

FACULTY OF ENGINEERING AND SCIENCE

Units Offered – Semesters 1 & 2, 2026

(Undergraduate Programme)

(Rev.10 – changes are highlighted in yellow and/or refer to last page for revision note)

Date: Wednesday, July 8, 2026

UNIT CODE	UNIT TITLE	SEM 1, 2026	SEM 2, 2026	REMARKS
MINU-ENGFL Engineering Flexible Minor				
XINO3004	Science and Engineering International Experience 1	Summer Period 2026		January – February 2026
DEPARTMENT: ENGINEERING FIRST YEAR HEAD OF DEPARTMENT: IR. DR TAN YEE YONG				
COMP1005	Fundamentals of Programming	√	√	
ELEN1000	Electrical Systems	√	√	
INDE1001	Engineering Foundations: Principles, Design and Communication	√	√	
MATH1019	Linear Algebra and Statistics for Engineers	√	√	
MATH1020	Calculus for Engineers	√	√	
MCEN1000	Engineering Mechanics	√	√	
PRRE1003	Resources, Processes and Materials Engineering	√	√	
BLDG1004	Introduction to Management in Construction	√		Optional Unit
CHEM1000	Principles and Processes in Chemistry	√	√	Optional Unit
CMPE1000	Hardware Fundamentals	√		Optional Unit
ELEN1002	Sustainability and Renewable Energy	√	√	Optional Unit
GEOL1007	Planetary Science		√	Optional Unit
GEOL1008	Dynamic Earth	√		Optional Unit
ISAD1000	Introduction to Software Engineering	√		Optional Unit
SPAT1007	Fundamentals of Geographic Information Systems	√		Optional Unit
GEOL1005	Fundamentals of Geology		√	Optional Unit
ENGR2002	Introduction to Energy Engineering		√	Optional Unit
DEPARTMENT: CHEMICAL AND ENERGY ENGINEERING HEAD OF DEPARTMENT: IR. TS. PROFESSOR STEPHANIE CHAN YEN SAN				
PROGRAMME: CHEMICAL ENGINEERING				
CHEM1000	Principles and Processes in Chemistry	√	√	
CHEM1002	Reactivity and Function in Chemistry	√	√	
CHEN2000	Mass and Energy Balances	√	√	
CHEN2001	Thermodynamics		√	
CHEN2002	Process Heat Transfer	√		
CHEN2003	Process Mass Transfer		√	
CHEN2004	Process Simulation and Data Analytics		√	
CHEN3001	Computational Transport Phenomena	√	√	
CHEN3003	Process Synthesis and Design	√		
CHEN3005	Process Instrumentation and Control		√	
CHEN3009	Fluid and Particle Processes	√		
CHEN3010	Reaction Engineering	√		
CHEN4001	Process Safety and Risk Management	√		
CHEN4012	Advanced Unit Operations	√		
CHEN4015	Chemical Engineering Design Project		√	
CHEN4016	Engineering Economics, Management and Sustainability		√	
ENGR2000	Fluid Mechanics	√		Common Engineering Unit
ENGR4000	Engineering Industry Research Project 1	√	√	
ENGR4001	Engineering Industry Research Project 2	√	√	
Specialisation Units Year 3 (please refer to Course Structure for list of specialisations offered):				
CHEN3013	Sustainable Palm Oil Processing and Production		√	SPUE-ADMPR Advanced Materials and Processing Specialisation

UNIT CODE	UNIT TITLE	SEM 1, 2026	SEM 2, 2026	REMARKS
CHEN3014	Water and Wastewater Treatment Processes	√		SPUE-WAWMG Water, Air and Waste Management Specialisation
CHEN4017	Bioprocess Engineering		√	SPUE-TRENT Transitional Energy Technologies Specialisation
CHEN4020	Carbon Management	√		SPUE-TRENT Transitional Energy Technologies Specialisation
ENEN2001	Solid and Hazardous Waste Management		√	SPUE-WAWMG Water, Air and Waste Management Specialisation
Specialisation Units Year 4 (please refer to Course Structure for list of specialisations offered):				
CHEN4003	Advanced Process Integration	√		SPUE-ADMPR Advanced Materials and Processing Specialisation
CHEN4010	Advanced Thermodynamics and Reactor Engineering		√	SPUE-ADMPR Advanced Materials and Processing Specialisation
CHEN4019	Electrochemical Energy Conversion and Storage		√	SPUE-TRENT Transitional Energy Technologies Specialisation
CHEN4020	Carbon Management	√		SPUE-WAWMG Water, Air and Waste Management Specialisation
ENEN3000	Aerial Emissions and Abatement		√	SPUE-WAWMG Water, Air and Waste Management Specialisation
PRRE4007	Hydrogen Energy	√		SPUE-TRENT Transitional Energy Technologies Specialisation
PROGRAMME: ENERGY ENGINEERING				
CHEN2000	Mass and Energy Balances	√		Shared unit with Chemical Engineering
CHEN2001	Thermodynamics		√	Shared unit with Chemical Engineering
CHEN2002	Process Heat Transfer	√		Shared unit with Chemical Engineering
ELEN2000	Electrical Circuits	√		Shared unit with Electrical and Electronic Engineering
ENGR2000	Fluid Mechanics	√		Common Engineering Unit
ENGR2002	Introduction to Energy Engineering		√	
ENGR2003	Sustainable Energy Systems Engineering		√	
MCEN2007	Mechanics for Energy Engineering		√	
ELEN3004	Renewable Energy Principles	√		Shared unit with Electrical and Electronic Engineering
ENGR3006	Energy Conversion and Sustainable Management	√		
PRRE4007	Hydrogen Energy	√		
ENGR3002	Energy Storage		√	
ENGR3005	Energy Transport		√	
Specialisation Units Year 3 (please refer to Course Structure for list of specialisations offered):				
CHEN3012	Materials Selection and Corrosion	√		SPUE-ENCOT Energy Conversion Technologies Specialisation; SPUE-LCATR Low Carbon Transition Specialisation
ENGR3003	Porous Media Characterisation	√		SPUE-SSENR Subsurface Energy Specialisation
CHEN4018	Natural Gas Processing		√	SPUE-ENCOT Energy Conversion Technologies Specialisation; SPUE-SSENR Subsurface Energy Specialisation; SPUE-LCATR Low Carbon Transition Specialisation
PROGRAMME: PETROLEUM ENGINEERING				
ENGR4000	Engineering Industry Research Project 1	√		
ENGR4001	Engineering Industry Research Project 2	√		
DEPARTMENT: CIVIL AND CONSTRUCTION ENGINEERING				

UNIT CODE	UNIT TITLE	SEM 1, 2026	SEM 2, 2026	REMARKS
HEAD OF DEPARTMENT: IR. ASSOCIATE PROF. DR WONG KWONG SOON				
PROGRAMME: CIVIL AND CONSTRUCTION ENGINEERING				
CSEN2000	Civil Engineering Construction Materials	√		
CSEN3000	Civil Engineering Project and Cost Management		√	
CSEN3002	Structural Actions and Steel Design	√		
CSEN3003	Reinforced Concrete Design		√	
CSEN4002	Integrated Design and Construction		√	
CSEN4003	Civil Engineering Practices, Quality and Legislation	√		
CVEN2000	Civil Engineering Drawing and Surveying	√		
CVEN2001	Water and Environmental Resources		√	
CVEN3002	Hydraulics and Hydrology		√	
CVEN4003	Civil and Construction Engineering Research Project 1	√	√	
CVEN4004	Civil and Construction Engineering Research Project 2	√	√	
ENGR2000	Fluid Mechanics	√		Common Engineering Unit
GEOT2000	Principles of Geomechanics		√	
GEOT3002	Geotechnical Engineering Analysis	√		
GEOT4003	Design of Foundations		√	
STEN2004	Structural Mechanics		√	
STEN2005	Structural Analysis of Determinate Structures	√		
STEN2006	Structural Analysis of Indeterminate Structures		√	
STEN4003	Integrated Structural Design	√		
TREN3001	Transportation Engineering and Earthworks	√		
Specialisation Units Year 3 (please refer to Course Structure for list of specialisations offered):				
BLDG2013	Construction Plant and Equipment	√		SPUE-CONEN Construction Engineering Specialisation; SPUE-INFST Infrastructure Specialisation
ENEN3009	Water and Environmental Engineering		√	SPUE-INFST Infrastructure Specialisation
MCEN2002	Fundamentals of Mechanical Design		√	SPUC-MEDVB Mechanical Dynamics and Vibration Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering)
MCEN2003	Machine Dynamics	√		SPUC-MEDVB Mechanical Dynamics and Vibration Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering)
MXEN2003	Microcontroller Project	√		SPUC-ROBAU Robot Automation Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering)
MXEN3000	Mechatronics Design Project		√	SPUC-ROBAU Robot Automation Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering)
STEN3003	Advanced Structural Analysis	√		SPUE-STENG Structural Engineering Specialisation; SPUE-INFST Infrastructure Specialisation
STEN4005	Advanced Concrete Design and Construction		√	SPUE-INFST Infrastructure Specialisation
TREN4002	Traffic and Road Pavement Engineering		√	SPUE-CONEN Construction Engineering Specialisation
Specialisation Units Year 4 (please refer to Course Structure for list of specialisations offered):				
BLDG2023	Specialised Construction	√		SPUE-CONEN Construction Engineering Specialisation
CHEN4020	Carbon Management	√		SPUC-SUENV Sustainable Environment Specialisation
ENEN4013	Environmental, Social and Governance		√	SPUC-SUENV Sustainable Environment Specialisation
GEOT4004	Geotechnical Engineering Practice	√		SPUE-CONEN Construction Engineering Specialisation; SPUE-INFST Infrastructure Specialisation

UNIT CODE	UNIT TITLE	SEM 1, 2026	SEM 2, 2026	REMARKS
STEN4004	Advanced Structural Modelling	√		SPUE-STENG Structural Engineering Specialisation; SPUE-INFST Infrastructure Specialisation
STEN4005	Advanced Concrete Design and Construction		√	SPUE-CONEN Construction Engineering Specialisation; SPUE-STENG Structural Engineering Specialisation
TREN4002	Traffic and Road Pavement Engineering		√	SPUE-INFST Infrastructure Specialisation
ICTE4001	Introduction to Autonomous Robots		√	SPUC-ROBAU Robot Automation Specialisation <i>(Specialisation offered by Department Mechanical and Mechatronic Engineering)</i>
MCEN3009	Linear Systems and Vibrations	√		SPUC-MEDVB Mechanical Dynamics and Vibration Specialisation <i>(Specialisation offered by Department Mechanical and Mechatronic Engineering)</i>
MCEN4019	Automatic Control Systems		√	SPUC-MEDVB Mechanical Dynamics and Vibration Specialisation <i>(Specialisation offered by Department Mechanical and Mechatronic Engineering)</i>
MXEN3005	Robot Manipulation Project	√		SPUC-ROBAU Robot Automation Specialisation <i>(Specialisation offered by Department Mechanical and Mechatronic Engineering)</i>
PROGRAMME: ENVIRONMENTAL ENGINEERING				
CVEN3002	Hydraulics and Hydrology		√	Shared unit with Civil and Construction Engineering
ENGR2000	Fluid Mechanics	√		Common Engineering Unit
ENEN2001	Solid and Hazardous Waste Management		√	
ENEN2002	Energy Management and Climate Change	√		
ENEN2003	Wastewater Treatment Principles and Design		√	
ENEN2004	Water Resource Management and Treatment Principles	√		
ENEN3000	Aerial Emissions and Abatement		√	
ENEN3001	Green Engineering Principles and Applications	√		
ENEN4003	Environmental Integrated Design Project		√	
ENEN4006	Environmental Engineering Research Project 1	√	√	
ENEN4007	Environmental Engineering Research Project 2	√	√	
ENEN4011	Environmental Engineering Design and Principles	√		
ENST2005	Environmental Chemistry and Microbiology	√		
ENST2006	Environmental Monitoring and Analysis		√	
ENST3000	Environmental Impact Assessment	√		
GEOT2000	Principles of Geomechanics		√	Shared unit with Civil and Construction Engineering
MCEN3007	Engineering Professionalism and Communication		√	Shared unit with Mechanical Engineering and Mechatronic Engineering
MGMT3000	Engineering Management and Professional Practice		√	Shared unit with Electrical and Electronic Engineering
Specialisation Units Year 3 (please refer to Course Structure for list of specialisations offered):				
CSEN2000	Civil Engineering Construction Materials	√		SPUC-CIVEN Civil Engineering Specialisation
MXEN2003	Microcontroller Project	√		SPUC-ROBAU Robot Automation Specialisation <i>(Specialisation offered by Department Mechanical and Mechatronic Engineering)</i>
MXEN3000	Mechatronics Design Project		√	SPUC-ROBAU Robot Automation Specialisation <i>(Specialisation offered by Department Mechanical and Mechatronic Engineering)</i>
STEN2004	Structural Mechanics		√	SPUC-CIVEN Civil Engineering Specialisation
STEN2005	Structural Analysis of Determinate Structures	√		SPUC-CIVEN Civil Engineering Specialisation
Specialisation Units Year 4 (please refer to Course Structure for list of specialisations offered):				

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CHEN4020	Carbon Management	√		SPUC-SUENV Sustainable Environment Specialisation
CSEN3000	Civil Engineering Project and Cost Management		√	SPUC-CIVEN Civil Engineering Specialisation
ENEN4013	Environmental, Social and Governance		√	SPUC-SUENV Sustainable Environment Specialisation
ICTE4001	Introduction to Autonomous Robots		√	SPUC-ROBAU Robot Automation Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering)
MXEN3005	Robot Manipulation Project	√		SPUC-ROBAU Robot Automation Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering)
TREN3001	Transportation Engineering and Earthworks	√		SPUC-CIVEN Civil Engineering Specialisation
DEPARTMENT: ELECTRICAL AND COMPUTER ENGINEERING HEAD OF DEPARTMENT: DR. CHEW ING MING				
PROGRAMME: BACHELOR OF TECHNOLOGY (COMPUTER SYSTEMS AND NETWORKING)				
CMPE1000	Hardware Fundamentals	√		
CMPE2000	Data Communications and Network Management	√		
CMPE2002	Requirements Engineering		√	Elective
CMPE2003	Microcomputers		√	
CMPE3001	Embedded Systems Engineering		√	
CMPE3002	Computer Technology Project 1	√	√	
CMPE3003	Computer Technology Project 2	√	√	
CMPE3004	Network Engineering		√	
CNCO3000	Distributed Networks	√		
COMP1000	Unix and C Programming		√	
COMP1002	Data Structures and Algorithms	√	√	
COMP1007	Programming Design and Implementation	√	√	
COMP2000	Computer Systems		√	
COMP2003	Object Oriented Software Engineering	√		Elective
COMP2006	Operating Systems	√		
COMP2008	Mobile Application Development		√	Optional unit
COMP3001	Design and Analysis of Algorithms	√		Optional unit
COMT3002	Internet of Things Design and Communications	√		
ELEN2002	Transmission and Interface Design	√		
ETEN1000	Electronics		√	
ICTE3002	Human Computer Interface	√		Optional unit
INDE1001	Engineering Foundations: Principles, Design and Communication	√	√	Shared Unit with Engineering First Year
ISAD1000	Introduction to Software Engineering	√		Optional unit
ISEC1000	Cyber Security Concepts		√	Elective
ISEC2000	Fundamental Concepts of Cryptography	√		Optional unit
ISEC2001	Fundamental Concepts of Data Security	√		Optional unit; Elective
ISEC3004	Cyber Crime and Security Enhanced Programming		√	Optional unit
ISEC3005	Cyber Security – Intrusion Detection System and Incident Handling		√	Optional unit
COMP3010	Machine Learning	√		Optional unit
CNCO3003	Cloud Computing	√		Optional unit
ISEC3002	Penetration Testing and Defence		√	Optional unit
ISYS2014	Database Systems		√	
MATH1019	Linear Algebra and Statistics for Engineers	√	√	Shared Unit with Engineering First Year
MGMT3000	Engineering Management and Professional Practice		√	
PROGRAMME: ELECTRICAL AND ELECTRONIC ENGINEERING				
CMPE2001	Foundations of Digital Design	√		
CMPE2003	Microcomputers		√	
COMT3000	Communications Engineering		√	
EEET4000	Engineering Research Project 1	√	√	
EEET4001	Engineering Research Project 2	√	√	
EEET4002	Integrated Design Project	√		
ELEN2000	Electrical Circuits	√		
ELEN2005	Electrical Machines		√	
ELEN3001	Power System Analysis		√	
ELEN3002	Fundamentals of Engineering Electromagnetics		√	

UNIT CODE	UNIT TITLE	SEM 1, 2026	SEM 2, 2026	REMARKS
ELEN3003	Power Grid Infrastructure and Protection Systems	√		
ELEN3004	Renewable Energy Principles		√	
ELEN4007	Electrical Machines Drives and Control		√	
ETEN2000	Signals and Systems		√	
ETEN2001	Electronic Fundamentals	√		
ETEN3003	Power Electronics	√		
ETEN4001	Industrial Automated Systems	√		
MATH2009	Calculus 2	√		
MGMT3000	Engineering Management and Professional Practice		√	
MXEN3004	Dynamic Modelling and Control	√		
ETEN3004	Integrated Circuit Design		√	MINU-ENGFL Engineering Flexible Minor (<i>elective unit</i>). (Note: This unit is not listed in Electrical and Electronic Engineering Course Structure 2026)
Specialisation Units Year 3 (please refer to Course Structure for list of specialisations offered):				
COMP1002	Data Structures and Algorithms	√		SPUC-AIMLN Artificial Intelligence and Machine Learning Specialisation
ENGR2000	Fluid Mechanics	√		SPUC-MESYS Mechanical Systems Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering)
ISYS2014	Database Systems		√	SPUC-AIMLN Artificial Intelligence and Machine Learning Specialisation
MCEN2001	Fundamentals of Thermodynamics		√	SPUC-MESYS Mechanical Systems Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering)
MXEN2003	Microcontroller Project	√		SPUC-ROBAU Robot Automation Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering)
MXEN3000	Mechatronics Design Project		√	SPUC-ROBAU Robot Automation Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering)
ISEC1000	Cyber Security Concepts		√	SPUC-CYBSE Cybersecurity Specialisation
ISEC2001	Fundamental Concepts of Data Security	√		SPUC-CYBSE Cybersecurity Specialisation
Specialisation Units Year 4 (please refer to Course Structure for list of specialisations offered):				
CHEN4020	Carbon Management	√		SPUC-SUENV Sustainable Environment Specialisation (Specialisation offered by Department Civil and Construction Engineering)
COMP3009	Data Mining		√	SPUC-AIMLN Artificial Intelligence and Machine Learning Specialisation
COMP3010	Machine Learning	√		SPUC-AIMLN Artificial Intelligence and Machine Learning Specialisation
ENEN4013	Environmental, Social and Governance		√	SPUC-SUENV Sustainable Environment Specialisation (Specialisation offered by Department Civil and Construction Engineering)
ICTE4001	Introduction to Autonomous Robots		√	SPUC-ROBAU Robot Automation Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering)
ISEC3005	Cyber Security-Intrusion Detection System and Incident Handling		√	SPUC-CYBSE Cybersecurity Specialisation
MCEN3002	Applied Fluid Mechanics		√	SPUC-MESYS Mechanical Systems Specialisation (Specialisation offered by Department Mechanical and Mechatronic Engineering)

UNIT CODE	UNIT TITLE	SEM 1, 2026	SEM 2, 2026	REMARKS
MCEN4018	Electromechanical Energy Systems	√		SPUC-MESYS Mechanical Systems Specialisation <i>(Specialisation offered by Department Mechanical and Mechatronic Engineering)</i>
MXEN3005	Robot Manipulation Project	√		SPUC-ROBAU Robot Automation Specialisation <i>(Specialisation offered by Department Mechanical and Mechatronic Engineering)</i>
PROGRAMME: BACHELOR OF COMPUTING – SOFTWARE ENGINEERING MAJOR				
CMPE2002	Requirements Engineering		√	
CMPE3008	Software Engineering Testing	√		
CNCO2000	Computer Communications	√		
CNCO3003	Cloud Computing	√		Elective Unit Y3 S1 (Normal Intake), Y3 S2 (Mid-Year Intake)
COMP1000	Unix and C Programming		√	
COMP1002	Data Structures and Algorithms	√	√	
COMP1006	Foundations of Computer Science		√	Compulsory Elective Y3 S2 (Normal Intake), Y2 S1 (Mid-Year)
COMP1007	Programming Design and Implementation	√	√	
COMP2000	Computer Systems		√	Elective Unit Y3 S2 (Normal Intake); Y1 S1 (Compulsory Elective: Mid-Year)
COMP2002	Unix Systems Programming	√		Elective Unit Y3 S1 (Normal Intake), Y3 S2 (Mid-Year Intake)
COMP2003	Object Oriented Software Engineering	√		
COMP2005	Computing Topics		√	Elective Unit Y3 S2 (Normal Intake)
COMP2006	Operating Systems	√		
COMP2008	Mobile Application Development		√	
COMP3001	Design and Analysis of Algorithms	√		
COMP3003	Software Architecture and Extensible Design		√	
COMP3008	Distributed Computing		√	
COMP3010	Machine Learning	√		Elective Unit Y3 S1 (Normal Intake), Y3 S2 (Mid-Year Intake)
ICTE3002	Human Computer Interface	√		
ISAD1000	Introduction to Software Engineering	√		
ISEC1000	Cyber Security Concepts		√	Elective Unit Y3 S2 (Normal Intake)
ISEC2000	Fundamental Concepts of Cryptography	√		Elective Unit Y3 S1 (Normal Intake), Y3 S2 (Mid-Year Intake)
ISEC2001	Fundamental Concepts of Data Security	√		
ISAD3000	Capstone Computing Project 1	√	√	
ISAD3001	Capstone Computing Project 2	√	√	
ISEC3004	Cyber Crime and Security Enhanced Programming		√	
ISEC3005	Cyber Security- Intrusion Detection System and Incident Handling		√	Elective Unit Y3 S2 (Normal Intake)
ISYS2014	Database Systems		√	
MATH1019	Linear Algebra and Statistics for Engineers	√	√	Shared Unit with Engineering First Year
NPSC1003	Integrating Indigenous Science and STEM	√		
EIT301	Engineering Industrial Training	Year 2 Summer Semester (December)		
PROGRAMME: BACHELOR OF COMPUTING – CYBER SECURITY MAJOR				
CMPE2002	Requirements Engineering		√	Elective Y2 S1 (Mid-Year) / Y2 S2, Y3 S2 (Normal Intake)
CMPE3008	Software Engineering Testing	√		Elective Y3 S1 (Normal Intake)
CNCO2000	Computer Communications	√		
CNCO3003	Cloud Computing	√		
COMP1000	Unix and C Programming		√	
COMP1002	Data Structures and Algorithms	√	√	
COMP1007	Programming Design and Implementation	√	√	
COMP2000	Computer Systems		√	Elective Y2 S1 (Mid-Year); Y3 Y2 S2, S2 (Normal Intake)
COMP2002	Unix Systems Programming	√		
COMP2003	Object Oriented Software Engineering	√		Elective Y3 S1 (Normal Intake)
COMP2005	Computing Topics		√	
COMP2006	Operating Systems	√		

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COMP2008	Mobile Application Development		√	Elective Y2 S1 (Mid-Year) / Y2 S2, Y3 S2 (Normal Intake)
COMP3001	Design and Analysis of Algorithms	√		Elective Y3 S1 (Normal Intake)
COMP3003	Software Architecture and Extensible Design		√	Elective Y2 S2, Y3 S2 (Normal Intake)
COMP3010	Machine Learning	√		
ICTE3002	Human Computer Interface	√		Elective Y3 S1 (Normal Intake)
ISAD1000	Introduction to Software Engineering	√		
ISAD3000	Capstone Computing Project 1	√	√	
ISAD3001	Capstone Computing Project 2	√	√	
ISEC1000	Cyber Security Concepts		√	
ISEC2000	Fundamental Concepts of Cryptography	√		
ISEC2001	Fundamental Concepts of Data Security	√		
ISEC3002	Penetration Testing and Defence		√	
ISEC3004	Cyber Crime and Security Enhanced Programming		√	
ISEC3005	Cyber Security- Intrusion Detection System and Incident Handling		√	
ISYS2014	Database Systems		√	
MATH1019	Linear Algebra and Statistics for Engineers	√	√	Shared Unit with Engineering First Year
NPSC1003	Integrating Indigenous Science and STEM	√		
EIT301	Engineering Industrial Training	Year 2 Summer Semester		
DEPARTMENT: MECHANICAL AND MECHATRONIC ENGINEERING HEAD OF DEPARTMENT: ASSOCIATE PROF. DR MOOLA MOHAN REDDY				
PROGRAMME: MECHANICAL ENGINEERING				
ENGR2000	Fluid Mechanics	√		Common Engineering Unit; Also offered in SPUC-MESYS Mechanical Systems Specialisation
ENGR2001	Ethics and Sustainability in Engineering		√	
MCEN2000	Fundamentals of Strength of Materials	√		
MCEN2001	Fundamentals of Thermodynamics		√	Also offered in SPUC-MESYS Mechanical Systems Specialisation
MCEN2002	Fundamentals of Mechanical Design		√	Also offered in SPUC-MEDVB Mechanical Dynamics and Vibration Specialisation
MCEN2003	Machine Dynamics	√		Also offered in SPUC-MEDVB Mechanical Dynamics and Vibration Specialisation
MCEN2004	Manufacturing Processes		√	
MCEN2006	Computer Aided Drawing and Engineering Modelling	√		
MCEN3001	Machine Design		√	
MCEN3002	Applied Fluid Mechanics		√	Also offered in SPUC-MESYS Mechanical Systems Specialisation
MCEN3004	Advanced Strength of Materials	√		
MCEN3007	Engineering Professionalism and Communication		√	
MCEN3008	Fundamentals of Heat Transfer	√		
MCEN3009	Linear Systems and Vibrations	√		Also offered in SPUC-MEDVB Mechanical Dynamics and Vibration Specialisation
MCEN4005	Mechanical Engineering Research Project 1	√	√	
MCEN4006	Mechanical Engineering Research Project 2	√	√	
MCEN4015	Integrated Mechanical Design	√		
MCEN4016	Professional Engineering Management and Practice		√	
MCEN4018	Electromechanical Energy Systems	√		
MCEN4019	Automatic Control Systems		√	Also offered in SPUC-MEDVB Mechanical Dynamics and Vibration Specialisation
Specialisation Units Year 3 (please refer to Course Structure for list of specialisations offered):				
COMP1002	Data Structures and Algorithms	√		SPUC-AIMLN Artificial 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)

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GEOT2000	Principles of Geomechanics		√	SPUC-CIVEN Civil Engineering Specialisation <i>(Specialisation offered by Department Civil and Construction Engineering)</i>
ISEC1000	Cyber Security Concepts		√	SPUC-CYBSE Cybersecurity Specialisation <i>(Specialisation offered by Department Electrical and Computer Engineering)</i>
ISEC2001	Fundamental Concepts of Data Security	√		SPUC-CYBSE Cybersecurity Specialisation <i>(Specialisation offered by Department Electrical and Computer Engineering)</i>
ISYS2014	Database Systems		√	SPUC-AIMLN Artificial Intelligence and Machine Learning Specialisation <i>(Specialisation offered by Department Electrical and Computer Engineering)</i>
MCEN4001	Industrial Fluid Mechanics		√	SPUE-COMEC Computational Mechanics Specialisation
MCEN4013	Advanced Refrigeration System Design	√		SPUE-COMEC Computational Mechanics Specialisation
MXEN2003	Microcontroller Project	√		SPUC-ROBAU Robot Automation Specialisation
MXEN3000	Mechatronics Design Project		√	SPUC-ROBAU Robot Automation Specialisation
STEN2005	Structural Analysis of Determinate Structures	√		SPUC-CIVEN Civil Engineering Specialisation <i>(Specialisation offered by Department Civil and Construction Engineering)</i>
Specialisation Units Year 4 (please refer to Course Structure for list of specialisations offered):				
CHEN4020	Carbon Management	√		SPUC-SUENV Sustainable Environment Specialisation <i>(Specialisation offered by Department Civil and Construction Engineering)</i>
CSEN3000	Civil Engineering Project and Cost Management		√	SPUC-CIVEN Civil Engineering Specialisation <i>(Specialisation offered by Department Civil and Construction Engineering)</i>
COMP3009	Data Mining		√	SPUC-AIMLN Artificial Intelligence and Machine Learning Specialisation <i>(Specialisation offered by Department Electrical and Computer Engineering)</i>
COMP3010	Machine Learning	√		SPUC-AIMLN Artificial Intelligence and Machine Learning Specialisation <i>(Specialisation offered by Department Electrical and Computer Engineering)</i>
COMT3002	Internet of Things Design and Communications	√		SPUC-CYBSE Cybersecurity Specialisation <i>(Specialisation offered by Department Electrical and Computer Engineering)</i>
ENEN4013	Environmental, Social and Governance		√	SPUC-SUENV Sustainable Environment Specialisation <i>(Specialisation offered by Department Civil and Construction Engineering)</i>
ISEC3005	Cyber Security - Intrusion Detection System and Incident Handling		√	SPUC-CYBSE Cybersecurity Specialisation <i>(Specialisation offered by Department Electrical and Computer Engineering)</i>
MCEN4020	Computational Fluid Dynamics and Heat Transfer	√		SPUE-COMEC Computational Mechanics Specialisation
MCEN4008	Finite Element Analysis		√	SPUE-COMEC Computational Mechanics Specialisation
MXEN3005	Robot Manipulation Project	√		SPUC-ROBAU Robot Automation Specialisation
ICTE4001	Introduction to Autonomous Robots		√	SPUC-ROBAU Robot Automation Specialisation
TREN3001	Transportation Engineering and Earthworks	√		SPUC-CIVEN Civil Engineering Specialisation <i>(Specialisation offered by Department Civil and Construction Engineering)</i>
PROGRAMME: MECHATRONIC ENGINEERING				
CMPE2001	Foundations of Digital Design	√		Shared unit with Electrical and Electronic Engineering
COMP1002	Data Structures and Algorithms		√	Shared unit with BTECH, B-COMP;

UNIT CODE	UNIT TITLE	SEM 1, 2026	SEM 2, 2026	REMARKS
CMPE3001	Embedded Systems Engineering		√	Shared unit with BTECH
ELEN2000	Electrical Circuits	√		Shared unit with Electrical and Electronic Engineering
ENGR2001	Ethics and Sustainability in Engineering		√	
ETEN2000	Signals and Systems		√	Shared unit with Electrical and Electronic Engineering
ICTE4001	Introduction to Autonomous Robots		√	
MCEN2003	Machine Dynamics	√		Also offered in SPUC-MEDVB Mechanical Dynamics and Vibration Specialisation
MCEN2006	Computer Aided Drawing and Engineering Modelling	√		
MCEN3007	Engineering Professionalism and Communication		√	
MXEN2003	Microcontroller Project	√		
MXEN3000	Mechatronics Design Project		√	
MXEN3005	Robot Manipulation Project	√		
Specialisation Units Year 3 (please refer to Course Structure for list of specialisations offered):				
CVEN2001	Water and Environmental Resources		√	SPUC-CIVEN Civil Engineering Specialisation (Specialisation offered by Department Civil and Construction Engineering)
GEOT2000	Principles of Geomechanics		√	SPUC-CIVEN Civil Engineering Specialisation (Specialisation offered by Department Civil and Construction Engineering)
ISEC1000	Cyber Security Concepts		√	SPUC-CYBSE Cybersecurity Specialisation (Specialisation offered by Department Electrical and Computer Engineering)
ISYS2014	Database Systems		√	SPUC-AIMLN Artificial Intelligence and Machine Learning Specialisation (Specialisation offered by Department Electrical and Computer Engineering)
MCEN2001	Fundamentals of Thermodynamics		√	SPUC-MESYS Mechanical Systems Specialisation
MCEN2002	Fundamentals of Mechanical Design		√	SPUC-MEDVB Mechanical Dynamics and Vibration Specialisation
ENGR2000	Fluid Mechanics	√		SPUC-MESYS Mechanical Systems Specialisation (Common Engineering Unit)
CSEN2000	Civil Engineering Construction Materials	√		SPUC-CIVEN Civil Engineering Specialisation (Specialisation offered by Department Civil and Construction Engineering)
STEN2005	Structural Analysis of Determinate Structures	√		SPUC-CIVEN Civil Engineering Specialisation (Specialisation offered by Department Civil and Construction Engineering)
ISEC2001	Fundamental Concepts of Data Security	√		SPUC-CYBSE Cybersecurity Specialisation (Specialisation offered by Department Electrical and Computer Engineering)
DEPARTMENT: APPLIED SCIENCES HEAD OF DEPARTMENT: PROFESSOR M.V. PRASANNA				
PROGRAMME: APPLIED GEOLOGY				
CHEM1003	Introduction to Chemistry		√	
COMP1005	Fundamentals of Programming	√	√	Shared unit with Engineering First Year
ERTH2000	Earth Resources and Sustainability		√	
ERTH3001	Climate and the Biosphere	√		
GEOL1005	Fundamentals of Geology		√	
GEOL1007	Planetary Science		√	
GEOL1008	Dynamic Earth	√		
GEOL2003	Mineralogy and Geochemistry	√		
GEOL2004	Sedimentology and Stratigraphy		√	
GEOL2007	Structural Geology	√		
GEOL2008	Field Geology Techniques	√		
GEOL2009	Geological Field Mapping		√	
GEOL2011	Petrology		√	
GEOL3001	Tectonics and the Dynamic Earth		√	
GEOL3003	Hydrogeology and Engineering Geology	√		
GEOL3006	Geoscience Project	√	√	
GEOL3008	Environmental Geoscience		√	

UNIT CODE	UNIT TITLE	SEM 1, 2026	SEM 2, 2026	REMARKS
GEOL3009	Field Studies of Sedimentary Basins	√		
GEOL3012	Basin Dynamics	√		
GEOP2006	Introduction to Geophysical Exploration Methods	√		
MATH1013	Introductory Mathematics	√		
NPSC1003	Integrating Indigenous Science and STEM	√		Shared unit with Bachelor of Computing
PEEN3000	Formation Evaluation		√	
SPAT1007	Fundamentals of Geographic Information Systems	√		
PROGRAMME: GRADUATE CERTIFICATE IN GEOSPATIAL INTELLIGENCE				
SPAT5009	Applied Remote Sensing	√		
SPAT5015	Drone Mapping & Applications	√		
SPAT5006	Fundamentals of Geographic Information Systems	√		
ERTH5002	Habitat and Landform Mapping	√		
SPAT5008	Applied Geographic Information Systems (GIS)		√	
SPAT5005	Digital Image Interpretation		√	
SPAT5013	Spatial Database Systems		√	
COMP5005	Fundamentals of Programming		√	
PROGRAMME: GRADUATE DIPLOMA IN GEOSPATIAL INTELLIGENCE				
SPAT5009	Applied Remote Sensing	√	√	
SPAT5015	Drone Mapping & Applications	√	√	
SPAT5006	Fundamentals of Geographic Information Systems	√	√	
ERTH5002	Habitat and Landform Mapping	√	√	
SPAT5008	Applied Geographic Information Systems (GIS)	√	√	
SPAT5005	Digital Image Interpretation	√	√	
SPAT5013	Spatial Database Systems	√	√	
COMP5005	Fundamentals of Programming	√	√	

Note for Revision:

1.

Unit Code and Title	Specialisation	Offered
CHEN4018 Natural Gas Processing	SPUE-ENCOT Energy Conversion Technologies Specialisation; SPUE-SSENR Subsurface Energy Specialisation; SPUE-LCATR Low Carbon Transition Specialisation	Semester 2, 2026

2.

Unit Code and Title	Specialisation	Remark
GEOT4004 Geotechnical Engineering Practice	SPUE-CONEN Construction Engineering Specialisation; SPUE-INFST Infrastructure Specialisation	Corrected the unit title. Offered in Semester 1, 2026.

3.

Unit Code and Title	Programme	Remark
MCEN3007 Engineering Professionalism and Communication	Mechanical Engineering; Mechatronic Engineering; Environmental Engineering	Change of unit title. Offered in Semester 2, 2026.

4.

Unit Code and Title	Programme	Remark
ERTH4002 Geoscience Professional Practice	Applied Geology Honours	Removed from the list of units offered 2026. No more offered in Semester 2, 2026.
GEOL4001 Geoscience Analytical Techniques		

5.

Specialisation	Remark
SPUC-AIMLN: Artificial Intelligence and Machine Learning Specialisation	Removed from Mechatronic Engineering
SPUC-ROBAU: Robot Automation Specialisation	Removed from Mechatronic Engineering