Classical mechanics 702 (PHY 702)

Qualification	Postgraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	15.00
Prerequisites	No prerequisites.
Contact time	6 lectures per week
Language of tuition	Module is presented in English
Department	Physics
Period of presentation	Semester 1

Module content

Lagrangian dynamics: Lagrange's equations, d'Alembert's principle, energy, applications, the tangent bundle, action, symmetry, conservation, Noether's Theorem, linear oscillations, normal modes.
Hamiltonian dynamics: Hamilton's equations, symplectic notation, phase space, Liouville's Theorem, Poisson brackets, canonical transformations, generating functions, the Hamilton-Jacobi equation. Elementary Lagrangian field theory.

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