

# COMPUTER ENGINEERING PROGRAMME

Student Number: .....

Student First Names : .....

Student Surname: .....

**NB: Modules in red are not offered in 2023**

1) 1st year 1st sem		Credits	Prereqs and co-reqs	Concession/ Query (mark)
CHEM181 <b>or</b>	Chemistry for Engineers 1A <b>or</b>	8		
CHEM163	Chemistry and Society 1	8		
ENCH1TC	Technical Communication for Engineers	8		
ENME1DR	Engineering Drawing	8		
MATH131	Mathematics 1A (Eng)	16		
MATH132	Applied Mathematics 1A (Eng)	16		
PHYS151 <b>or</b>	Engineering Physics 1A <b>or</b>	16		
PHYS110	Mech., Optics & Thermal Physics	16	Co-req: MATH130 or MATH195	
<b>Credit Subtotal</b>				
2) 1st year 2nd sem				
CHEM191 <b>or</b>	Chemistry for Engineers 1B <b>or</b>	8	CHEM181 (40%)	
CHEM173	Chemistry and Society 2	8		
ENEL1ED <b>or</b>	Electrical Design 1 <b>or</b>	8		
ENAG1DE	Engineering Design	8		
ENME1EM <b>or</b>	Intro. To Engineering Materials	8		
ENAG1MT	Intro. To Engineering Materials	8		
MATH141	Mathematics 1B(Eng)	16	MATH131 (40%)	
MATH142	Applied Mathematics 1B (Eng)	16	MATH131 (40%); MATH132 (40%)	
PHYS152 <b>or</b>	Engineering Physics 1B <b>or</b>	16	PHYS151 (40%)	
PHYS120	Electromag, Waves & Mod Phys	16	PHYS110 (40%) or PHYS131 (60%); Co-req: MATH140 or MATH196	
<b>Credit Subtotal</b>				
3) 2nd year 1st sem				
ENEL2CA	Computer Methods 1	8	ENEL1ED	
ENEL2EA	Electrical Principles 1	16	PHYS152 or PHYS120; MATH132; MATH141	
MATH238	Mathematics 2A (Eng)	16	MATH131; MATH141 (40%)	
MATH239	Applied Finite Maths	8	MATH131 (40%); MATH141 (40%)	
PHYS251	Optics and Wave Motion	8	PHYS151; PHYS152 (40%)	
ZULN101 <b>or</b>	Basic isiZulu Language Studies <b>or</b>	16		
	Elective	16		
<b>Credit Subtotal</b>				
4) 2nd year 2nd sem				
ENEL2CB	Computer Methods 2	8	ENEL2CA	
ENEL2DS	Data Structures & Algorithms	8		
ENEL2EB	Electrical Principles 2	16	ENEL2EA	
ENEL2EN	Environmental Engineering	8		
ENEL2FT	Field Theory	8	PHYS120 or PHYS152; MATH238; Co-req: MATH248	
ENEL2SE	Software Engineering 1	8		
ENEL2WS	Workshop Training	DP		
MATH248	Mathematics 2B (Eng)	16	MATH238 (40%); MATH141	
<b>Credit Subtotal</b>				
5) 3rd year 1st sem				
ENCH4ML	Engineering Mgmt & Labour Relations	8	All first year modules, 96 credits of 2nd year modules	
ENEL3CA	Computer Engineering Design 1	8	Co-req: ENEL3TA	
ENEL3CC	Computer Methods 3	8	ENEL2CB	
ENEL3DS	Digital Systems	16	ENEL2CA	
ENEL3SS	Systems and Simulation	8	MATH248; ENEL2EA or ENEL2EL	
ENEL3TA	Analogue Electronics 1	8	ENEL2EB	
MATH354	Mathematics 3A (Eng)	8	MATH238; MATH248 (40%)	
STAT370	Engineering Statistics	8	MATH248 (DP)	
<b>Credit Subtotal</b>				
6) 3rd year 2nd sem				
ENEL3AE	Analogue Electronics 2	8	ENEL3TA	
ENEL3CB	Computer Engineering Design 2	8	ENEL2WS; ENEL3CA; ENEL3DS	
ENEL3CO	Communications	16	MATH354; STAT370	
ENEL3CS	Control Systems 1	8	ENEL3SS; MATH354	
ENEL3DE	Digital Electronics	8	ENEL2EB	
ENEL3SF	Software Engineering 2	8	ENEL2SE	
MATH349	Discrete Mathematics	8	MATH239 (40%); MATH248	
MATH360	Numerical Methods	8	MATH248 (40%)	
<b>Credit Subtotal</b>				
7) 4th year 1st sem				
ENEL4AA	Design & Analysis of Algorithms	8	ENEL2DS; ENEL3CC	
ENEL4CA	Computer Engineering Design 3	16	ENEL3CB; ENEL3AE; ENEL3DE	
ENEL4CO	Computer Architecture & Org.	8	ENEL3DS	
ENEL4DC	Digital Communication	8	ENEL3CO	
ENEL4DT	Data Communications	8	ENEL3CO	

ENEL4EE	Engineering Entrepreneurship	8		
ENEL4OS	Operating Systems for Engineers	8	ENEL3CC	
		<b>Credit Subtotal</b>		
<b>Plus one from the following options</b>				
ENEL4CM	E-commerce Systems	8		
ENEL4CS	Control Systems 2	8	ENEL3CS	
ENEL4DS	Digital Signal Processing	8	ENEL3CO	
ENEL4SE	Security and Encryption	8	MATH349	
ENEL4TC	Selected Topics in Computer Eng 1	8	Completed 96 credits at level-3 plus any other specialist pre-req required by the module lecturer	
		<b>Credit Subtotal</b>		
<b>8) 4th year 2nd sem</b>				
ENEL4CB	Computer Eng. Design Project	32	ENEL4CA	
ENEL4EB	Engineering Business	8		
ENEL4ES	Embedded Systems	8	ENEL3DS	
ENEL4IE	Internet Engineering	8	ENEL4DT	
ENEL4RC	Real Time Computing	8		
ENEL4VW	Vacation Work	DP		
		<b>Credit Subtotal</b>		
<b>Plus one from the following options</b>				
ENEL4AI	Artificial Intelligence	8	ENEL3CC	
ENEL4CC	Distributed Computing Systems	8	ENEL4OS	
ENEL4IP	Image Processing	8	ENEL4DS	
ENEL4ST	Selected Topics in Computer Eng 2	8	Completed 96 credits at level-3 plus any other specialist pre-req required by the module lecturer	
ENEL4VL	VLSI Design	8	ENEL3TA; ENEL3DS	
		<b>Credit Subtotal</b>		

School of Engineering - List of Out of School Electives

Semester 1		Semester 2	
ACLE102	Academic Learning in English		Dutch for Beginners
AFRN101	Afrikaans for Beginners		Afrikaanse Media
AFRN130	Inleidende Kortkuns en Taal		Intro to Anthropology/ Culture & Society
ANTH101	Introduction to anthropology		Classical Civilisation 1A Words & Ideas/1B
CCCV101	Classical Civilisation 1A		Classics in the Movies/ Class Civil Ancient
CCCV201	Classical Civilisation 2A		Fundamental Criminology 1B
CCCV203	Classical Civilisation 203		Drama & Performance Studies 1B
CCGK101	Greek 1A		Introduction to English Studies 1B
CRIM101	Fundamental Criminology A		
ECHS101	Political Economy of Food in a Global context		French 1
FREN101	French 1A: French for Beginners		German 1B
FREN201	French 2		Scientific German
GERM101	German 1A: Intro to German Language 1		Italian 1B
HIST104	The Making of the Modern World		Linguistics 1B: Intro to Language studies
ITAL101	Italian 1A		Western Classical Music: An Introduction
LING101	Understanding Language		Music Theory and Perception 1B
PHIL101	Intro to Philosophy		Intro to Global Politics
POLS101	Intro to Political Science		
RELG101	Intro to Religion		Religion and Conflict
RELG207	Religion, Migration and Urbanization		Hinduism in SA
ZULM101	Intro to IsiZulu A		Translation & Intercultural Communication
ZULM105	Academic Writing		Intro to isiZulu 1B
ZULM301	Sociolinguistics & language Planning		Academic Writing/ Semiotics
ZULN101	Basic IsiZulu language Studies A		Advanced isiZulu 2B
			Heritage and Culture
			IsiZulu Modern Prose & Drama/ Onomastics and Sema
			Basic isiZulu Language Studies 1B
Student 's Signature:.....			
Programme Co-ordinator Signature:.....			
Date:.....			





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