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## **Mathematics for Classical Mechanics**

Become an expert in the most intricately complex body of ideas and methods ever to have been clubbed together for a common purpose. Gain insights into little-discussed yet fundamental notions such as the foundational role of parameterisation and the relation between variational calculus and basic vector algebra.

### *Outline of Syllabus.*

Parameterisation

Differential equations

Differential Exactness and curl

Vector calculus

Scalar fields; potential theory

Fourier analysis

Functionals and Variation Hamiltonian and Lagrangian formulations

Computational methods

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