

**College of Design and Engineering**  
**Bachelor of Engineering (Engineering Science)**  
**Cohort 2019/2020**

<b>Course Requirements</b>	<b>Units</b>
<b>University Level Requirements</b>	
General education courses:	
• Asking Questions (GEQ1000)	4
• Human Cultures (GEH)	4
• Quantitative Reasoning (GER1000)	4
• Singapore Studies (GES)	4
• Thinking & Expression (GET)	4
<b>Sub-total for University Level Requirements</b>	<b>20</b>
<b>Faculty Level Requirements</b>	
• ES2531 Critical Thinking & Writing	4
• EG2401A Engineering Professionalism	2
<b>Sub-total for Faculty Level Requirements</b>	<b>6</b>
<b>Unrestricted elective (UE) courses</b>	
• 8 unrestricted elective courses	
<b>Sub-total for unrestricted elective courses</b>	<b>32</b>
<b>Programme Requirements</b>	
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 <sup>1</sup>	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 <sup>2</sup>	20
<b>Sub-total for Programme Requirements</b>	<b>102</b>
<b>Total</b>	<b>160</b>

<sup>1</sup>Your research project must be relevant to your specialisation.

<sup>2</sup>See separate document on courses for specialisations.