

MATH 414

Dr. Jakobson

Math 3317, x55152

e-mail mvy@math.umd.edu

Office hours:

Text: Fred Brauer , John A. Nohel , Qualitative theory of ordinary differential equations, Dover Publ.

Prerequisites: Math 410 , or Math 250-251.

Math 414 is an introduction to some important aspects of modern qualitative theory of differential equations. The main topics are: existence and uniqueness theorems, asymptotic behavior of solutions and stability, linear and non-linear oscillations, elements of the theory of dynamical systems and attractors.

Students with strong record in lower level courses (such as 246 , 461 , 463) who are interested in rigorous mathematical methods may enroll with the approval of the Undergraduate Office.

There will be two hourly exams (each counts 100 points), homework assignments (for total 200 points) and a comprehensive final exam (200 points).