

## The Hong Kong University of Science and Technology

[Course Title] Exploration of Mechanical Design and Engineering

[Course Code] MECH1908

[No. of Credits] 3

[Any pre-/co-requisites] N/A

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### Course Description

This course provides a comprehensive introduction to the field of mechanical engineering and its growing intersection with the generative design principle. Mechanical engineering, a discipline that applies scientific principles to design and construct machines and structures, has far-reaching impacts on our daily lives. Throughout this course, the broad spectrum of mechanical engineering, covering various subdisciplines and their unique applications of mathematics and science will be explored. Students will examine how mechanical engineering solutions are integral to our lives and work from the simplest tools to complex systems. By engaging with the course activities, students will be able to develop critical problem-solving skills applicable to real-world engineering challenges. This course aims to equip students with a foundational understanding of mechanical engineering principles and the ability to assess the integration of generative design process.

### Assessments:

Assessment Task	Contribution to Overall Course grade (%)
Assignment	30%
Mid-Term	20%
Group Project Report	25%
Presentation	25%

### Required Texts and Materials

Lecture notes, Fundamental of Mechanical Engineering, Design and Manufacturing, etc.

### [Optional] Additional Resources

Mechanical Design and Engineering related online topics and/or articles, etc.