

Bachelor of Engineering (Engineering Science Programme)

Recommended Semester Schedule for A-level/IB/NUSHS Students

For Cohort AY2021/2022

Semester 1		Semester 2	
CS1010E Programming Methodology	4	GEA1000 Quantitative Reasoning	4
EG1311 Design and Make	4	DTK1234 Design Thinking	4
MA1511 Engineering Calculus	2	MA1508E Linear Algebra for Engineering	4
MA1512 Differential Equations for Engineering	2	PF1101 Fundamentals of Project Management	4
ESP1111 Engineering Principles In-Action	4	ESP2111 Sensor System Electronics	4
GE course / Unrestricted Elective	4		
Sub-total	20	Sub-total	20
Semester 3		Semester 4	
ES2631 Critique and Communication of Thinking and Design	4	EG2501 / CDE2501 Liveable Cities	4
IE2141 Systems Thinking and Dynamics	4	EE2211 Introduction to Machine Learning	4
ESP2107 Numerical Methods and Statistics	4	ESP2110 Design Project	4
ME2121 Engineering Thermodynamics & Heat Transfer	4	PC3235B Applied Solid State Physics	4
GE course / Unrestricted Elective	4	GE course / Unrestricted Elective	4
Sub-total	20	Sub-total	20
Semester 5		Semester 6	
EG3611A Industrial Attachment	10	CDE2000 Creating Narratives	4
ESP2106 Principles of Continua	4	PC2130B Applied Quantum Physics	4
GE course / Unrestricted Elective	4	EG2401A Engineering Professionalism	2
		Choose ONE	
		* PC2020 Electromagnetics for Electrical Engineers	4
		* EE2023 Signals and Systems	
		GE course / Unrestricted Elective	4
		GE course / Unrestricted Elective	4
Sub-total	18	Sub-total	22
Semester 7		Semester 8	
ESP4901 Research Project	4	ESP4901 Research Project	4
ESP3903 Major Design Project	4	GE course / Unrestricted Elective	4
GE course / Unrestricted Elective	4	GE course / Unrestricted Elective	4
GE course / Unrestricted Elective	4	GE course / Unrestricted Elective	4
GE course / Unrestricted Elective	4	GE course / Unrestricted Elective	4
Sub-total	20	Sub-total	20

[GE course - General Education Pillar](#)

[EG3611A - Industrial Attachment](#)

Students may take up to 20 Units of credit-bearing internships, of which up to 10 Units can be used to fulfil the major internship requirement and the remaining will be counted towards Unrestricted Electives:

EG3611A Industrial Attachment (10 Units)

EG3612 Vacation Industrial Attachment (6 Units)

CFG2101 Vacation Internship Programme (4 Units)

EG2605 Undergraduate Research Opportunities Programme (4 Units)