

ELECTRONIC 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 <u>or</u>	Chemistry for Engineers 1A <u>or</u>	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 <u>or</u>	Engineering Physics 1A <u>or</u>	16		
PHYS110	Mech., Optics & Thermal Physics	16	Co-req: MATH130 or MATH195	
Credit Subtotal				
2) 1st year 2nd sem				
CHEM191 <u>or</u>	Chemistry for Engineers 1B <u>or</u>	8	CHEM181 (40%)	
CHEM173	Chemistry and Society 2	8		
ENEL1ED <u>or</u>	Electrical Design 1 <u>or</u>	8		
ENAG1DE	Engineering Design	8		
ENME1EM <u>or</u>	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 <u>or</u>	Engineering Physics 1B <u>or</u>	16	PHYS151 (40%)	
PHYS120	Electromag, Waves & Mod Phys	16	PHYS110 (40%) or PHYS131 (60%); Co-req: MATH140 or MATH196	
Credit Subtotal				
3) 2nd year 1st sem				
ENEL2CA	Computer Methods 1	8	ENEL1ED	
ENEL2EA	Electrical Principles 1	16	PHYS152 or PHYS120; MATH132; MATH141	
ENEL2PA	Physical Electronics 1	8	CHEM181 & CHEM191 or CHEM163 & CHEM173	
ENME2TF	Thermofluids	8	PHYS152	
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%)	
Credit Subtotal				
4) 2nd year 2nd sem				
ENEL2CB	Computer Methods 2	8	ENEL2CA	
ENEL2EB	Electrical Principles 2	16	ENEL2EA	
ENEL2ED	Electrical Design 2	8	ENEL1ED; Co-req: ENEL2EB	
ENEL2EN	Environmental Engineering	8		
ENEL2FT	Field Theory	8	PHYS120 or PHYS152; MATH238; Co-req: MATH248	
ENEL2PB	Physical Electronics 2	8	ENEL2PA	
ENEL2WS	Workshop Training (Can take in any Semester/ Year)	DP		
MATH248	Mathematics 2B (Eng)	16	MATH238 (40%); MATH141	
Credit Subtotal				
5) 3rd year 1st sem				
ENCH4ML	Engineering Mgmt & Labour Relations	8	All first year modules, 96 credits of 2nd year modules	
ENEL3CC	Computer Methods 3	8	ENEL2CB	
ENEL3DA	Electronic Design 1	8	ENEL3TA	
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)	
Credit Subtotal				
6) 3rd year 2nd sem				
ENEL3AE	Analogue Electronics 2	8	ENEL3TA	
ENEL3CO	Communications	16	MATH354; STAT370	
ENEL3CS	Control Systems 1	8	ENEL3SS; MATH354	
ENEL3DB	Electronic Design 2	8	ENEL2WS; ENEL3DA; ENEL3TA; ENEL3DS; Co-req: ENEL3AE; ENEL3DE	
ENEL3DE	Digital Electronics	8	ENEL2EB	
ENEL3EM	E-M Theory	8	ENEL2FT	
ENEL3PE	Power Electronics 1	8	ENEL2EB	
MATH360	Numerical Methods	8	MATH248 (40%)	
Credit Subtotal				
7) 4th year 1st sem				
ENEL4DA	Electronic Design 3	16	ENEL3DA; ENEL3DS, ENEL3DB, ENEL3AE, ENEL3DE	
ENEL4EC	Analogue Electronics 3	8	ENEL3AE	
ENEL4DS	Digital Signal Processing	8	ENEL3CO	
ENEL4EE	Engineering Entrepreneurship	8		
Credit Subtotal				
8) 4th year 2nd sem				
ENEL4EB	Engineering Business	8		
ENEL4ED	Electronic Design Project	32	ENEL4DA	
ENEL4TB	Selected Topics in Electronic Design 2	8	Completed 96 credits at level-3 plus any other specialist pre-req required by the module lecturer	
ZULN101	Basic isiZulu Language Studies 1A or Other Elective	16		

ENEL4VW	Vacation Work	DP		
		Credit Subtotal		
<i>Optional modules: These must be chosen to account for 40cr in total.</i>				
Semester 1				
ENEL4CS	Control Systems 2	8	ENEL3CS	
ENEL4DC	Digital Communications	8	ENEL3CO	
ENEL4DP	Digital Processes	8	ENEL3DS; ENEL3DE	
ENEL4AC	Acoustics	8	ENEL3AE	
ENEL4DT	Data Communications	8	ENEL3CO	
ENEL4IN	Instrumentation	8	ENEL3TA; ENEL2ED	
ENEL4PA	Power Electronics 2	8	ENEL3PE	
ENEL4TA	Selected Topics in Electronic Eng 1	8	Completed 96 credits at level-3 plus any other specialist pre-req required by the module lecturer	
		Credit Subtotal		
Semester 2				
ENEL4AI	Artificial Intelligence	8	ENEL3CC	
ENEL4AM	Automation	8	ENEL3SS; ENEL3CS	
ENEL4ES	Embedded Systems	8	ENEL3DS	
ENEL4IP	Image Processing	8	ENEL4DS	
ENEL4MS	Microwave Systems	8	ENEL3EM	
ENEL4SC	Superconductivity	8	ENEL2PB	
ENEL4SY	Communication Systems	8	ENEL3CO; ENEL4DC	
		Credit Subtotal		

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	French 1	
ECHS101	Political Economy of Food in a Global context	German 1B	
FREN101	French 1A: French for Beginners	Scientific German	
FREN201	French 2	Italian 1B	
GERM101	German 1A: Intro to German Language 1	Linguistics 1B: Intro to Language studies	
HIST104	The Making of the Modern World	Western Classical Music: An Introduction	
ITAL101	Italian 1A	Music Theory and Perception 1B	
LING101	Understanding Language	Intro to Global Politics	
PHIL101	Intro to Philosophy	Religion and Conflict	
POLS101	Intro to Political Science	Hinduism in SA	
RELG101	Intro to Religion	Translation & Intercultural Communication	
RELG207	Religion, Migration and Urbanization	Intro to isiZulu 1B	
ZULM101	Intro to IsiZulu A	Academic Writing/ Semiotics	
ZULM105	Academic Writing	Advanced isiZulu 2B	
ZULM301	Sociolinguistics & language Planning	Heritage and Culture	
ZULN101	Basic IsiZulu language Studies A	IsiZulu Modern Prose & Drama/ Onomastics and Semantics	
Student 's Signature:.....		Basic isiZulu Language Studies 1B	
Programme Co-ordinator Signature:.....			
Date:.....			

