

School of Mathematics**Module MA2331 — Equations of mathematical physics I**

2009-10

(SF Mathematics, SF Theoretical Physics, JS & SS Two-subject Moderatorship)

Lecturer: Dr. Sinéad Ryan**Requirements/prerequisites:****Duration:** Michaelmas term, 11 weeks**Number of lectures per week:** 3 lectures including tutorials per week**Assessment:****End-of-year Examination:** This module will be examined jointly with MA2332 in a 3-hour examination in Trinity term, except that those taking just one of the two modules will have a 2 hour examination.**Description:** (Preliminary.) Vector analysis; Theorems of Gauss and Stokes; Fourier series and Fourier integrals; Ordinary Differential Equations; Hermite polynomials, Bessel Functions.Approximately the first half of previous module 231. Refer to <http://www.maths.tcd.ie/pub/official/Courses08-09/231.html>**Objectives:**

Introduction to basic techniques of applied mathematics, with applications.

May 1, 2009