

COURSE DELIVERY PLAN 2022

Bachelor of Engineering (Honours) (Mechanical Engineering)

COURSE CODE: NHEM

CAMPUS	Footscray Park (FP)
COLLEGE	College of Engineering and Science
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 REQUIREMENTS	<p>To attain the Bachelor of Engineering (Honours) (Mechanical Engineering), students will be required to complete 384 credit points, consisting of:</p> <ul style="list-style-type: none">• 96 credit points of First Year Core studies;• 288 credit points of Core Mechanical Engineering studies. <p>Students are required to produce documented evidence of the completion of 12 weeks professional experience.</p> <p>Accreditation: This program is accredited by Engineers Australia and graduates are eligible to apply for graduate membership.</p> <p>First Class Honours: To be eligible for completion with First Class Honours, students must achieve:</p> <ul style="list-style-type: none">• 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. Enrolling in the units outside of blocks on CDP, requires Supervisor approval for enrolment.
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
COURSE CHAIR	Vincent Rouillard
COURSE ADVICE	ASK YOUR CUA - https://askvu.vu.edu.au/app/askcua

Students who have completed old/replaced/suspended unit/s do not need to take the new/superseded unit/s.
For detail, scroll down to page # 5.

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Note: 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.

Core/Elective Core (a unit that must be completed) & Elective (you have some choice in what you select).

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.

Unit Availability

Please refer to [2022 Timetable](#) for unit availability.

Date of Publication: This information is current at the publication date: 3/03/2022. It is provided as information only and does not form part of a contract between any person and Victoria University.

VU is working to ensure that the achievements and adaptability of students and staff are reflected in our ongoing delivery modes for the future.

VICTORIA UNIVERSITY DELIVERY

These delivery modes are:

- **In person:** Your unit or classes will be delivered on the campus you have enrolled in. The timetable will display "On Campus" and provide the room where the classes will be held and you will physically attend those classes. All learning activity delivered on campus will continue to be run under strict COVID-19 safe practices.*
- **Online real-time:** Your unit or classes will be delivered online using Zoom. The timetable will display "Online Real Time (ZOOM)" and you will attend scheduled classes remotely through Zoom classrooms.
- **Hybrid:** Part of your unit will be delivered in person on the campus you have enrolled in, with the remainder delivered in an online mode. The timetable will state which classes or activities in the unit will be delivered on campus and which classes or activities will be online, in either real-time or self-paced mode.

Your unit will show whether it is delivered wholly online real-time, or in person. If your unit is delivered in hybrid mode, each class within the unit will show whether it is delivered in person or online. Please be sure to check all the individual classes in your unit.

CC/CT – City Tower
FP – Footscray Park
FN – Footscray Nicholson
ORT – Online Real Time (Zoom)
HY – Hybrid
IP – In Person

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YEAR 1

UNIT CODE	UNIT TITLE	UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
NEF1103	Engineering and the Community	Core	1B1, 2B1, SB1	12	FP	
NEF1105 / Old NEM1001	Mathematics for Engineering and Science	Core	1B1, 1B2, 1B4, 2B2	12	FP	
NEF1104	Problem Solving for Engineers	Core	1B3, 1B4, 2B3	12	FP	
NEF1102	Engineering Physics 1	Core	1B2, 1B3, 1B4, 2B4	12	FP	
			?		REM	
NEF1201	Engineering Mathematics 2	Core	1B1, 1B3, 2B1	12	FP	NEF1105 / NEM1001
NEF1205	Engineering Fundamentals	Core	1B4, 2B1, 2B2, 2B3	12	FP	
			?		REM	
NEF1202	Engineering Physics 2	Core	1B2, 2B1, 2B2, 2B3	12	FP	NEF1102
			?		REM, W	
NEF1204	Introduction to Engineering Design	Core	1B3, 2B3, 2B4	12	FP	

YEAR 2

UNIT CODE	UNIT TITLE	UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
NEC2102	Solid Mechanics	Core	1B1, 2B1	12	FP	NEF1102, NEF1205, NEF1105 / NEM1001
NEF2101	Fluid Mechanics 1	Core	1B2	12	FP	NEF1105 / NEM1001
NEF2251	Fundamentals of Electrical and Electronic Engineering	Core	2B2	12	FP	NEF1205
NEM2101	Mechanical Engineering Design	Core	1B4	12	FP	NEF1204, NEF1205, NEC2102
NEM2102	Introduction to Engineering Materials	Core	1B3	12	FP	
NEM2104	Numerical Modelling of Mechanical Systems	Core	2B1	12	FP	NEF1201, NEF1104, NEF1205
NEM2201	Thermodynamics 1	Core	2B4	12	FP	NEF1202
NEM2202	Dynamics	Core	2B3	12	FP	NEF1202, NEM1001

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YEAR 3

UNIT CODE	UNIT TITLE	UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
NEF3101	Project Management	Core	1B1, 1B2, 1B4, WB1	12	FP	96 CP
NEF3202	Research Methods	Core	2B4	12	FP	192 CP
NEM3101	Engineering Analysis and Modelling	Core	1B1, 1B2	12	FP	NEM2104
NEM3102	Design of Mechanical Systems	Core	2B1	12	FP	NEM2101, NEM3203
NEM3103	Thermodynamics 2	Core	1B3	12	FP	NEM2201
NEM3201	Manufacturing Materials	Core	2B3	12	FP	NEM2102
NEM3202	Fluid Mechanics 2	Core	2B4	12	FP	NEF2101
NEM3203	Stress Analysis	Core	1B1, 1B2	12	FP	NEC2102, NEM2101

YEAR 4

UNIT CODE	UNIT TITLE	UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
NEF4001 Suspended NEM4102	Computational Heat and Fluid Flows	Core	1B1, 1B2	12	FP	NEF1201, NEF1202, 240 CP
NEF4205	Sustainable Energy Systems	Core	2B2, 2B3	12	FP	
NEF4206	Advanced Engineering Design	Core	2B1, 2B3, WB1	12	FP	NEF3101, NEM3102, 288 CP
NEM4101	Mechanical Vibrations	Core	1B3	12	FP	NEM3101
NEM4202	Advanced Engineering Analysis	Core	2B3	12	FP	NEM3101
NEF4101	Research Project 1	Core	1B4, 2B4	12	FP	NEF3202
NEF4201	Research Project 2	Core	1B4, 2B4	12	FP	NEF4101
NEF4105	Professional Engineering Practice	Core	1B1, 1B2, 1B3, 2B4	12	FP	

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Minor:

Modelling and Simulation NMIMSM

In engineering, the design and development of new mechanical devices, systems and processes, modelling and simulation is becoming increasingly important. This exploits the combining of the various principles that underpin Mechanical Engineering into powerful engineering development and design tools using multi-physics. The minor reinforces the already existing theme of Modelling and Simulation and will ensure that students have information at the leading edge of industry practice and innovation while providing graduates with a significant level of future-proofing for their careers.

UNIT CODE	UNIT TITLE	UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
NEM2104	Numerical Modelling of Mechanical Systems	Minor	2B1	12	FP	NEF1201, NEF1104, NEF1205
NEM3101	Engineering Analysis and Modelling	Minor	1B1, 1B2	12	FP	NEM2104
NEM4202	Advanced Engineering Analysis	Minor	2B3	12	FP	NEM3101

<u>New/Replaced/Superseded Unit Code</u>	<u>Old/Suspended Unit Code</u>
NEF1105	NEM1001
NEF4001	NEM4102