

College of Design and Engineering
Bachelor of Engineering (Engineering Science)
Cohort 2020/2021

Course Requirements	Units
University Level Requirements	
General education courses:	
• Asking Questions (GEQ1000)	4
• Human Cultures (GEH)	4
• Quantitative Reasoning (GER1000)	4
• Singapore Studies (GES)	4
• Thinking & Expression (GET)	4
Sub-total for University Level Requirements	20
Faculty Level Requirements	
• ES2631 Critique and Communication of Thinking and Design <i>(Replaced ES2531 Critical Thinking & Writing)</i>	4
• EG2401A Engineering Professionalism	2
Sub-total for Faculty Level Requirements	6
Unrestricted elective (UE) courses	
• 8 unrestricted elective courses	
Sub-total for unrestricted elective courses	32
Programme Requirements	
Core courses:	
• CS1010E Programming Methodology	4
• ESP1104B Sensor System Electronics	4
• ESP1111 Engineering Principles in Action	4
• ESP2106 Principles of Continua	4
• ESP2107 Numerical Methods & Statistics	4
• ESP2110 Design Project 2	4
• ESP3902 Major Design Project 1	4
• ESP3903 Major Design Project 2	4
• ESP4901 Research Project ¹	8
• MA1507 Advanced Calculus	4
• MA1508E Linear Algebra for Engineering	4
• ME2121 Engineering Thermodynamics & Heat Transfer	4
• MLE1010 Materials Engineering Principles & Practice	4
• PC1433 Mechanics & Waves	4
• PC2020 Electromagnetics for Electrical Engineers	4
• PC2130B Applied Quantum Physics	4
• PC2133 Applied Solid State Physics	4
• PC2134 Mathematical Methods in Physics	4
Industrial attachment:	
• EG3612 Vacation Industrial Attachment	6
Specialization courses:	
• 5 courses from the chosen specialisation basket ²	20
Sub-total for Programme Requirements	102
Total	160

¹Your research project must be relevant to your specialisation.

²See separate document on courses for specialisations.