COURSE DETAIL

MATERIALS FOR ENERGY TECHNOLOGIES
Country Hong Kong
Host Institution Hong Kong University of Science and Technology (HKUST)
Program(s) Hong Kong University of Science and Technology
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mechanical Engineering
UCEAP Course Number 109
UCEAP Course Suffix
UCEAP Official Title MATERIALS FOR ENERGY TECHNOLOGIES
UCEAP Transcript Title MATERIALS/ENERGY
UCEAP Quarter Units 4.50
UCEAP Semester Units 3.00

Course Description
The societal energy transition from fossil fuels to renewable sources requires novel energy technologies, with material design and engineering at the center of the innovation process. This course explains the enabling materials science and engineering behind advanced energy technologies by answering questions such as why lithium powers our batteries and why it takes silicon to make a solar panel. The course also examines major material challenges of emerging energy technologies. Course topics include: material structure-property correlations used in energy technologies, materials synthesis and fabrication techniques for their incorporation into energy devices, and material evaluation principles in energy applications.

Language(s) of Instruction
English

Host Institution Course Number
MECH3110

Host Institution Course Title
MATERIALS FOR ENERGY TECHNOLOGIES

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department
Mechanical and Aerospace Engineering

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