Bachelor of Engineering (Engineering Science Programme)

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

For Cohort AY2022/2023 and AY2023/2024

(Assuming the Physics bridging course PC1201 is required)

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 or	4
ESP1111 Engineering Principles In-Action	4	PF1101A Project Management and Finance	
PC1201 Fundamentals of Physics	4	ESP2111 Sensor System Electronics	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 or	4
ESP2107 Numerical Methods and Statistics	4	EE2213 Introduction to Artificial Intelligence	
ME2121 Engineering Thermodynamics & Heat Transfer	4	ESP2110 Design Project	4
GE course / Unrestricted Elective	4	PC3235B Applied Solid State Physics	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	4
		* PC2020 Electromagnetics for Electrical Engineers	
		* 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)

CDE2605R Undergraduate Research Experience (4 Units)

#Read 1 from each basket (AY2023/2024 to complete 2, AY2022/2023 to complete 1):

Basket A: EE3331C or ME2142 or ME3142

Basket B: EE2023 or PC2020

Basket C: ESP3201A

These courses can be used to replace the Systems Thinking, Sustainable Futures and Creating Narratives Pillars

Bachelor of Engineering (Engineering Science Programme)

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

For Cohort AY2022/2023 and AY2023/2024

(Assuming the Physics bridging course PC1201 is NOT required)

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 or	4
ESP1111 Engineering Principles In-Action	4	PF1101A Project Management and Finance	
GE course / Unrestricted Elective	4	ESP2111 Sensor System Electronics	4
Sub-total	**20**	**Sub-total**	**20**
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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 or	4
ESP2107 Numerical Methods and Statistics	4	EE2213 Introduction to Artificial Intelligence	
ME2121 Engineering Thermodynamics & Heat Transfer	4	ESP2110 Design Project	4
GE course / Unrestricted Elective	4	PC3235B Applied Solid State Physics	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	4
		* PC2020 Electromagnetics for Electrical Engineers	
		* 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**

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Basket B: EE2023 or PC2020

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