

# COURSE DETAIL

## MATERIALS 1 (AEROSPACE)

**Country**

United Kingdom - England

**Host Institution**

University of Manchester

**Program(s)**

University of Manchester

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Mechanical Engineering Materials Science

**UCEAP Course Number**

125

**UCEAP Course Suffix****UCEAP Official Title**

MATERIALS 1 (AEROSPACE)

**UCEAP Transcript Title**

MATERIALS/AEROSPACE

**UCEAP Quarter Units**

4.00

**UCEAP Semester Units**

2.70

## Course Description

This course serves as a starting point to develop an engineer's ability to select a material based on cost and performance, understand limitations and how properties change in service and the ability to critically assess new materials for a given application. Furthermore, this course provides an introduction to materials engineering and materials science. It also introduces the primary classes of materials, and to develop an understanding of types of interatomic, crystal, and molecular bonding in engineering materials and their influence on mechanical properties. Students develop an understanding of the modes of failure for different classes of materials. This course introduces brittle fracture, and to develop an understanding of the ways in which a flaw within a material can influence its response to loading.

### Language(s) of Instruction

English

### Host Institution Course Number

MECH10002

### Host Institution Course Title

MATERIALS 1 (AEROSPACE)

### Host Institution Campus

### Host Institution Faculty

### Host Institution Degree

### Host Institution Department

Mechanical Engineering

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