East China Normal University

Department of Mathematics

SYLLABUS AND COURSE INFORMATION
Advanced Ordinary Differential Equations (Fall 2010)

When: Tuesday 1:00-3:45 PM
Where: R. 310, No. 4 Classroom Building in Min Hang Campus

Instructor: Prof. Zhiming Wang, PhD
Office: Math Building in Min Hang Campus, Room 327
Phone: 54342609 ext 327
E-mail: zmwang@math.ecnu.edu.cn
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Office hours (tentative): Monday 10:00 -11:30 AM; Thursday 9:00-11:30 AM

Text: Differential Equations and Dynamical Systems, by Prof. Luc Rey-Bellet, Class Notes, Department of Mathematics, University of Massachusetts. (2008)

Reference Book: Differential Equations and Dynamical Systems, Third edition, Lawrence. Perko, Springer (2001) for linear systems and nonlinear systems (local and global theory).

The content, subject to change, is as follows.
Chapter One. Fundamental Theory (basically local);
Chapter Two. Linear Systems;
Chapter Three. Stability Analysis;
Chapter Four. Geometric Theory of Dynamical Systems (global).

Prerequisites: Mathematical Analysis, Higher Algebra, and Elementary ODE.

Homework: Homework will be assigned each week. Late homework will not be graded. Homework is an important component of the course and is worth 30% of the final grade.

Exams: There will be one mid-term exam and a final exam. The time, date, and location of the final exam will be announced when they become available. The weight of the mid-term exam is 30%, and the weight of the final is 40%.

Make-up exam: There will have one make-up exam if the final grade is bellow 60%. It will take place at the beginning of next semester.