

## 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 Course Details

## Host Institution Campus

## Host Institution Faculty

## Host Institution Degree

## Host Institution Department

Mechanical and Aerospace Engineering

## Course Last Reviewed

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