

ELECTRICAL ENGINEERING PROGRAMME

Student Number:

Student First Names :

Student Surname:

1) 1st year 1st sem		Credits	Prereqs and co-reqs	Concession/ Query (mark)
CHEM181 or	Chemistry for Engineers 1A or	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 or	Engineering Physics 1A or	16		
PHYS110	Mech., Optics & Thermal Physics	16	Co-req: MATH130 or MATH195	
Credit Subtotal				
2) 1st year 2nd sem				
CHEM191 or	Chemistry for Engineers 1B or	8	CHEM181 (40%)	
CHEM173	Chemistry and Society 2	8		
ENEL1ED or	Electrical Design 1 or	8		
ENAG1DE	Engineering Design	8		
ENME1EM or	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%) or MATH160(40%); MATH132 (40%)	
PHYS152 or	Engineering Physics 1B or	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 or ENAG1DE or ENAG160	
ENEL2EA	Electrical Principles 1	16	PHYS152 or PHYS120 or PHYS163; MATH132; MATH141 or MATH161	
ENME2MS	Material Strengths	8	MATH142	
ENME2TF	Thermofluids	8	PHYS152 or PHYS163	
MATH238	Mathematics 2A (Eng)	16	MATH131 or MATH160; MATH141 (40%) or MATH161(40%)	
MATH239	Applied Finite Maths	8	MATH131 (40%) or MATH160(40%); MATH141 (40%) or MATH161(40%)	
PHYS251	Optics and Wave Motion	8	PHYS151 or PHYS160; PHYS152 (40%) or PHYS163 (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 or ENAG1DE or ENAG160; Co-req: ENEL2EB	
ENEL2EN	Environmental Engineering	8		
ENEL2FT	Field Theory	8	PHYS120 or PHYS152 or PHYS163; MATH238; Co-req: MATH248	
ENEL2NP	Nuclear & Semiconductor Physics	8	PHYS120 or PHYS152 or PHYS163	
ENEL2WS	Workshop Training	DP		
MATH248	Mathematics 2B (Eng)	16	MATH238 (40%); MATH141 or MATH161	
Credit Subtotal				
5) 3rd year 1st sem				
ENCH4ML	Engineering Mgmt & Labour Relations	8	All first year modules, 96 credits of 2nd year modules	
ENEL3DS	Digital Systems	16	ENEL2CA	
ENEL3EA	Electrical Design 3	8	ENEL2EB; ENEL2FT; Co-req: ENEL3MA	
ENEL3MA	Electrical Machines 1	8	ENEL2EL or ENEL2EA	
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	
ENEL3CS	Control Systems 1	8	ENEL3SS; MATH354	
ENEL3DE	Digital Electronics	8	ENEL2EB	
ENEL3EB	Electrical Design 4	8	ENEL3DS; ENEL2WS; ENEL3TA	
ENEL3EM	E-M Theory	8	ENEL2FT	
ENEL3MB	Electrical Machines 2	8	ENEL3MA	
ENEL3PE	Power Electronics 1	8	ENEL2EB	
ENEL3PS	Power Systems 1	16	ENEL3MA; Co-req: ENEL3MB	
Credit Subtotal				

7) 4th year 1st sem			
ENEL4EA	Electrical Design 5	24	Passed at least 10 level-3 modules; ENEL3EA; ENEL3EB
ENEL4EE	Engineering Entrepreneurship	8	
ENEL4WA	Power Systems 2	8	ENEL3PS; ENEL3MB
ENEL4HA	High Voltage Engineering 1	8	ENEL3PS
ENEL4SA	Selected Topics in Electrical Eng 1 (self-study)	8	Completed 96 credits at level-3 plus any other specialist pre-req required by the module lecturer
		Credit Subtotal	
8) 4th year 2nd sem			
ENEL4EB	Engineering Business	8	
ENEL4EP	Electrical Design Project	32	ENEL4EA
ENEL4VW	Vacation Work	DP	
ZULN101	Basic isiZulu Language Studies A	16	
		Credit Subtotal	
4th year - either 1st semester or 2nd semester			
<i>If exempted from ZULUN101: One 16cr module from outside the College taken in either semester and chosen with the approval of the School</i>			
<i>Elective modules: These must be chosen to account for 32cr in total.</i>			
Semester 1 Major Electives			
ENEL4CS	Control Systems 2	8	ENEL3CS
ENEL4MA	Electrical Machines 3	8	ENEL3MB; ENEL3PS
ENEL4PA	Power Electronics 2	8	ENEL3PE
		Credit Subtotal	
Semester 2 Major Electives			
ENEL4HB	High Voltage Engineering 2	8	ENEL3EM; ENEL4HA; MATH354
ENEL4MB	Electrical Machines 4	8	ENEL3MA
		Credit Subtotal	
Between 0cr and 8cr from Minor Electives			
ENEL4ES	Embedded Systems	8	ENEL3DS
		Credit Subtotal	

School of Engineering - List of Out of School Electives

College of Humanities			
Semester 1		Semester 2	
ZULN101	Basic isiZulu language Studies A	ZULN101	Basic isiZulu Language Studies A
ZULM101	Intro to isiZulu A	ZULM102	Intro to isiZulu 1B
ZULM105	Academic Writing	ZULM106	Semiotics of African Cosmology
CFSD101	Introduction to Criminology	ZULM203	Heritage and Culture
ACLE102	Academic Learning in English	RELG210	Hinduism in South Africa
FREN101	French 1A: French for Beginners	CCCV102	Classical Civilisation 1B
ANTH101	Introduction to anthropology	DRAM102	Drama & Performance Studies 1B
CCCV101	Classical Civilisation 1A	ENGL102	Introduction to English Studies B
HIST104	The Making of the Modern World	ANTH102	Culture & Society in Africa
LING101	Understanding Language	LING102	Linguistics 1B: Intro to Language studies
PHIL101	Intro to Philosophy	MUSC1HB	Western Classical Music: An Introduction
POLS101	Intro to Political Science	POLS102	Introduction to Global Politics
RELG101	Intro to Religion	RELG106	Religion and Conflict
CCGK101	Greek 1A	TRIC202	Translation & Intercultural Communication

Student's Signature:.....
Programme Co-ordinator Signature:.....
Date:.....