

Bachelor of Engineering (Engineering Science Programme)

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

For Cohort AY2025/2026

(Assuming the Physics bridging course PC1201 is required)

| Semester 1 | | Semester 2 | |
|--|-----------|--|-----------|
| CS1010E Programming Methodology | 4 | GEA1000 Quantitative Reasoning | 4 |
| DTK1234 Design Thinking | 4 | EG1311 Design and Make | 4 |
| MA1511 Engineering Calculus | 2 | MA1508E Linear Algebra for Engineering | 4 |
| MA1512 Differential Equations for Engineering | 2 | PF1101A Project Management and Finance | 4 |
| ESP1111 Engineering Principles In-Action | 4 | ESP2111 Sensor System Electronics | 4 |
| PC1201 Fundamentals of Physics | 4 | | |
| Sub-total | 20 | Sub-total | 20 |
| Semester 3 | | Semester 4 | |
| EE2211 Introduction to Machine Learning or EE2213 Introduction to Artificial Intelligence | 4 | EE2023 Signals and Systems | 4 |
| CDE2501 Liveable Cities | 4 | ESP2110 Design Project | 4 |
| ME2121 Engineering Thermodynamics & Heat Transfer | 4 | PC3235B Applied Solid State Physics | 4 |
| GE course / Unrestricted Elective | 4 | ESP2107 Numerical Methods and Statistics | 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 | ES2631 Critique and Communication of Thinking and Design | 4 |
| ESP2106 Principles of Continua | 4 | PC2130B Applied Quantum Physics | 4 |
| GE course / Unrestricted Elective | 4 | EG2401A Engineering Professionalism | 2 |
| | | EE3331C OR ME3142 Feedback Control Systems | 4 |
| | | PC2020 Electromagnetics for Electrical Engineers | 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 |
| ESP3201A Machine Learning in Engineering Science | 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](#)

[*Bridging courses](#)

[Internships](#)

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)

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