review of linear systems. Stability. Liapunov functions. Stable manifold and Hartman-Grobman theorems. Local bifurcations, Hopf bifurcations, global bifurcations. Poincare Sections. Quadratic maps: chaos, symbolic dynamics, topological conjugacy. Sarkovskii's theorem, periodic doubling route to chaos. Smale Horseshoe.

- Winter
- Prerequisites: MATH 325 and MATH 454 or permission of the instructor.

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