

BACHELOR OF ENGINEERING (HONOURS) IN MECHANICAL ENGINEERING

(4 YEARS DURATION WITH THE INCLUSION OF UP TO A ONE-YEAR 'DISCOVERY YEAR' IN SEMESTERS 6 & 7)

INTRODUCTION

Mechanical engineering plays a dominant role in enhancing the overall quality of life along with safety, economic vitality in the world. Mechanical engineers are concerned with the principles of force, energy and motion. The men and women who work as mechanical engineers are professionals with expert knowledge of the design and manufacture of mechanical systems and thermal devices and processes. Some examples of products and processes developed by mechanical engineers include engines and control systems for automobiles and aircraft, power generation plants, lifesaving medical devices and consumer products ranging from air conditioners to personal computers. Virtually every aspect of life is touched by mechanical engineering.

Programme aims and objectives

The aims of the programme are to:

- provide high quality education in mechanical engineering for undergraduate and graduate students by continuously pursuing the best teaching methods, facilities, and state-of-the-art technologies available.
- provide students with the knowledge and skills, that will enable them to make a valuable contributions to national development.
- prepare graduates who shall have the abilities to work logically, accurately, ethically and efficiently, and to enhance their careers through life-long learning.
- provide support for faculty research to contribute to the expansion of knowledge and to ensure quality education in Brunei Darussalam.
- provide technical expertise and training to industry and government departments in Brunei Darussalam.

CAREER PATHS

Graduates will have a broad base knowledge in design, manufacturing and thermo fluids and will be suitable to work as engineers or supervisors in the manufacturing and fabrication industries, thermal power plants, air-conditioning and refrigeration plants, petrochemical industries etc in the government and private sectors in the country.

Entry Requirements:

General Entry Requirements:

- At least a credit six in Malay Language at GCE Ordinary Level (*Applicable only to local Bruneian students applying for the award of Brunei Government Scholarships*).
- At least a credit six in Mathematics at GCE Ordinary Level.
- At least a credit six in English Language at GCE Ordinary Level or an IELTS score of 6.0 within the last two years or a TOEFL minimum overall score of 550 or its equivalent.

Programme Entry Requirements:

The minimum entry requirements to the Year 1 of the Bachelor of Engineering (Honours) in Mechanical Engineering programme are:

- A minimum of 220 'A' Level points for 3 'A' level passes including Mathematics or Further Mathematics (grade C or higher), Physics (grade C or higher) and a relevant Science subject (Relevant science subjects include Design and Technology, Chemistry, and Computing)

OR

- A minimum International Baccalaureate score of 30 points with minimum of 5 points in Mathematics at higher level and preferably with two relevant subjects at higher level (Relevant subjects include Chemistry, Physics and Further Mathematics)

OR

- A relevant BTEC/BDTVEC Higher National Diploma or its equivalent with acceptable grades as specified by the faculty

OR

- Work experience and/or qualifications deemed to be equivalent to one of the above to be decided on a case by case basis by the faculty

Note: For Advanced Standing Entry to Year 2 of the Programme or Accreditation of Prior Learning, please contact the Mechanical Engineering Programme Leader.

BEng (Hons) Mechanical Engineering Programme Structure

YEAR 1	SEMESTER 1 <ul style="list-style-type: none"> • Engineering Mathematics 1 • Material Science • Computer Aided Drafting (CAD) • Manufacturing Process 1 • Communication Skills for Engineers 1 • Melayu Islam Baraja (MIB) 	SEMESTER 2 <ul style="list-style-type: none"> • Engineering Mathematics 2 • Engineering Mechanics 1 • Design Modelling • Manufacturing Process 2 • Communication Skills for Engineers 2 • Mechanics of Materials
YEAR 2	SEMESTER 3 <ul style="list-style-type: none"> • Fluid Mechanics 1 • Engineering Mechanics 2 • Computing 1 • Machine Design 1 • Engineering Thermodynamics 1 • Electrotechnology 	SEMESTER 4 <ul style="list-style-type: none"> • Fluid Mechanics 2 • Manufacturing Engineering 1 • Computing 2 • Machine Design 2 • Engineering Thermodynamics 2
YEAR 3	SEMESTER 5 <ul style="list-style-type: none"> • Mechanical Vibration • Manufacturing Engineering 2 • Heat Transfer • Mechanics of Machines • Engineering Professional Ethics 	SEMESTER 6 <ul style="list-style-type: none"> • Work Placement
YEAR 4	SEMESTER 7 <u>Equipping Skills</u> <ul style="list-style-type: none"> • Technopreneurship • Research & Methodology • Elective* <u>Programme Modules</u> <ul style="list-style-type: none"> • Project (Phase 1) • Engineering Maintenance • Engineering Management 	SEMESTER 8 <ul style="list-style-type: none"> • Project (Phase 2) • Refrigeration and Air Conditioning • Industrial Automation and Control Systems • Thermal Power Systems

Disclaimer: ITB reserves the right to make any necessary changes to the programme without any prior notice.

*To be advised

FURTHER INQUIRIES

For further information and details regarding the programme, please contact:

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