

# CHEE 688. ADVANCED MATERIALS IN CHEMICAL ENGINEERING.

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Credits: 4

Offered by: Chemical Engineering (Graduate Studies)

Terms offered: Fall 2025

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## Description

Fundamentals of materials science and engineering for chemical engineers, applying thermodynamic, transport, reaction kinetics principles to the synthesis, characterization and performance of advanced nano-, micro- and meso-structured materials, polymer solutions, gels, colloidal dispersions, emulsions, natural materials, bio-inspired materials, and composites. Applications of advanced materials in chemical engineering, including design for sustainability, and environmental/health considerations. Critical analysis of contemporary advanced-materials research literature.

• 3-0-9

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