# COURSE DETAIL

| ENGINEERING INNOVATION AND MODELLING |
| --- |
| **Country**<br>Singapore |
| **Host Institution**<br>National University of Singapore |
| **Program(s)**<br>National University of Singapore |
| **UCEAP Course Level**<br>Lower Division |
| **UCEAP Subject Area(s)**<br>Mechanical Engineering Engineering |
| **UCEAP Course Number**<br>20 |
| **UCEAP Course Suffix** |
| **UCEAP Official Title**<br>ENGINEERING INNOVATION AND MODELLING |
| **UCEAP Transcript Title**<br>ENGNR INNOVTN&MODEL |
| **UCEAP Quarter Units**<br>6.00 |
| **UCEAP Semester Units**<br>4.00 |

**Course Description**

This module introduces the various standards and techniques of sketching, how to prepare engineering drawings and specifications, and how to interpret drawings. Students use advanced commercial CAD software to do 3D solid modeling. Above all, this module expands the students' creative talent and enhances their ability to communicate their ideas in a meaningful manner. Major topics include: principles of projections; isometric; orthographic and isometric sketching; 3D solid modeling; sectioning and dimensioning; drawing standards; and limits, fits, and geometrical tolerances. This module provides the student with the fundamental knowledge to do calculations on design components like bolts, screws, fasteners, weld joints, springs, gears, material selection, fatigue, bearings, and shafts.

**Language(s) of Instruction**
English

**Host Institution Course Number**
ME2102

**Host Institution Course Title**
ENGINEERING INNOVATION AND MODELLING

**Host Institution Course Details**
https://nusmods.com/courses/ME2102/engineering-innovation-and-modelling

**Host Institution Campus**

**Host Institution Faculty**

**Host Institution Degree**

**Host Institution Department**
Mechanical Engineering

**Course Last Reviewed**
2023-2024

Print