

**Elective and Minor Options for  
Bachelor of Engineering (Mechanical) (Honours), BH-EME**

Students who commenced Degree in 2010 and onwards			
(A) Specialist Study (package of 4 units)			
Unit Code	Unit Name	Pre-requisite	Remarks
MEE40005	Human Factors	100 CPS	Semester 1
RME40003	Robot System Design	250 CPS	Semester 1
EEE20006	Circuits and Electronics 1	(MTH10007 or MTH10013) & (EEE10001 or PHY10004)	Semester 1
EEE20001	Digital Electronics Design	Nil	Semester 1
EEE80015	Renewable Energy	200 CPS	Semester 1
CEE30008	Environmental Engineering	250 CPS	Semester 1
	<i>Students will be joining a class with Chemical Engineering students. It is assumed that the Mechanical Engineering students who have less exposure to Chemical Engineering will need <b>to spend additional learning time</b> to acquire the basic Chemical Engineering knowledge in addition to the contents delivered by the unit, so that they will be able to meet the required standard.</i>		
RME20001	Electrical Actuators and Sensors	EEE10001 or PHY10004	Semester 2
CVE20007	Sustainable Built Environment	200 CPS	Semester 2
CEE20005	Engineering Chemistry	Nil	Semester 1
	<i>A <b>restriction*</b> is applied to Engineering Chemistry, Chemistry 1, and Chemistry 2. Please refer to more details below.</i>		
CEE20004	Safe and Sustainable Design	RME10001 or ENG10001	Semester 2
RSK80004**	Introduction to Risk and Due Diligence	250 CPS	Semester 1 & 2 (the unit is delivered online)
CSM80006**	Engineering Project Management	250 CPS	Semester 1 & 2 (the unit is delivered online)
MME80003**	Maintenance Management of Engineering Assets	250 CPS	Summer and Winter Term (Term 1 & 3) (the unit is delivered online)
ENT30014	Social Innovation Internship	100 CPS	Winter term (limited seats)
BIO10001	Concepts of Biology		Semester 1 & 2
CHE10001	Chemistry 1		Semester 1 & 2
BIO10003	Concepts of Biotechnology		Semester 1 & 2
NPS10001	Introduction to e-Science		Semester 2
CHE10002	Chemistry 2	CHE10001	Semester 1 & 2
CHE20006	Analytical and Forensic Chemistry	CHE10002	Semester 1
PEH20006	Water Science	CHE10001	Semester 1
HES2210	Industrial Microbiology	BIO20002	Semester 2
NPS20005	Communication for Scientists	100 CPS	Semester 2
HES3410	Project Development and Evaluation	150 CPS	Winter Term
HES2205	Aquatic Biotechnology	150 CPS	Semester 1

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**\*Restriction:**

1. A restriction is applied to CEE20004 and RSK80004. A student has to choose a unit between CEE20004 and RSK80004. If a student has completed either CEE20004 or RSK80004, he/she is not allowed to take the other unit.
2. A restriction is applied to CEE20005, CHE10001, and CHE10002. A student has to choose a unit(s) between CEE20005 and CHE10001/CHE10002. If a student has completed either CEE20005 or CHE10001/CHE10002, he/she is not allowed to take the other unit.

**\*\*Master Degree Level & Unit Exemption in the Master of Construction Management:**

The RSK80004, CSM80006 and MME80003 are units from the Master of Construction Management program. It is expected that students will put in a high level of commitment in order to keep up with the academic standard of the Master program.

If a student has completed these units in the BEng program and he/she signs up for the Master of Construction Management program subsequently, the same units which is required by the Master program will be exempted.

**(B) Mechatronics Minor (package of 4 units)**

EEE20006	Circuits and Electronics 1	(MTH10007 or MTH10013) & (EEE10001 or PHY10004)	Semester 1
EEE20001	Digital Electronics Design	Nil	Semester 1
RME20001	Electrical Actuators and Sensors	EEE10001 or PHY10004	Semester 2
RME40003	Robot System Design	250 CPS	Semester 1

**The default study sequence will not work for the Mechatronics Minor. Please consult the ME Program Coordinator during the beginning of your 3<sup>rd</sup> year for customization of study sequence if you select this Minor.**

**(C) Biotechnology Minor (package of 4 units)**

CHE10001	Chemistry 1	Nil	
BIO10001	Concepts of Biology	Nil	Semester 1 & 2
BCH20002	Introduction to Biochemistry	BIO10001 & CHE10001	
BCH20001	Biochemistry of Genes and Proteins	BCH20002 & CHE10001	

**(D) Chemistry Minor (package of 4 units)**

CHE10001	Chemistry 1	Nil	Semester 1 & 2
CHE10002	Chemistry 2	CHE10001	Semester 1 & 2
CHE10005	Consumer Chemistry	CHE10001	Winter term
CHE20006	Analytical and Forensic Chemistry	CHE10002	Semester 1

*Please consult the ME Program Coordinator for customization of study sequence if you select this Minor*

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**Important:**

Student MUST complete either (A), (B),(C), OR (D)

\* It is **student's own responsibility** to check the offering of the units with the Student Central, if in doubt.

\* Failure to comply with any instruction above may result in time-table clashes and/or delay of completing the Degree in 4 years under normal circumstances.