

ECSE 507. OPTIMIZATION AND OPTIMAL CONTROL.

Credits: 3

Offered by: Electrical & Computer Engr (Faculty of Engineering)

Terms offered: Winter 2026

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Description

General introduction to optimization methods including steepest descent, conjugate gradient, Newton algorithms. Generalized matrix inverses and the least squared error problem. Introduction to constrained optimality; convexity and duality; interior point methods. Introduction to dynamic optimization; existence theory, relaxed controls, the Pontryagin Maximum Principle. Sufficiency of the Maximum Principle.

- (3-0-6)
- Prerequisite(s): ECSE 343 or ECSE 543 or ECSE501 or COMP 540 or MATH 247 or permission of the instructor.

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