

FACULTY OF ENGINEERING AND SCIENCE

Units Offered – Semesters 1 & 2, 2026

(Undergraduate Programme)

(Rev.02 – changes are highlighted in yellow and/or refer to last page for revision note)

Date: Wednesday, October 15, 2025

UNIT CODE	UNIT TITLE	SEM 1, 2026	SEM 2, 2026	REMARKS
	DEPARTMENT:	 ENGINEERING FIRS	T VFAR	
		MENT: IR. DR TAN		
COMP1005	Fundamentals of Programming	V	٧	
ELEN1000	Electrical Systems	٧	٧	
INDE1001	Engineering Foundations: Principles, Design and Communication	٧	٧	
MATH1019	Linear Algebra and Statistics for Engineers	٧	٧	
MATH1020	Calculus for Engineers	٧	٧	
MCEN1000	Engineering Mechanics	٧	٧	
PRRE1003	Resources, Processes and Materials Engineering	٧	٧	
BLDG1004	Introduction to Management in Construction	٧		Optional Unit
CHEM1000	Principles and Processes in Chemistry	٧	٧	Optional Unit
CMPE1000	Hardware Fundamentals	٧	-1	Optional Unit
GEOL1007	Sustainability and Renewable Energy Planetary Science	V	√ √	Optional Unit Optional Unit
GEOL1007 GEOL1008	Dynamic Earth	√	V	Optional Unit
ISAD1000	Introduction to Software Engineering	V √		Optional Unit
SPAT1007	Fundamentals of Geographic Information Systems	√ v		Optional Unit
GEOL1005	Fundamentals of Geology		٧	Optional Unit
ENGR2002	Introduction to Energy Engineering		V	Optional Unit
2.1.01.2002	DEPARTMENT: CHEMI	CAL AND ENERGY	-	optional onic
	HEAD OF DEPARTMENT: PR			
ROGRAMME: CH	EMICAL ENGINEERING			
CHEM1000	Principles and Processes in Chemistry	٧	٧	
CHEM1002	Reactivity and Function in Chemistry	٧	٧	
CHEN2000	Mass and Energy Balances	٧	٧	
CHEN2001	Thermodynamics		٧	
CHEN2002	Process Heat Transfer	٧		
CHEN2003	Process Mass Transfer	-	٧	
CHEN2004	Process Simulation and Data Analytics		√	
	,	-1		
CHEN3001	Computational Transport Phenomena	٧	٧	
CHEN3003	Process Synthesis and Design	٧		
CHEN3005	Process Instrumentation and Control		٧	
CHEN3009	Fluid and Particle Processes	٧		
CHEN3010	Reaction Engineering	٧		
CHEN4001	Process Safety and Risk Management	٧		
CHEN4012	Advanced Unit Operations	٧		
CHEN4015	Chemical Engineering Design Project		٧	
CHEN4016	Engineering Economics, Management and Sustainability		٧	
ENGR2000	Fluid Mechanics	٧		Common Engineering Unit
ENGR4000	Engineering Industry Research Project 1	√ √	٧	
ENGR4001	Engineering Industry Research Project 2	V V	V	
	ts Year 3 (please refer to Course Structure for			
-		1	ojjereuj.	CDITE ADMIDD Advocand
CHEN3012	Materials Selection and Corrosion	V		SPUE-ADMPR Advanced Materials and Processing Specialisation
CHEN3013	Sustainable Palm Oil Processing and Production		٧	SPUE-ADMPR Advanced Materials and Processing Specialisation

UNIT CODE	UNIT TITLE	SEM 1, 2026	SEM 2, 2026	REMARKS
CHEN3014	Water and Wastewater Treatment Processes	٧		SPUE-WAWMG Water, Air and Waste Management Specialisation
CHEN4017	Bioprocess Engineering		٧	SPUE-TRENT Transitional Energy Technologies Specialisation
CHEN4020	Carbon Management	٧		SPUE-TRENT Transitional Energy Technologies Specialisation
ENEN2001	Solid and Hazardous Waste Management		٧	SPUE-WAWMG Water, Air an Waste Management Specialisation
pecialisation Uni	ts Year 4 (please refer to Course Structure for	list of specialisations	offered):	
CHEN4003	Advanced Process Integration	V		SPUE-ADMPR Advanced Materials and Processing Specialisation
CHEN4010	Advanced Thermodynamics and Reactor Engineering		٧	SPUE-ADMPR Advanced Materials and Processing Specialisation
CHEN4019	Electrochemical Energy Conversion and Storage		٧	SPUE-TRENT Transitional Energy Technologies Specialisation
CHEN4020	Carbon Management	٧		SPUE-WAWMG Water, Air an Waste Management Specialisation
ENEN3000	Aerial Emissions and Abatement		٧	SPUE-WAWMG Water, Air an Waste Management Specialisation
PRRE4007	Hydrogen Energy	V		SPUE-TRENT Transitional Energy Technologies Specialisation
ROGRAMME: EN	ERGY ENGINEERING			
CHEN2000	Mass and Energy Balances	٧	V	Shared unit with Chemical Engineering Shared unit with Chemical
CHEN2001	Thermodynamics			Engineering
CHEN2002	Process Heat Transfer	√ √		Shared unit with Chemical Engineering Shared unit with Electrical an
ELEN2000	Electrical Circuits	V		Electronic Engineering
ENGR2000	Fluid Mechanics	٧		Common Engineering Unit
ENGR2002	Introduction to Energy Engineering		٧	
ENGR2003	Sustainable Energy Systems Engineering		٧	
MCEN2007	Mechanics for Energy Engineering		٧	
ELEN3004	Renewable Energy Principles	٧		Shared unit with Electrical ar Electronic Engineering
	Energy Conversion and Sustainable	٧		
ENGR3006	Management			
PRRE4007	Hydrogen Energy	٧		
ECON3008	Energy Economics, Management & Markets		√	
ENGR3002	Energy Storage		√	
ENGR3005	Energy Transport			
CHEN3012	ts Year 3 (please refer to Course Structure for Materials Selection and Corrosion	list of specialisations	ојјегеа):	SPUE-ENCOT Energy
CHENSOIZ	Waterials Selection and Corrosion	v		Conversion Technologies Specialisation; SPUE-LCATR Low Carbon Transition Specialisation
ENCROSS	Doroug Markin Characterists	٧		SPUE-SSENR Subsurface
ENGR3003	Porous Media Characterisation			Energy Specialisation
ENGR4000	Forming Industry Possarch Project 1	,,,		
	Engineering Industry Research Project 1	V		
ENGR4001	Engineering Industry Research Project 2 DEPARTMENT: CIVIL AND OF DEPARTMENT: ASSOCIATION AND OF DEPARTMENT: ASSOCIATION AND ADDRESS OF THE PROPERTY ASSOCIATION ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ASSOCIATION ADDRESS OF THE PROPERTY ADDRESS OF TH			ON
DOCDANANAE, CO	HEAD OF DEPARTMENT: ASSOC	LIATE PROF. IR. DR	WONG KWONG SO	UN
	/IL AND CONSTRUCTION ENGINEERING	,		
CSEN2000	Civil Engineering Construction Materials	V		
CSLITZGGG	Civil Engineering Project and Cost			

UNIT CODE	UNIT TITLE	SEM 1, 2026	SEM 2, 2026	REMARKS
CSEN3002	Structural Actions and Steel Design	٧		
CSEN3003	Reinforced Concrete Design		٧	
CSEN4002	Integrated Design and Construction		٧	
CSEN4003	Civil Engineering Practices, Quality and Legislation	٧		
CVEN2000	Civil Engineering Drawing and Surveying	√		
CVEN2001	Water and Environmental Resources		٧	
CVEN3002	Hydraulics and Hydrology		٧	
CVEN4003	Civil and Construction Engineering Research Project 1	٧	٧	
CVEN4004	Civil and Construction Engineering Research Project 2	٧	٧	
ENGR2000	Fluid Mechanics	٧		Common Engineering Unit
GEOT2000	Principles of Geomechanics		٧	
GEOT3002	Geotechnical Engineering Analysis	٧		
GEOT4003	Design of Foundations		٧	
STEN2004	Structural Mechanics		٧	
STEN2005	Structural Analysis of Determinate Structures	√		
STEN2006	Structural Analysis of Indeterminate Structures		٧	
STEN4003	Integrated Structural Design	√		
TREN3001	Transportation Engineering and Earthworks	√		
	ts Year 3 (please refer to Course Structure for I	•	offered):	
BLDG2013	Construction Plant and Equipment	√	ојјегеиј.	SPUE-CONEN Construction
BLDG2013	Construction Plant and Equipment	V		Engineering Specialisation; SPUE-INFST Infrastructure Specialisation
CHEN2000	Mass and Energy Balances	٧		SPUC-PROEN Process Engineering Specialisation (Specialisation offered by Departmen Chemical and Energy Engineering)
CHEN2004	Process Simulation and Data Analytics		V	SPUC-PROEN Process Engineering Specialisation (Specialisation offered by Departmen Chemical and Energy Engineering)
ENEN3009	Water and Environmental Engineering		٧	SPUE-INFST Infrastructure Specialisation
ENEN4014	Sustainable Urban Management and Planning		٧	SPUC-SUENV Sustainable Environment Specialisation
MCEN2002	Fundamentals of Mechanical Design		٧	SPUC-MEDVB Mechanical Dynamics and Vibration Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering)
MCEN2003	Machine Dynamics	٧		SPUC-MEDVB Mechanical Dynamics and Vibration Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering)
MXEN2003	Microcontroller Project	V		SPUC-ROBAU Robot Automation Specialisation (Specialisation offered by Departmen Mechanical and Mechatronic Engineering)
MXEN3000	Mechatronics Design Project		V	SPUC-ROBAU Robot Automation Specialisation (Specialisation offered by Departmen Mechanical and Mechatronic Engineering)
STEN3003	Advanced Structural Analysis	V		SPUE-STENG Structural Engineering Specialisation; SPUE-INFST Infrastructure Specialisation
STEN4006	Structural Dynamics		V	SPUE-STENG Structural Engineering Specialisation; SPUE-INFST Infrastructure Specialisation
STEN4005	Advanced Concrete Design and Construction		٧	SPUE-INFST Infrastructure Specialisation
TREN4002	Traffic and Road Pavement Engineering		٧	SPUE-CONEN Construction Engineering Specialisation
Specialisation Unit	ts Year 4 (please refer to Course Structure for I	list of specialisations	offered):	O - P
	in the state of th	-	,,	SPUE-CONEN Construction
		V		Engineering Specialisation

UNIT CODE	UNIT TITLE	SEM 1, 2026	SEM 2, 2026	REMARKS
				SPUC-PROEN Process
		√		Engineering Specialisation (Specialisation offered by Department
CHEN3009	Fluid and Particle Processes			Chemical and Energy Engineering)
				SPUC-PROEN Process
			٧	Engineering Specialisation (Specialisation offered by Department
CHEN4001	Process Safety and Risk Management			Chemical and Energy Engineering)
		٧		SPUC-SUENV Sustainable
CHEN4020	Carbon Management	V		Environment Specialisation
ENEN 4042	5. to control (control of control		٧	SPUC-SUENV Sustainable
ENEN4013	Environmental, Social and Governance			Environment Specialisation SPUE-CONEN Construction
				Engineering Specialisation;
		V		SPUE-INFST Infrastructure
GEOT4004	Applied Analysis in Geotechnical Engineering			Specialisation
STEN4004	Advanced Structural Modelling	V		SPUE-STENG Structural
		•		Engineering Specialisation
STEN4005	Advanced Concrete Design and Construction		٧	SPUE-CONEN Construction
				Engineering Specialisation; SPUE-STENG Structural
				Engineering Specialisation
TREN4002	Traffic and Road Pavement Engineering		٧	SPUE-INFST Infrastructure
				Specialisation
				SPUC-ROBAU Robot
			٧	Automation Specialisation
			V	(Specialisation offered by Department Mechanical and Mechatronic
ICTE4001	Introduction to Autonomous Robots			Engineering)
				SPUC-MEDVB Mechanical
				Dynamics and Vibration Specialisation
		V		(Specialisation offered by Department
				Mechanical and Mechatronic
MCEN3009	Linear Systems and Vibrations			Engineering)
				SPUC-MEDVB Mechanical Dynamics and Vibration
			٧	Specialisation
			V	(Specialisation offered by Department
MCEN4019	Automatic Control Systems			Mechanical and Mechatronic Engineering)
WICEINAOIS	Automatic control systems			SPUC-ROBAU Robot
				Automation Specialisation
		V		(Specialisation offered by Department
MXEN3005	Robot Manipulation Project			Mechanical and Mechatronic Engineering)
PROGRAMME: EN	VIRONMENTAL ENGINEERING			
CVEN3002	Hydraulics and Hydrology		٧	Shared unit with Civil and
	, , , , , , , , , , , , , , , , , , , ,		v	Construction Engineering
ENGR2000	Fluid Mechanics	٧	·	Common Engineering Unit
ENEN2001	Solid and Hazardous Waste Management	√	٧	
ENEN2002 ENEN2003	Energy Management and Climate Change Wastewater Treatment Principles and Design	V	√	
	Water Resource Management and Treatment		V	
ENEN2004	Principles	٧		
ENEN3000	Aerial Emissions and Abatement		٧	
ENEN3001	Green Engineering Principles and Applications	٧		
ENEN4003	Environmental Integrated Design Project		V	
ENEN4006	Environmental Engineering Research Project 1	٧	٧	
	Environmental Engineering Research Project 1 Environmental Engineering Research Project 2	√ √		
ENEN4006	Environmental Engineering Research Project 1 Environmental Engineering Research Project 2 Environmental Engineering Design and		٧	
ENEN4006 ENEN4007 ENEN4011	Environmental Engineering Research Project 1 Environmental Engineering Research Project 2 Environmental Engineering Design and Principles	√ √	٧	
ENEN4006 ENEN4007	Environmental Engineering Research Project 1 Environmental Engineering Research Project 2 Environmental Engineering Design and Principles Environmental Chemistry and Microbiology	V	٧	
ENEN4006 ENEN4007 ENEN4011 ENST2005	Environmental Engineering Research Project 1 Environmental Engineering Research Project 2 Environmental Engineering Design and Principles	√ √	√ √	
ENEN4006 ENEN4007 ENEN4011 ENST2005 ENST2006 ENST3000	Environmental Engineering Research Project 1 Environmental Engineering Research Project 2 Environmental Engineering Design and Principles Environmental Chemistry and Microbiology Environmental Monitoring and Analysis Environmental Impact Assessment	√ √ √	√ √	Shared unit with Civil and
ENEN4006 ENEN4007 ENEN4011 ENST2005 ENST2006	Environmental Engineering Research Project 1 Environmental Engineering Research Project 2 Environmental Engineering Design and Principles Environmental Chemistry and Microbiology Environmental Monitoring and Analysis	√ √ √	√ √	Construction Engineering
ENEN4006 ENEN4007 ENEN4011 ENST2005 ENST2006 ENST3000 GEOT2000	Environmental Engineering Research Project 1 Environmental Engineering Research Project 2 Environmental Engineering Design and Principles Environmental Chemistry and Microbiology Environmental Monitoring and Analysis Environmental Impact Assessment Principles of Geomechanics	√ √ √	√ √ √	Construction Engineering Shared unit with Mechanical
ENEN4006 ENEN4007 ENEN4011 ENST2005 ENST2006 ENST3000	Environmental Engineering Research Project 1 Environmental Engineering Research Project 2 Environmental Engineering Design and Principles Environmental Chemistry and Microbiology Environmental Monitoring and Analysis Environmental Impact Assessment	√ √ √	√ √	Construction Engineering Shared unit with Mechanical Engineering and Mechatronic
ENEN4006 ENEN4007 ENEN4011 ENST2005 ENST2006 ENST3000 GEOT2000	Environmental Engineering Research Project 1 Environmental Engineering Research Project 2 Environmental Engineering Design and Principles Environmental Chemistry and Microbiology Environmental Monitoring and Analysis Environmental Impact Assessment Principles of Geomechanics Exposure to Professional Engineering Practice	√ √ √	√ √ √	Construction Engineering Shared unit with Mechanical Engineering and Mechatronic Engineering
ENEN4006 ENEN4007 ENEN4011 ENST2005 ENST2006 ENST3000 GEOT2000	Environmental Engineering Research Project 1 Environmental Engineering Research Project 2 Environmental Engineering Design and Principles Environmental Chemistry and Microbiology Environmental Monitoring and Analysis Environmental Impact Assessment Principles of Geomechanics Exposure to Professional Engineering Practice Engineering Management and Professional	√ √ √	√ √ √	Construction Engineering Shared unit with Mechanical Engineering and Mechatronic Engineering Shared unit with Electrical and
ENEN4006 ENEN4007 ENEN4011 ENST2005 ENST2006 ENST3000 GEOT2000 MCEN3007 MGMT3000	Environmental Engineering Research Project 1 Environmental Engineering Research Project 2 Environmental Engineering Design and Principles Environmental Chemistry and Microbiology Environmental Monitoring and Analysis Environmental Impact Assessment Principles of Geomechanics Exposure to Professional Engineering Practice Engineering Management and Professional Practice	√ √ √	√ √ √ √	Construction Engineering Shared unit with Mechanical Engineering and Mechatronic Engineering
ENEN4006 ENEN4007 ENEN4011 ENST2005 ENST2006 ENST3000 GEOT2000 MCEN3007 MGMT3000	Environmental Engineering Research Project 1 Environmental Engineering Research Project 2 Environmental Engineering Design and Principles Environmental Chemistry and Microbiology Environmental Monitoring and Analysis Environmental Impact Assessment Principles of Geomechanics Exposure to Professional Engineering Practice Engineering Management and Professional	√ √ √	√ √ √ √	Construction Engineering Shared unit with Mechanical Engineering and Mechatronic Engineering Shared unit with Electrical and
ENEN4006 ENEN4007 ENEN4011 ENST2005 ENST2006 ENST3000 GEOT2000 MCEN3007 MGMT3000 Specialisation Uni	Environmental Engineering Research Project 1 Environmental Engineering Research Project 2 Environmental Engineering Design and Principles Environmental Chemistry and Microbiology Environmental Monitoring and Analysis Environmental Impact Assessment Principles of Geomechanics Exposure to Professional Engineering Practice Engineering Management and Professional Practice ts Year 3 (please refer to Course Structure for	√ √ √	√ √ √ √	Construction Engineering Shared unit with Mechanical Engineering and Mechatronic Engineering Shared unit with Electrical and Electronic Engineering

UNIT CODE	UNIT TITLE	SEM 1, 2026	SEM 2, 2026	REMARKS
CHEN2004	Process Simulation and Data Analytics		٧	SPUC-PROEN Process Engineering Specialisation (Specialisation offered by Department Chemical and Energy Engineering)
CSEN2000	Civil Engineering Construction Materials	٧		SPUC-CIVEN Civil Engineering Specialisation
ENEN4014	Sustainable Urban Management and Planning		٧	SPUC-SUENV Sustainable
MXEN2003	Microcontroller Project	V		Environment Specialisation SPUC-ROBAU Robot Automation Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering)
MXEN3000	Mechatronics Design Project		٧	SPUC-ROBAU Robot Automation Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering)
STEN2004	Structural Mechanics		٧	SPUC-CIVEN Civil Engineering Specialisation
STEN2005	Structural Analysis of Determinate Structures	V		SPUC-CIVEN Civil Engineering Specialisation
Specialisation Uni	ts Year 4 (please refer to Course Structure for	list of specialisations	offered):	
CHEN4020	Carbon Management	٧		SPUC-SUENV Sustainable
CHEN3009	Fluid and Particle Processes	V		Environment Specialisation SPUC-PROEN Process Engineering Specialisation (Specialisation offered by Departmen Chemical and Energy Engineering)
CHEN4001	Process Safety and Risk Management		٧	SPUC-PROEN Process Engineering Specialisation (Specialisation offered by Department Chemical and Energy Engineering)
CSEN3000	Civil Engineering Project and Cost Management		٧	SPUC-CIVEN Civil Engineering Specialisation
ENEN4013	Environmental, Social and Governance		٧	SPUC-SUENV Sustainable Environment Specialisation
ICTE4001	Introduction to Autonomous Robots		٧	SPUC-ROBAU Robot Automation Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering) SPUC-ROBAU Robot
MXEN3005	Robot Manipulation Project	V		Automation Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering)
TREN3001	Transportation Engineering and Earthworks	٧		SPUC-CIVEN Civil Engineering Specialisation
	DEPARTMENT: ELECTRIC	AL AND COMPUTE	R ENGINEERING	Specialisation
	HEAD OF DEPARTI			
	CHELOR OF TECHNOLOGY (COMPUTER SYSTE		IG)	
CMPE1000	Hardware Fundamentals Data Communications and Network	V		
CMPE2000	Management	V		
CMPE2002	Requirements Engineering		√	Elective
CMPE2003 CMPE3001	Microcomputers Embedded Systems Engineering		V √	
CMPE3001	Embedded Systems Engineering Computer Technology Project 1	٧	V √	
CMPE3003	Computer Technology Project 2	V	√	
CMPE3004	Network Engineering		٧	
CNCO3000	Distributed Networks	٧		
COMP1000	Unix and C Programming		٧	
	Data Structures and Algorithms	V	√	
COMP1002	9			
COMP1002 COMP1007	Programming Design and Implementation	٧	√ .	
COMP1002 COMP1007 COMP2000	Programming Design and Implementation Computer Systems	٧	V V	Florit
COMP1002 COMP1007 COMP2000 COMP2003	Programming Design and Implementation Computer Systems Object Oriented Software Engineering	√ √		Elective
COMP1002 COMP1007 COMP2000 COMP2003 COMP2006	Programming Design and Implementation Computer Systems Object Oriented Software Engineering Operating Systems	٧	٧	
COMP1002 COMP1007 COMP2000 COMP2003 COMP2006 COMP2008	Programming Design and Implementation Computer Systems Object Oriented Software Engineering Operating Systems Mobile Application Development	V V V		Optional unit
COMP1002 COMP1007 COMP2000 COMP2003 COMP2006 COMP2008 COMP3001	Programming Design and Implementation Computer Systems Object Oriented Software Engineering Operating Systems Mobile Application Development Design and Analysis of Algorithms	√ √	٧	
COMP1002 COMP1007 COMP2000 COMP2003 COMP2006 COMP2008 COMP3001 COMT3002	Programming Design and Implementation Computer Systems Object Oriented Software Engineering Operating Systems Mobile Application Development Design and Analysis of Algorithms Internet of Things Design and Communications	V V V	٧	Optional unit
COMP1002 COMP1007 COMP2000 COMP2003 COMP2006 COMP2008 COMP3001	Programming Design and Implementation Computer Systems Object Oriented Software Engineering Operating Systems Mobile Application Development Design and Analysis of Algorithms	V V V	٧	Optional unit
COMP1002 COMP1007 COMP2000 COMP2003 COMP2006 COMP2008 COMP3001 COMT3002 ELEN2002	Programming Design and Implementation Computer Systems Object Oriented Software Engineering Operating Systems Mobile Application Development Design and Analysis of Algorithms Internet of Things Design and Communications Transmission and Interface Design	V V V	V V	Optional unit
COMP1002 COMP1007 COMP2000 COMP2003 COMP2006 COMP2008 COMP3001 COMT3002 ELEN2002 ETEN1000	Programming Design and Implementation Computer Systems Object Oriented Software Engineering Operating Systems Mobile Application Development Design and Analysis of Algorithms Internet of Things Design and Communications Transmission and Interface Design Electronics	V V V V	V V	Optional unit Optional unit

UNIT CODE	UNIT TITLE	SEM 1, 2026	SEM 2, 2026	REMARKS
ISAD1000	Introduction to Software Engineering	٧		Optional unit
ISEC1000	Cyber Security Concepts		V	Elective
ISEC2000	Fundamental Concepts of Cryptography	√		Optional unit
ISEC2001	Fundamental Concepts of Data Security	√		Optional unit; Elective
ISEC3004	Cyber Crime and Security Enhanced Programming		٧	Optional unit
ISEC3005	Cyber Security – Intrusion Detection System and Incident Handling		٧	Optional unit
COMP3010	Machine Learning	٧		Optional unit
CNCO3003	Cloud Computing	V		Optional unit
ISEC3002	Penetration Testing and Defence		√	Optional unit
ISYS2014 MATH1019	Database Systems Linear Algebra and Statistics for Engineers	√	√ √	Shared Unit with Engineer
MGMT3000	Engineering Management and Professional Practice		٧	First Year
OGRAMME: FLI	ECTRICAL AND ELECTRONIC ENGINEERING			
CMPE2001	Foundations of Digital Design	√		
CMPE2003		V	J	
COMT3000	Microcomputers Communications Engineering		√ 	
	Communications Engineering	-1	√	
EEET4000	Engineering Research Project 1	√	√	
EEET4001	Engineering Research Project 2	√	٧	
EEET4002	Integrated Design Project	√		
ELEN2000	Electrical Circuits	V		
ELEN2005	Electrical Machines		√	
ELEN3001	Power System Analysis		٧	
ELEN3002	Fundamentals of Engineering Electromagnetics		V	
ELEN3003	Power Grid Infrastructure and Protection Systems	٧		
ELEN3004	Renewable Energy Principles		V	
ELEN4007	Electrical Machines Drives and Control		V	
ETEN2000	Signals and Systems		√	
ETEN2001	Electronic Fundamentals	٧		
ETEN3003	Power Electronics	٧		
ETEN4001	Industrial Automated Systems	٧		
MATH2009	Calculus 2	٧		
MGMT3000	Engineering Management and Professional Practice	<u> </u>	٧	
MXEN3004	Dynamic Modelling and Control	٧		
ecialisation Uni	ts Year 3 (please refer to Course Structure for I	list of specialisations	offered):	
COMP1002	Data Structures and Algorithms	٧		SPUC-AIMLN Artificial Intelligence and Machine
ENEN4014	Sustainable Urban Management and Planning	·	V	Learning Specialisation SPUC-SUENV Sustainable
	Sustamasic Orsan Management and Hamming			Environment Specialisation SPUC-MESYS Mechanical
ENGR2000	Fluid Mechanics	٧		Systems Specialisation (Specialisation offered by Departm Mechanical and Mechatronic Engineering)
ISYS2014	Database Systems		٧	SPUC-AIMLN Artificial Intelligence and Machine Learning Specialisation
MCEN2001	Fundamentals of Thermodynamics		٧	SPUC-MESYS Mechanical Systems Specialisation (Specialisation offered by Departr Mechanical and Mechatronic Engineering)
MXEN2003	Microcontroller Project	٧		SPUC-ROBAU Robot Automation Specialisation (Specialisation offered by Departi Mechanical and Mechatronic Engineering)
MXEN3000	Mechatronics Design Project		٧	SPUC-ROBAU Robot Automation Specialisation (Specialisation offered by Departe Mechanical and Mechatronic Engineering)
ISEC1000	Cyber Security Concepts		٧	SPUC-CYBSE Cybersecurity Specialisation
ICEC2001	Fundamental Concepts of Data Security	٧		SPUC-CYBSE Cybersecurity
ISEC2001	I I dilddillelital collectors of Dama & Co	V		Specialisation

UNIT CODE	UNIT TITLE	SEM 1, 2026	SEM 2, 2026	REMARKS
CHEN4020	Carbon Management	٧		SPUC-SUENV Sustainable Environment Specialisation (Specialisation offered by Department
				Civil and Construction Engineering) SPUC-AIMLN Artificial
COMP3009	Data Mining		√	Intelligence and Machine Learning Specialisation
COMP3010	Machine Learning	٧		SPUC-AIMLN Artificial Intelligence and Machine
ENEN4013	Environmental, Social and Governance		V	Learning Specialisation SPUC-SUENV Sustainable Environment Specialisation (Specialisation offered by Department Civil and Construction Engineering)
			V	SPUC-ROBAU Robot Automation Specialisation (Specialisation offered by Department Mechanical and Mechatronic
ICTE4001	Introduction to Autonomous Robots Cyber Security-Intrusion Detection System and			Engineering) SPUC-CYBSE Cybersecurity
ISEC3005	Incident Handling		٧	Specialisation
MCEN3002	Applied Fluid Mechanics		٧	SPUC-MESYS Mechanical Systems Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering)
MCEN4018	Electromechanical Energy Systems	٧		SPUC-MESYS Mechanical Systems Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering)
MXEN3005	Robot Manipulation Project	٧		SPUC-ROBAU Robot Automation Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering)
	ACHELOR OF COMPUTING – SOFTWARE ENGIN	EERING MAJOR	,	
CMPE2002 CMPE3008	Requirements Engineering Software Engineering Testing	√	V	
CNCO2000	Computer Communications	√	V	
CNCO3003	Cloud Computing	V		Elective Unit Y3 S1 (Normal Intake), Y3 S2 (Mid-Year Intake)
COMP1000	Unix and C Programming	V	٧	
COMP1002 COMP1006	Data Structures and Algorithms Foundations of Computer Science	V	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Compulsory Elective Y3 S2 (Normal Intake), Y2 S1 (Mid- Year)
COMP1007	Programming Design and Implementation	٧	٧	,
COMP2000	Computer Systems		٧	Elective Unit Y3 S2 (Normal Intake); Y1 S1 (Compulsory Elective: Mid-Year)
COMP2002	Unix Systems Programming	V		Elective Unit Y3 S1 (Normal Intake), Y3 S2 (Mid-Year Intake)
COMP2003	Object Oriented Software Engineering	√	-1	Floating Unit V2 C2 (N
COMP2005	Computing Topics		٧	Elective Unit Y3 S2 (Normal Intake)
COMP2006	Operating Systems	√	-1	
COMP2008 COMP3001	Mobile Application Development Design and Analysis of Algorithms	V	V	
COMP3001 COMP3003	Software Architecture and Extensible Design	V	V	
COMP3008	Distributed Computing		V	
COMP3010	Machine Learning	V		Elective Unit Y3 S1 (Normal Intake), Y3 S2 (Mid-Year Intake)
ICTE3002	Human Computer Interface	√		
ISAD1000 ISEC1000	Introduction to Software Engineering Cyber Security Concepts	√	V	Elective Unit Y3 S2 (Normal
ISEC2000	Fundamental Concepts of Cryptography	٧		Intake) Elective Unit Y3 S1 (Normal Intake), Y3 S2 (Mid-Year
13202000				Intake)
ISEC2001	Fundamental Concepts of Data Security	V		
	Fundamental Concepts of Data Security Capstone Computing Project 1 Capstone Computing Project 2	√ √ √	√ √	

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ISEC3004	Cyber Crime and Security Enhanced Programming		٧	
ISEC3005	Cyber Security- Intrusion Detection System and Incident Handling		٧	Elective Unit Y3 S2 (Normal Intake)
ISYS2014	Database Systems		٧	
MATH1019	Linear Algebra and Statistics for Engineers	٧	٧	Shared Unit with Engineering First Year
NPSC1003 EIT301	Integrating Indigenous Science and STEM Engineering Industrial Training	√ Year 2 Summer S	emester (December)	
PROGRAMME: BA	CHELOR OF COMPUTING – CYBER SECURITY M	IAJOR		
CMPE2002	Requirements Engineering		٧	Elective Y2 S1 (Mid-Year) / Y2 S2, Y3 S2 (Normal Intake)
CMPE3008	Software Engineering Testing	٧		Elective Y3 S1 (Normal Intake)
CNCO2000	Computer Communications	٧	٧	
CNCO3003	Cloud Computing	٧		
COMP1000	Unix and C Programming	٧	٧	
COMP1002	Data Structures and Algorithms	٧	٧	
COMP1007	Programming Design and Implementation	٧	٧	
COMP2000	Computer Systems		٧	Elective Y2 S1 (Mid-Year); Y3 Y2 S2, S2 (Normal Intake)
COMP2002	Unix Systems Programming	٧		
COMP2003	Object Oriented Software Engineering	٧		Elective Y3 S1 (Normal Intake)
COMP2005	Computing Topics		٧	
COMP2006	Operating Systems	٧		
COMP2008	Mobile Application Development		٧	Elective Y2 S1 (Mid-Year) / Y2 S2, Y3 S2 (Normal Intake)
COMP3001	Design and Analysis of Algorithms	٧		Elective Y3 S1 (Normal Intake)
COMP3003	Software Architecture and Extensible Design		٧	Elective Y2 S2, Y3 S2 (Normal Intake)
COMP3010	Machine Learning	٧		
ICTE3002	Human Computer Interface	٧		Elective Y3 S1 (Normal Intake,
ISAD1000	Introduction to Software Engineering	٧		
ISAD3000	Capstone Computing Project 1	٧	٧	
ISAD3001	Capstone Computing Project 2	٧	٧	
ISEC1000	Cyber Security Concepts		٧	
ISEC2000	Fundamental Concepts of Cryptography	٧		
ISEC2001	Fundamental Concepts of Data Security	٧	-1	
ISEC3002 ISEC3004	Penetration Testing and Defence Cyber Crime and Security Enhanced		√ √	
ISEC3005	Programming Cyber Security- Intrusion Detection System and		٧	
ISYS2014	Incident Handling Database Systems		V	
MATH1019	Linear Algebra and Statistics for Engineers	٧	√	Shared Unit with Engineering
	2.11.60.7 1.18.60.70 0.11.0 0.10.10.10.10.10.10.10.10.10.10.10.10.10	·	•	First Year
NPSC1003	Integrating Indigenous Science and STEM	٧		
EIT301	Engineering Industrial Training		mer Semester	
	DEPARTMENT: MECHANICA	L AND MECHATRO	ONIC ENGINEERING	
	HEAD OF DEPARTMENT: ASSOC	CIATE PROF. DR M	OOLA MOHAN REDI	DY
PROGRAMME: ME	ECHANICAL ENGINEERING			
ENGR2000	Fluid Mechanics	٧		Common Engineering Unit; Also offered in SPUC-MESYS Mechanical Systems Specialisation
ENGR2001	Ethics and Sustainability in Engineering		٧	- Postandulon
MCEN2000	Fundamentals of Strength of Materials	٧		
MCEN2001	Fundamentals of Thermodynamics		V	Also offered in SPUC-MESYS Mechanical Systems Specialisation
MCEN2002	Fundamentals of Mechanical Design		٧	Also offered in SPUC-MEDVB Mechanical Dynamics and Vibration Specialisation
MCEN2003	Machine Dynamics	٧		Also offered in SPUC-MEDVB Mechanical Dynamics and Vibration Specialisation
MCEN2004	Manufacturing Processes		√	vibration specialisation
MCEN2004	Computer Aided Drawing and Engineering Modelling	٧	,	
MCEN3001	Machine Design		٧	
MCEN3002	Applied Fluid Mechanics		V	Also offered in SPUC-MESYS Mechanical Systems

UNIT CODE	UNIT TITLE	SEM 1, 2026	SEM 2, 2026	REMARKS
MCEN3004	Advanced Strength of Materials	٧		
MCEN3007	Exposure to Professional Engineering Practice		٧	
MCEN3008	Fundamentals of Heat Transfer	√		
				Also offered in SPUC-MEDVB
		V		Mechanical Dynamics and
MCEN3009	Linear Systems and Vibrations			Vibration Specialisation
MCEN4005	Mechanical Engineering Research Project 1	√	٧	
MCEN4006	Mechanical Engineering Research Project 2	√	٧	
MCEN4015	Integrated Mechanical Design	√		
MCEN4016	Professional Engineering Management and		٧	
	Practice			
MCEN4018	Electromechanical Energy Systems	√		
MCEN4019	Automatic Control Systems		V	Also offered in SPUC-MEDVB Mechanical Dynamics and Vibration Specialisation
Specialisation Unit	ts Year 3 (please refer to Course Structure for	list of specialisations	offered):	
CHEN2000	Mass and Energy Balances	√		SPUC-PROEN Process
CHEN2004	Process Simulation and Data Analytics	•	V	Engineering Specialisation (Specialisation offered by Department Chemical and Energy Engineering) SPUC-PROEN Process
CHEN2004	Process Simulation and Data Analytics		V	Engineering Specialisation (Specialisation offered by Department Chemical and Energy Engineering)
COMP1002	Data Structures and Algorithms	٧		SPUC-AIMLN Artificial
	0			Intelligence and Machine Learning Specialisation (Specialisation offered by Department Electrical and Computer Engineering)
CSEN2000	Civil Engineering Construction Materials	√		SPUC-CIVEN Civil Engineering
		·		Specialisation (Specialisation offered by Department Civil and Construction Engineering)
ENEN4014	Sustainable Urban Management and Planning		٧	SPUC-SUENV Sustainable
ENLIVIOLI	Sustainable Orban Management and Flamming		·	Environment Specialisation (Specialisation offered by Department Civil and Construction Engineering)
GEOT2000	Principles of Geomechanics		V	SPUC-CIVEN Civil Engineering Specialisation (Specialisation offered by Department Civil and Construction Engineering)
ISEC1000	Cyber Security Concepts		V	SPUC-CYBSE Cybersecurity Specialisation (Specialisation offered by Department Electrical and Computer Engineering)
ISEC2001	Fundamental Concepts of Data Security	٧		SPUC-CYBSE Cybersecurity Specialisation (Specialisation offered by Department Electrical and Computer Engineering)
ISYS2014	Database Systems		٧	SPUC-AIMLN Artificial Intelligence and Machine Learning Specialisation (Specialisation offered by Department Electrical and Computer Engineering)
MCEN4001	Industrial Fluid Mechanic		٧	SPUE-COMEC Computational Mechanics Specialisation
MCEN4013	Advanced Refrigeration System Design	V		SPUE-COMEC Computational
MXEN2003	Microcontroller Project	V		Mechanics Specialisation SPUC-ROBAU Robot
MXEN3000	Mechatronics Design Project		√	Automation Specialisation SPUC-ROBAU Robot Automation Specialisation
STEN2005	Structural Analysis of Determinate Structures	٧		SPUC-CIVEN Civil Engineering Specialisation (Specialisation offered by Department
				Civil and Construction Engineering)
Specialisation Unit	ts Year 4 (please refer to Course Structure for	list of specialisations	offered):	, , , , , , , , , , , , , , , , , , ,
CHEN3009	Fluid and Particle Processes	√		SPUC-PROEN Process Engineering Specialisation (Specialisation offered by Department Chemical and Energy Engineering)
CHEN4001	Process Safety and Risk Management		٧	SPUC-PROEN Process Engineering Specialisation (Specialisation offered by Department Chemical and Energy Engineering)
CHEN4020	Carbon Management	V		SPUC-SUENV Sustainable Environment Specialisation (Specialisation offered by Department Civil and Construction Engineering)

UNIT CODE	UNIT TITLE	SEM 1, 2026	SEM 2, 2026	REMARKS
CSEN3000	Civil Engineering Project and Cost Management		٧	SPUC-CIVEN Civil Engineering Specialisation (Specialisation offered by Department
				Civil and Construction Engineering)
COMP3009	Data Mining		V	SPUC-AIMLN Artificial Intelligence and Machine Learning Specialisation (Specialisation offered by Department Electrical and Computer Engineering)
COMP3010	Machine Learning	V		SPUC-AIMLN Artificial Intelligence and Machine Learning Specialisation (Specialisation offered by Department Electrical and Computer Engineering)
COMT3002	Internet of Things Design and Communications	٧		SPUC-CYBSE Cybersecurity Specialisation (Specialisation offered by Department Electrical and Computer Engineering)
ENEN4013	Environmental, Social and Governance		٧	SPUC-SUENV Sustainable Environment Specialisation (Specialisation offered by Department Civil and Construction Engineering)
ISEC3005	Cyber Security - Intrusion Detection System and Incident Handling		V	SPUC-CYBSE Cybersecurity Specialisation (Specialisation offered by Department Electrical and Computer Engineering)
MCEN4020	Computational Fluid Dynamics and Heat Transfer	٧		SPUE-COMEC Computational Mechanics Specialisation
MCEN4008	Finite Element Analysis		v.	SPUE-COMEC Computational Mechanics Specialisation
MXEN3005	Robot Manipulation Project	<mark>√</mark>		SPUC-ROBAU Robot Automation Specialisation
ICTE4001	Introduction to Autonomous Robots		v v	SPUC-ROBAU Robot Automation Specialisation
TREN3001	Transportation Engineering and Earthworks	V		SPUC-CIVEN Civil Engineering Specialisation (Specialisation offered by Department Civil and Construction Engineering)
PROGRAMME: MI	ECHATRONIC ENGINEERING	,		Character 20 - 20 - Elever Seel and
CMPE2001	Foundations of Digital Design	√		Shared unit with Electrical and Electronic Engineering
COMP1002	Data Structures and Algorithms		V	Shared unit with BTECH, B- COMP
COMP2009	Intelligent Agents	٧		
CMPE3001	Embedded Systems Engineering		٧	Shared unit with BTECH
ELEN2000	Floatrical Circuits	V		Shared unit with Electrical and
ELEN2000 ENGR2001	Electrical Circuits Ethics and Sustainability in Engineering		V	Electronic Engineering
LIVGNZOOT	Ethics and sustainability in Engineering		V	Shared unit with Electrical and
ETEN2000	Signals and Systems			Electronic Engineering
ICTE4001	Introduction to Autonomous Robots		٧	
MCEN2003	Machine Dynamics	V		Also offered in SPUC-ROBAU Robot Automation Specialisation; SPUC-MEDVB Mechanical Dynamics and Vibration Specialisation
	,			The residence of the re
MCEN2006	Computer Aided Drawing and Engineering	٧		
MCEN2006 MCEN3007	Modelling	√	V	
		√ √	V	Also offered in SPUC-ROBAU Robot Automation Specialisation
MCEN3007 MXEN2003 MXEN3000	Modelling Exposure to Professional Engineering Practice Microcontroller Project Mechatronics Design Project	√	√ √	Robot Automation
MCEN3007 MXEN2003 MXEN3000 MXEN3005	Modelling Exposure to Professional Engineering Practice Microcontroller Project Mechatronics Design Project Robot Manipulation Project	√ √	V	Robot Automation Specialisation Also offered in SPUC-ROBAU Robot Automation
MCEN3007 MXEN2003 MXEN3000 MXEN3005	Modelling Exposure to Professional Engineering Practice Microcontroller Project Mechatronics Design Project	√ √	V	Robot Automation Specialisation Also offered in SPUC-ROBAU Robot Automation Specialisation SPUC-CIVEN Civil Engineering Specialisation
MCEN3007 MXEN2003 MXEN3000 MXEN3005 Specialisation Unit CVEN2001	Modelling Exposure to Professional Engineering Practice Microcontroller Project Mechatronics Design Project Robot Manipulation Project ts Year 3 (please refer to Course Structure for Water and Environmental Resources	√ √	√ offered): √	Robot Automation Specialisation Also offered in SPUC-ROBAU Robot Automation Specialisation SPUC-CIVEN Civil Engineering Specialisation (Specialisation offered by Department Civil and Construction Engineering)
MCEN3007 MXEN2003 MXEN3000 MXEN3005 Specialisation Uni	Modelling Exposure to Professional Engineering Practice Microcontroller Project Mechatronics Design Project Robot Manipulation Project ts Year 3 (please refer to Course Structure for	√ √	√ offered):	Robot Automation Specialisation Also offered in SPUC-ROBAU Robot Automation Specialisation SPUC-CIVEN Civil Engineering Specialisation (Specialisation offered by Department

UNIT CODE	UNIT TITLE	SEM 1, 2026	SEM 2, 2026	REMARKS
ISEC1000	Cyber Security Concepts		V	(Specialisation offered by Department Civil and Construction Engineering) SPUC-CYBSE Cybersecurity Specialisation (Specialisation offered by Department Electrical and Computer Engineering)
ISYS2014	Database Systems		٧	SPUC-AIMLN Artificial Intelligence and Machine Learning Specialisation (Specialisation offered by Department Electrical and Computer Engineering)
MCEN2001	Fundamentals of Thermodynamics		٧	SPUC-MESYS Mechanical Systems Specialisation
MCEN2002	Fundamentals of Mechanical Design		٧	SPUC-MEDVB Mechanical Dynamics and Vibration Specialisation
MCEN4001	Industrial Fluid Mechanic		٧	SPUE-COMEC Computational Mechanics Specialisation
	DEPARTMEN HEAD OF DEPARTM	NT: APPLIED SCIEN IENT: PROF. M.V. I		
PROGRAMME: API	PLIED GEOLOGY			
CHEM1003	Introduction to Chemistry		٧	
COMP1005	Fundamentals of Programming	٧	٧	Shared unit with Engineering First Year
ERTH2000	Earth Resources and Sustainability		٧	
ERTH3001	Climate and the Biosphere	V	-1	
GEOL1005 GEOL1007	Fundamentals of Geology Planetary Science		√ √	
GEOL1007 GEOL1008	Dynamic Earth	٧	V	
GEOL2003	Mineralogy and Geochemistry	√ √		
GEOL2004	Sedimentology and Stratigraphy		V	
GEOL2007	Structural Geology	٧		
GEOL2008	Field Geology Techniques	٧		
GEOL2009	Geological Field Mapping		٧	
GEOL2011	Petrology		٧	
GEOL3001	Tectonics and the Dynamic Earth	-1	٧	
GEOL3003 GEOL3006	Hydrogeology and Engineering Geology Geoscience Project	√ √	√	
GEOL3008	Environmental Geoscience	V	V √	
GEOL3009	Field Studies of Sedimentary Basins	٧	•	
GEOL3012	Basin Dynamics	٧		
GEOP2006	Introduction to Geophysical Exploration Methods	٧		
MATH1013	Introductory Mathematics	٧		
NPSC1003	Integrating Indigenous Science and STEM	٧	,	Shared unit with Bachelor of Computing
PEEN3000 SPAT1007	Formation Evaluation Fundamentals of Geographic Information Systems	٧	V	
ERTH4004	Earth and Planetary Sciences Honours Dissertation	٧	٧	Honours unit (students are expected to complete by Semester 2, 2026)
ERTH4002	Geoscience Professional Practice	٧		Honours unit (students are expected to complete by Semester 2, 2026)
GEOL4001	Geoscience Analytical Techniques	٧		Honours unit (students are expected to complete by Semester 2, 2026)
PROGRAMME: GR	ADUATE CERTIFICATE IN GEOSPATIAL INTELLI	GENCE		
SPAT5009	Applied Remote Sensing	٧		
SPAT5015	Drone Mapping & Applications	٧		
SPAT5006	Fundamentals of Geographic Information Systems	٧		
ERTH5002	Habitat and Landform Mapping	٧		
SPAT5008	Applied Geographic Information Systems (GIS)		٧	
SPAT5005	Digital Image Interpretation		٧	
SPAT5013	Spatial Database Systems		٧	
COMP5005	Fundamentals of Programming		٧	
	ADUATE DIPLOMA IN GEOSPATIAL INTELLIGE	T		
SPAT5009	Applied Remote Sensing	٧	٧	
SPAT5015	Drone Mapping & Applications	٧	٧	
SPAT5006	Fundamentals of Geographic Information	V	V	

UNIT CODE	UNIT TITLE	SEM 1, 2026	SEM 2, 2026	REMARKS
ERTH5002	Habitat and Landform Mapping	V	V	
SPAT5008	Applied Geographic Information Systems (GIS)	V	V	
SPAT5005	Digital Image Interpretation	٧	٧	
SPAT5013	Spatial Database Systems	٧	V	
COMP5005	Fundamentals of Programming	٧	V	
MINU-ENGFL Engir	neering Flexible Minor			
XINO3004	Science and Engineering International	Summer Period 2026		January – February 2026
	Experience 1			

Note for Revision:

1. Programme: Mechanical Engineering

Specialisation	Unit	Semester, Year
SPUC-COMEC Computational Mechanics	MCEN4008 Finite Element Analysis	Semester 2, 2026
Specialisation		
SPUC-ROBAU Robot Automation	MXEN3005 Robot Manipulation Project	Semester 1, 2026
Specialisation		
SPUC-ROBAU Robot Automation	ICTE4001 Introduction to Autonomous Robots	Semester 2, 2026
Specialisation		