Åbo Akademi
Matematiska institutionen
Fänriksgatan 3 B III vån.

Introduktion till dynamiska system

Introduction to Dynamical Systems

The course 273027 **Introduction to Dynamical Systems** (5 sp) treats fundamental notions in the theory of discrete-time dynamical systems, such as periodicity, attraction/repulsion, bifurcations, chaos and sensitive dependence on initial conditions ("the butterfly effect"). In the multidimensional case we also give a survey of the classical theory for linear systems.

The course in given, in English or Swedish depending on the audience, by Prof. Göran Högnäs on Mondays and Tuesdays 13 - 15 and Fridays 10 - 12 in aud. *Hilbertrummet* B329 on the 3rd floor of the ASA building. The course starts on **Monday, January 9 at 1 p.m.** and ends on Friday, March 9. There are weekly exercise sessions, but in addition some project work will also be assigned. - The *examination* is a 24-hour open-book examination. Preliminary examination date is Thursday-Friday, March 8-9.

Basic *textbook* is Devaney: *An Introduction to Chaotic Dynamical Systems*, Addison-Wesley, 2nd ed. 1989 (or later editions). The book is available in the ASA library. Additional handouts will be distributed.

Göran Högnäs
December 30, 2011