

Course Schedule - Spring 2008

Mathematics

551 ***Dynamical Systems Theory*** credit: 4 hours.

Course is an introduction to the study of dynamical systems. Students who intend to do research in nonlinear dynamics are encouraged to take this course. Specific topics will be chosen to illustrate the theory and use of techniques from global analysis and nonlinear dynamics such as (1) discrete dynamical systems, (2) global theory of ordinary differential equations, (3) Hamiltonian systems, (4) KAM theory, (5) bifurcation and stability, (6) Hopf index theory of vector fields, (7) Morse theory of gradient vector fields, (8) Lyapunov theory, (9) infinite dimensional dynamical systems, (10) structural stability. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
38181	lecture-discussion	D1	11:00 AM - 11:50 AM	MWF	room 343 Altgeld Hall	Zharnitsky, V