Federation University | Institute of Innovation, Science and Sustainability

Enrolment Course Structure

Course Code – EG8.MEC

Course Name – Bachelor of Engineering (Mechanical) (Honours)

First Year	Unit Code	Unit Name	Unit Rules
Semester 1			
	ENGIN1001	Professional Engineering	**EX**: ENCOR1005 & GPENG1001
	ENGIN1002	Engineering Physics	**EX:** ENCOR1021 & ENCOR2100 & GPENG1002
	ENGIN1003	Materials in Engineering	**EX**: ENCOR1110 & GPENG1003
	MATHS1001	Modelling and Change (Introductory Level)	
Semester 2			
	ENGIN1004	Engineering Design and Drafting	**EX**: ENCOR1010 & GPENG1004
	ENGIN1005	Engineering Mechanics	**EX**: ITECH5103 & GPENG1005
	ENGIN1006	Engineering Computer Modelling	**EX:** ENCOR1021 & GPENG1006
	MATHS1102	Linear Algebra and Applications	**EX:** MATHS1005

Second Year	Unit Code	Unit Name	Unit Rules
Semester 1			
	ENGIN2001	Professional Practice	**PR**: ENGIN1001 or ENCOR1005 **EX:** ENCOR3035
	ENGIN2301	Mechanics of Solids	**PR**: ENGIN1005 for undergraduate Students only **EX:** ENCOR2030
	ENGIN2302	Engineering Dynamics	**PR:** ENGIN1005
	ENGIN2402	Measurement and Computer Instrumentation	**PR**: ENGIN1002 or ENCOR1000 or ENCOR1021 **EX:** ETMEC3260 & ENMTX2020
	MATHS2016	Modelling Continuous Change	**PR**: MATHS1001
Semester 2			
	ENGIN2002	Engineering Project Management and Sustainable Design	**EX**: ENMEC2121 & ENMTX2050
	ENGIN2303	Mechanism and Machine Theory	**PR:** EENCOR1000 or ENCOR1021 or ENGIN1005 **EX:** ENMEC2111
	ENGIN2304	Thermofluids	**PR:** ENGIN1005 & MATHS1001 **EX**: ENCOR2100
	MATHS3001	Modelling and Change (Advanced Level)	**PR**: MATHS1001 **EX**: MATHS2006

Third Year	Unit Code	Unit Name	Unit Rules
Semester 1			
	ENGIN3301	Fluid Dynamics	**PR**: ENGIN2304
	ENGIN3302	Introduction to Vibration Analysis	**PR**: ENGIN2302 for undergraduate Students only
	ENGIN3303	Robotics	**PR**: ENGIN2303 & MATHS3001
	ENGIN3404	System Dynamics and Control	**PR**: MATHS3001 for undergraduate Students only **EX**: ENMEC3500 & ENMTX3040
Semester 2			
	ENGIN3001	Engineering Research Methodology and Management	**PR**: ENGIN1001 or ENCOR1005 **EX**: ENCOR4010 & ENMTX4060
	ENGIN3002	Engineering Design Project	**PR**: ENGIN2002 or ENMEC2121 or ENMTX2050 **EX**: ENCIV3360 & ENMEC2120 & ENMEC3250 & ENMTX3800
	ENGIN3304	Thermodynamics	**PR**: ENGIN2304 for undergraduate Students only
	ENGIN3305	Manufacturing Engineering	**PR**: ENGIN1003 **EX**: ENMEC3110

Fourth Year	Unit Code	Unit Name	Unit Rules
Semester 1			
	ENGIN4001	Engineering Project 1	**EX**: ENCOR4100
	ENGIN4301	Machine Dynamics Vibration	**PR**: ENGIN3302 or equivalent
	ENGIN5302	Modelling and Simulation	**PR**: ENGIN2301 for undergraduate Students only **EX**: ENCOR4050
Semester 2			
	ENGIN4002	Engineering Project 2	**PR**: ENGIN4001 or ENCOR4100 **EX**: ENCOR4200
	ENGIN4302	Energy Conversion	**PR**: ENGIN3304 **EX**: ENMEC4090
	ENGIN5304	Advanced Robotics	**EX**: ENMEC7080

Additional Information

This course structure applies to continuing students who commenced in 2023 or prior.

Glossary

Semester: designated teaching period.
PR: Pre-requisite, a unit/s that must be completed prior to undertaking another unit.
CO: Co-requisite, a unit/s that must be completed simultaneously, or prior to, undertaking another unit.
EX: Exclusion, a unit/s that may not be taken.