

B.Eng. (Infrastructure and Project Management) (Hons) curriculum for AY2025/26 intake and after:

Table 1: Programme Structure

No	Requirements	Units (UTs)
1	Common Curriculum	40
a	<p><u>General Education Pillars</u> (University-wide), 4 UTs each</p> <ol style="list-style-type: none"> 1. Data Literacy (GEA1000 Quantitative Reasoning with Data) 2. Digital Literacy (CS1010E Programming Methodology) 3. Critique and Expressions (ES2631 Critique and Communication of Thinking and Design) 4. Cultures and Connection * 5. Singapore Studies (CDE2501 Liveable Cities) 6. Communities and Engagement * <p>*Students to select from the following list of available courses for GE Pillars with no pre-assigned course: - https://www.nus.edu.sg/registrar/academic-information-policies/undergraduate-students/general-education/list-of-courses-approved-under-the-ge-pillars</p>	24
b	<p><u>Common Curriculum Pillars</u> (CDE), 4 UTs each</p> <ol style="list-style-type: none"> 1. Design Thinking (DTK1234 Design Thinking) 2. Maker Space (EG1311 Design and Make) 3. Artificial Intelligence (EE2211 Introduction to Machine Learning) 4. Project Management (PF1101A Project Management and Finance) 	16
2	Primary Major	80
a	<p><u>Engineering Core</u> (CDE)</p> <ol style="list-style-type: none"> 1. CE2407A Uncertainty Analysis for Engineers (2 UTs) 2. CE2407B Introduction to Numerical Methods for Engineers (2 UTs) 3. MA1511 Engineering Calculus (2 UTs) 4. MA1513 Linear Algebra with Differential Equations (2 UTs) 5. EG2401A Engineering Professionalism (2 UTs) 6. EG3611A Industrial Attachment (10 UTs) * <p>* <u>Alternatives for Industrial Attachment:</u> a. EG3612 Vacation Industrial Attachment (6 UTs) + EG2605 Undergraduate Research Opportunities Programme (4 UTs) b. EG3612 Vacation Industrial Attachment (6 UTs) + CDE2605R Undergraduate Research Experience (4 UTs) c. EG3612 Vacation Industrial Attachment (6 UTs) + CFG2101 NUS Vacation Internship Programme (4 UTs) d. ETP3205 Innovation & Enterprise Internship (6 UTs) + EG3612 Vacation Industrial Attachment (6 UTs)</p>	20
b	<p><u>Discipline Core</u> (IPM Essentials)</p> <p><u>Year 1</u></p> <ol style="list-style-type: none"> 1. IPM1102 Infrastructure and Project Management Law (4 UTs) 2. IPM1103I Digitalisation in the Built Environment (4 UTs) 3. IPM1104 Built Environment Engineering Principles and Practice (4 UTs) <p><u>Year 2</u></p> <ol style="list-style-type: none"> 1. IPM2101 Introduction to Building Performance (4 UTs) 2. IPM2102 Construction Technology (4 UTs) 3. IPM2103 Measurement (Building Works) (4 UTs) 4. IPM2104 Project Cost Management (4 UTs) 5. IPM2105 Structural Systems (4 UTs) *** 6. IPM2106 Mechanical and Electrical Systems (4 UTs) *** <p><u>Year 3</u></p> <ol style="list-style-type: none"> 1. IPM3102 Infrastructure and Facilities Management (4 UTs) 2. IPM3103 Project Finance (4 UTs) *** <p><u>Year 4</u></p> <ol style="list-style-type: none"> 1. IPM4101 Dissertation (8 UTs) *Year-long course 2. IPM4102 Project Execution (4 UTs) 3. IPM4103 Contract and Procurement Management (4 UTs) 	60
3	Unrestricted Electives	40
	Total	160

- Some specific courses indicated might differ for students in Residential Colleges (RC).
- *** Indicates a new course, currently under review and approval.
- GEN coded courses are only available from year 2 onwards.

	Year 1		Year 2		Year 3		Year 4	
	Sem 1	Sem 2	Sem 3	Sem 4	Sem 5	Sem 6	Sem 7	Sem 8
NUS GE Pillars	GEA1000 Quantitative Reasoning with Data (4 Units)	CS1010E Programming Methodology (4 Units)		ES2631 Critique and Communication of Thinking and Design (4 Units)	CDE2501 Liveable Cities (4 Units)			
CDE Common Curriculum Courses	DTK1234 Design Thinking (4 Units)	EG1311 Design and Make (4 Units)	EE2211 Introduction to Machine Learning (4 Units)					
			PF1101A Project Management Finance (4 Units)					
Engineering Core Courses	CE2407A Uncertainty Analysis for Engineers (2 Units)	CE2407B Introduction to Numerical Methods for Engineers (2 Units)			EG2401A Engineering Professionalism (2 Units)	EG3611A* Industrial Attachment (10 Units)		
	MA1513 Linear Algebra with Differential Equations (2 Units)	MA1511 Engineering Calculus (2 Units)				Alternatives: EG3612 + EG2605 EG3612 + CDE2605R EG3612 + CFG2101 ETP3205 + EG2605 *Polytechnic students exempted		
Programme Core (IPM Essential) Courses	IPM1102 Infrastructure and Project Management Law (4 Units)	IPM1103I Digitalisation in the Built Environment (4 Units)	IPM2101 Introduction to Building Performance (4 Units)	IPM2103 Measurement (Building Works) (4 Units)	IPM3102 Infrastructure and Facilities Management (4 Units)		IPM4101 Dissertation (8 Units)	
	IPM1104 Built Environment Engineering Principles and Practice (4 Units)		IPM2102 Construction Technology (4 Units)	IPM2104 Project Cost Management (4 Units)	IPM3103 Project Finance (4 Units)		IPM4102 Project Execution (4 Units)	
			IPM2105 Structural Systems (4 Units)	IPM2106 Mechanical and Electrical Systems (4 Units)			IPM4103 Contract and Procurement Management (4 Units)	
IPM Elective Courses					IPM3101 Project Feasibility (4 Units)			PF4208 Safety and Health Management (4 Units)
					PF3105 Research Methods (4 Units)			
IPM Elective Courses (Cost and Contract Management)				PF2203 Quality and Productivity Management (4 Units)	PF3208 Project Leadership (4 Units)	PF3207 Project Management Law (4 Units)		PF4203 Project Dispute Management (4 Units)
					PF3205 Advanced Measurement (4 Units)			
					PF3209 Building Information Modelling (4 Units)			
IPM Elective Courses (Facilities Management)				PF2504 Materials Technology (4 Units)	PF3307 Strategic Facilities Management (4 Units)	PF3305 Facilities Planning and Design (4 Units)	PF4309 Infrastructure Operations and Maintenance (4 Units)	PF4306 REITs Facilities Management (4 Units)
						PF3301 Maintainability of Facilities (4 Units)		
						PF3306 Facilities Management Law and Contracts (4 Units)		
IPM Elective Courses (Sustainable and Digital Technologies)					PF3211 AI Applications for the Built Environment (4 Units)	PF3502 Smart Facilities (4 Units)	PF4502 Green Development (4 Units)	PF4502 Green Development (4 Units)
					PF3210 Total Building Performance (4 Units)	PF3504 Energy Management (4 Units)	PF4213 Building Energy Analysis and Simulation (4 Units)	PF4212 Advanced Building Information Modelling (4 Units)
Unrestricted Electives		1 x GE/UE		1 x GE/UE	1 x GE/UE	1 x GE/UE	2 x GE/UE	4 x GE/UE