## Physics 301

## **Mathematical Methods**

This is a one-semester course covering mainly topics in mathematics that are useful in solving the partial differential equations arising in physics. Some of the topics included are:

- 1. Review of ordinary differential equations
- 2. Fourier series and integrals
- 3. The heat equation in one dimension
- 4. the wave equation in one dimension
- 5. Poisson's equation in two dimensions
- 4. Heat and wave equations in several dimensions
- 5. Special functions: Bessel functions and Legendre polynomials
- 6. Laplace transforms

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The college is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures.