



COURSEWORK PROGRAMME

MASTER IN MECHANICAL ENGINEERING

Practical solutions for multi-disciplinary applications

ABOUT US

Since inception in 2006, UPNM now has more than 15 years of experience in teaching, training, professional development, leadership, and research. It continues to advance as a leading university in Asia niche in the field of defense, military, and security.



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<https://cgs.upnm.edu.my>

MASTER IN MECHANICAL ENGINEERING

✓ Programme Overview

Master in Engineering (Mechanical) offered by the Faculty of Engineering is suitable for fresh graduates, practising engineers and academicians with primary degrees in Mechanical Engineering (or equivalent) who are inspired to extend in depth and breadth the knowledge and skills gain from their engineering graduate studies related on defence on security. These areas of specialization are in line with the current demands of local and global industry's pursuit.

✓ Faculty Facilities

- Mechanics Dynamic Laboratory
- Computer Numerical Control Laboratory
- non Destructive Test Laboratory
- Energy Research Room Laboratory
- Mechanical of Solid Laboratory
- Mechanical Metallurgy Laboratory
- Physical Metallurgy Laboratory
- Applied & Basics Thermodynamics Laboratory
- CAE Laboratory
- Control Laboratory
- Fluid Laboratory
- General and Training Workshop Laboratory
- Instrumentation Laboratory
- Mechanics Statics Laboratory
- Lecture Theatre

✓ Career Prospects

A master's degree in mechanical engineering allows professionals to deepen their skills in a range of disciplines including aerospace, automotive, biomedical, automation, and fluid mechanics.

✓ Who Should Attend?

The programme aims at providing opportunities to various group of potential candidates such as;

- Fresh Graduates
- Practicing Engineers
- Academicians



✓ Entry Requirement

Applicants for the Master's Degree Programme by Coursework must fulfil the following requirements:

- i. A bachelor's degree in the field or related field or equivalent with a minimum CGPA of 2.50 or equivalent, from UPNM or any recognised university by the Senate; or
- ii. A bachelor's degree in the field or related field or equivalent with a minimum CGPA of 2.00 and not meeting a CGPA of 2.50 can be accepted subject to rigorous internal assessment; or
- iii. Candidate without a qualification in the related field or working experience in the relevant field must undergo appropriate prerequisite courses determined by the University and meet the minimum CGPA based on Clause (i) and/or Clause (ii) of the above. or
- iv. Other qualifications recognised by the Senate that are obtained through Accreditation of Prior Experiential Learning (APEL) - Level 7 (APEL-7).

The English language requirement applies to foreign/international applicant where English is not their native/official language. This requirement does not apply to International applicants with an accredited bachelor's and master's degree obtained from Malaysian-based academic institutions.



✓ Duration of Study

	Min	Max
Full Time	1 year	4 years
Part Time	2 years	6 years

✓ Study Fee

	Malaysian	International
Full Time	RM 12,050.00	RM 19,550.00
Part Time	RM 13,750.00	RM 21,250.00

Fee is subjected to change from time to time as suggested by the university Senate

✓ Structure of Study

The structure of the Master in Mechanical Engineering programme consist of 10 core courses with total of 40 credit hours, 2 elective courses with total of 6 credit hours, and Research Methodology Course 2 credit hours. Every students is required to complete Master's Dissertation in their final trimester.

Components	Modules	Credit
Core	Revolution in Military Affair	3
	Sustainability in Defence	3
	Research Methods	2
	Project Proposal	3
	Logistic Engineering	3
	Applied Engineering Mathematic	3
	Computational Methods	3
	Instrumentation, Measurement and Control System	3
	Structural Integrity	3
	Elective (2 modules only)	Advanced Manufacturing Process
Advanced Materials for Defence		3
Industrial Turbomachinery		3
Compressible Fluid Flow		3
Applied Heat Transfer		3
Automotive Safety		3
Vehicle Fleet Safety Management		3
Research		Project Paper (Masters' Dissertation)
Total Credit Hours		40

✓ Application

All applications must be submitted to the Centre for Graduate Studies, National Defence University of Malaysia.

The application form can be downloaded from the NDUM website at <https://cgs.upnm.edu.my/index.php/en/>

Notes:

