

MECH 419. ADVANCED MECHANICS OF SYSTEMS.

Credits: 4

Offered by: Mechanical Engineering (Faculty of Engineering)

Terms offered: Winter 2026

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Description

Lagrange's equations of motion. Hamilton's principle. Variational methods. Discrete linear systems: analytical and numerical methods. Distributed parameter systems: exact solutions and discretization techniques. Electrical-mechanical-acoustical analogies. Stability of systems. Nonlinear dynamics: phase-plane, perturbation and other methods of solution.

- (4-1-7)
- Prerequisites: MECH 220, CIVE 207, MATH 264, MATH 271.

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