



The Graduate Center of CUNY
Ph.D. Program in Mathematics
Course Syllabus

Course Title: Topics in Partial Equations

Course #: MATH 85600

Time and Location: Tue. 4:00PM - 6:00PM

Instructor Name: Marcello Lucia

Contact Information: Mlucia@gc.cuny.edu

Pre-Requisites: TBA

Office Hours: Tue 2:00PM - 4:00PM

Description:

The aim of this course will be to present several problems arising in differential geometry that lead to some nonlinear partial differential equations. Particular attention will be given to the problem of prescribing Gauss curvature, scalar curvature and the Yamabe problem.

Solving these geometrical problems has been a main motivation to invent many new technics in the modern theory of PDEs. I will explain those tools and show how they have been applied in some famous papers written by Yamabe, Trudinger, Kazdan-Warner, and Aubin.