Bachelor of Engineering (Honours) (Mechanical Engineering)

Course code: NHEM

Course Requirements

To attain the Bachelor of Engineering (Honours) (Mechanical Engineering), students will be required to complete 384 credit points, consisting of:

- 96 credit points of First Year Core studies;
- 288 credit points of Mechanical Engineering units.

Students are required to produce documented evidence of the completion of 12 weeks professional experience.

Accreditation:
This program is accredited by Engineers Australia and graduates are eligible to apply for graduate membership..

First Class Honours:
To be eligible for completion with First Class Honours, students must achieve:
- A minimum weighted average of 60% over year levels 1 to 3;
- A minimum weighted average of 80% in year level 4;
- An average HD grade for the final year units, NEF4101 Research Project 1 and NEF4201 Research Project 2

Students are required to enrol in all units for semester 1 and 2, and are not permitted to enrol in more than 48 credit points per semester as a full-time load.

Credit Points

A credit point is used to measure the study load for a unit. A standard unit consists of 12 credit points, with each completed unit's credit points adding up to meet your required total of credit points to complete your course.

Capstone Units

This course includes capstone units, which are third-year level units that are completed at the end of your last year of study. They involve demonstrating the skills and knowledge you have acquired through your course, usually through a large research project or an internship. They have the study load of 2 units, and are worth 24 credit points upon completion.

Further Information

Unit and course information is available from the University course search site at http://vu.edu.au/course-search or go to https://askvu.vu.edu.au or Phone VUHQ on 03 9919 6100

Campus

Footscray Park (FP)

College

College of Sport, Health and Engineering

Study Mode

Full Time or Part Time

Duration

4 years Full Time or Part Time equivalent

Fee Type

For information on course fees, refer to http://vu.edu.au/fees

Application Method

VTAC - https://vtac.edu.au
Direct Application - https://gotovu.custhelp.com/app/landing

Timetable

vu.edu.au/timetables

Course Chair

Matthew Lamb

Course Advice

AskCUA - https://askvu.vu.edu.au/app/askcua

Year 1

Unit Code	Unit Title	Unit Type	Sem	Credit Points	Campus	Pre-Requisites
NEF1103	Engineering and the Community	Core	1B1	12	FP	
NEF1105	Mathematics for Engineering and Science	Core	1B2	12	FP	
NEF1104	Problem Solving for Engineers	Core	1B3	12	FP	
NEF1102	Engineering Physics 1	Core	1B4	12	FP	
NEF1201	Engineering Mathematics 2	Core	2B1	12	FP	NEF1105
NEF1202	Engineering Physics 2	Core	2B2	12	FP	
NEF1204	Introduction to Engineering Design	Core	2B3	12	FP	NEF1102
NEF1205	Engineering Fundamentals	Core	2B4	12	FP	

Year 2

Unit Code	Unit Title	Unit Type	Sem	Credit Points	Campus	Pre-Requisites
NEF2101	Fluid Mechanics 1	Core	1B1	12	FP	NEF1105
NEC2102	Solid Mechanics	Core	1B2, 2B1	12	FP	NEF1102, NEF1205 and NEF1105
NEM2102	Introduction to Engineering Materials	Core	1B3	12	FP	NEF1204
NEM2101	Mechanical Engineering Design	Core	1B4	12	FP	NEF1204, NEF1205 and NEC2102
NEM2201	Thermodynamics 1	Core	2B1	12	FP	NEF1202
NEM2104	Numerical Modelling of Mechanical Systems	Core	2B2	12	FP	NEF1201, NEF1104 and NEF1205
NEM2202	Dynamics	Core	2B3	12	FP	NEF1202 and NEF1105
NEF2251	Fundamentals of Electrical and Electronic Engineering	Core	2B4	12	FP	NEF1205

Students should be enrolling in the above sequence patterns only. Unit offerings have been created by your discipline for your specific course. If the unit quota is full, please contact AskCUA for course advice

Prerequisites

A number of units within the degree have 'prerequisites'. These prerequisites must be met before enrolment in the unit is permitted. Generally these prerequisites require the successful completion of a unit or units taken at an earlier stage in the course. Students should pay particular attention to these prerequisite requirements as failure to meet these can seriously hinder progression through the course.

Core

A unit that must be completed

Year 3

Unit Code	Unit Title	Unit Type	Sem	Credit Points	Campus	Pre-Requisites
NEM3203	Stress Analysis	Core	1B1	12	FP	NEC2102 and NEM2101
NEM3101	Engineering Analysis and Modelling	Core	1B2	12	FP	NEM2104
NEM3103	Thermodynamics 2	Core	1B3	12	FP	NEM2201
NEF3101	Project Management	Core	1B4	12	FP	Completion of at least 96 Credit Points
NEM3102	Design of Mechanical Systems	Core	WB1	12	FP	NEM2101 and NEM3203
NEF3202	Research Methods	Core	2B2	12	FP	Completion of 192 credit points
NEM3201	Manufacturing Materials	Core	2B3	12	FP	NEM2102
NEM3202	Fluid Mechanics 2	Core	2B4	12	FP	NEF2101

Year 4

Unit Code	Unit Title	Unit Type	Sem	Credit Points	Campus	Pre-Requisites
NEF4105	Professional Engineering Practice	Core	1B1	12	FP	Completion of 288 credit points.
NEF4001	Computational Heat and Fluid Flows	Core	1B2	12	FP	NEF1201 and NEF1202 and 240 credit points
NEM4101	Mechanical Vibrations	Core	1B3	12	FP	NEM3101
NEF4101	Research Project 1	Core	1B4, 2B4	12	FP	NEF3202 and Completion of at least 288 credit points
NEF4206	Advanced Engineering Design	Core	WB1	12	FP	NEF3101, NEM3102. and Completion of 288 credit points.
NEF4205	Sustainable Energy Systems	Core	2B2	12	FP	
NEM4202	Advanced Engineering Analysis	Core	2B3	12	FP	NEM3101
NEF4201	Research Project 2	Core	2B4	12	FP	NEF4101

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