



## School of Mechanical & Aerospace Engineering

### MSc Mechanical Engineering

#### Overview

Mechanical Engineering is a discipline with a long history of technology innovation, and it is at the frontier of a new wave of technological breakthroughs that are characterised by digitalisation, connectivity, and intelligence. With world-class faculty, facilities, and a rigorous but flexible curriculum, the MSc in Mechanical Engineering builds a solid foundation in fundamental theories on structures, dynamics, and controls, and provides students with the latest tools for analysing, designing, producing, and servicing various products and systems.

#### Who should apply

The programme caters to both full-time and part-time students who would like to pursue a professional career in *research and development, manufacturing and servicing, technology management, facility management*.

Graduates from the programme are expected to find jobs and advance their careers in a wide range of industry sectors that include: *Electronics, Semiconductors, Machinery and Robotics, Building and Construction, Pharmaceutical, Aerospace, Defence, Marine, Oil and Gas*.

## PROGRAMME STRUCTURE

### Option 1: Coursework Only (Default Option)

10 Courses  
4 Core & 6 Electives

### Option 2: Coursework and Dissertation

8 Courses + Dissertation  
4 Core & 4 Electives

*\*Students in the MSc Mechanical Engineering programme have the option to graduate with a Specialisation in Additive Manufacturing.*

## DURATION OF THE PROGRAMME

### Part-Time Study

Minimum Candidature: 2 years (4 semesters)  
Maximum Candidature: 4 years (8 semesters)

### Full-Time Study

Minimum Candidature: 1 year (2 semesters)  
Maximum Candidature: 2 years (4 semesters)

## CORE COURSES

**MA6801:** Advanced Thermal Engineering  
**MA6802:** Engineering Measurements  
**MA6803:** Computational Methods in Engineering  
**MA6804:** Advanced Mechanics of Materials

## ELECTIVE COURSES

**MA6086:** Systems Engineering Fundamentals  
**MA6087:** Project Strategy, Risk and Quality Management  
**MA6502:** Fundamentals and Advances in Additive Manufacturing  
**MA6511:** Advanced Manufacturing Processes  
**MA6512:** Fundamentals of Precision Engineering  
**MA6515:** 3D Printing of Electronics  
**MA6703:** Supply Chain Inventory Planning  
**MA6715:** Systems Simulation & Modeling  
**MA6811:** Product Design & Development  
**MA6812:** Advanced Materials Engineering  
**MA6813:** Robotics and Industrial Automation  
**MA6814:** Structural Integrity for Sustainability and Clean Energy Technologies (*tbc*)  
**MA6816:** Laser Assisted Manufacturing

## QUOTE

“

A wonderful opportunity to get exposure to the cutting-edge research, technologies, and global industries and also a great chance to inspire yourself and make your wild imaginations and dreams come true.

”



Zhang Tianyi  
(Class of 2022)

“

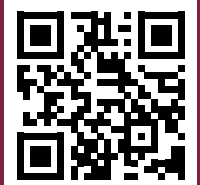
Undoubtedly challenging but also highly fulfilling. Taking this programme has equipped me with relevant engineering skills and knowledge for my future.

”



Liew Qian Yu  
(Class of 2023)

Learn more



## PROGRAMME DIRECTOR

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