

B.Eng. (Infrastructure and Project Management) – Programme Structure and Syllabus as of 15 July 2024

	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 Critical Thinking and Writing (4 Units)				
CDE Common Curriculum Pillars	DTK1234 Design Thinking (4 Units)	EG1311 Design and Make (4 Units)	PF1101 Fundamentals of Project Management (4 Units)	IE2141 Systems Thinking and Dynamics (4 Units)	CDE2000 Creating Narratives (4 Units)		IPM4101 Dissertation (8 Units)	
			EE2211 Introduction to Machine Learning (4 Units)					
			CDE2501 Liveable Cities (4 Units)					
Common Engineering 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)						
IPM Essential Courses	IPM1102 Infrastructure and Project Management Law (4 Units)	IPM1103 Digital Construction (4 Units)	IPM2101 Introduction to Building Performance (4 Units)	IPM2103 Measurement (Building Works) (4 Units)	IPM3102 Infrastructure and Facilities Management (4 Units)		IPM4102 Project Execution (4 Units)	
	IPM1104 Built Environment Engineering Principles and Practice (4 Units)		IPM2102 Construction Technology (4 Units)	IPM2104 Project Cost Management (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)			PF2102 Structural Systems (4 Units)	PF2203 Quality and Productivity Management (4 Units)	PF3205 Advanced Measurement (4 Units)	PF3207 Project Management Law (4 Units)	PF4209 Construction Enterprise Management (4 Units)	PF4203 Project Dispute Management (4 Units)
			PF2205 Project Finance (4 Units)		PF3208 Project Leadership (4 Units)			
IPM Elective Courses (Facilities Management)				PF2504 Materials Technology (4 Units)	PF3307 Strategic Facilities Management (4 Units)	PF3301 Maintainability of Facilities (4 Units)	PF4309 Infrastructure Operations and Maintenance (4 Units)	PF4306 REITs Facilities Management (4 Units)
				PF2505 M&E Systems (4 Units)		PF3305 Facilities Planning and Design (4 Units)		
						PF3306 Facilities Management Law and Contracts (4 Units)		
IPM Elective Courses (Sustainable and Digital Technologies)					PF3209 Building Information Modelling (4 Units)	PF3502 Smart Facilities (4 Units)	PF4213 Building Energy Analysis and Simulation (4 Units)	PF4212 Advanced Building Information Modelling (4 Units)
					PF3210 Total Building Performance (4 Units)	PF3504 Energy Management (4 Units)	PF4502 Green Development (4 Units)	PF4502 Green Development (4 Units)
					PF3211 AI Applications for the Built Environment (4 Units)		IPM4201 Smart Facility Management Robotics (4 Units)	
Unrestricted Electives		1 x GE/UE		1 x GE/UE	3 x GE/UE	2 x GE/UE	2 x GE/UE	4 x GE/UE