

# **PH2130 Mathematical Methods**

## **Syllabus**

Ordinary differential equations, physical origins, series solutions.

Functions of several variables, change of variables.

Partial differential equations, physical origins, separation of variables, boundary conditions.

Examples of PDEs and their solutions, special functions.

Integral transforms, physical meaning of the Fourier transform and the Laplace transform, applications to solving differential equations: oscillating systems, electric circuits.