

Programme Name	Bachelor of Engineering (Honours) (Electronics Engineering) (Instrumentation & Control Systems)
Programme Description	<p>BE ELECTRONICS (hons) (Instrumentation & Control) is a 4-year degree that can be completed in 4 years of study. The programme is designed to prepare aspiring students for the following engineering attributes:</p> <ul style="list-style-type: none"> - to equip students with the knowledge and skills that are currently in high demand in the instrumentation and control engineering and related industries - to provide students with a foundation for further study and research in the same or other field of study - to enable students to acquire a broad understanding of instrumentation and control engineering, whilst providing opportunities for them to develop expertise within particular areas of specialisation - to develop the students' ability to make an effective contribution to team-based activity - to encourage students to adopt an investigative approach and develop autonomous study skills in order to ensure their continuing professional development - to provide students with an understanding of the industrial context and an appreciation of a range of external factors that affect the work of the professional instrumentation and control engineer. - to provide skill in networking of physical entities in an industrial set up and provide supervisory role including control through software programs like scada. <p>The courses in the programme have both theoretical sessions, laboratory experimental exercises and practical sessions to enhance the learning and acquiring of cognitive (of the mind) and practical skill suitable for an engineer in this area of expertise. In the last year there a one year capstone project followed by an Industrial Attachment of about six months to provide hands on experience in an industrial scenario to students to make them work- ready.</p>
Majors	Bachelor of Engineering (Honours) (Electronics Engineering) (Instrumentation & Control Systems)
Minimum Requirements	Pass in Year 13 with 280 out of 400 marks with pass 50% or more in English, 70% or more in Mathematics and 70% or more in Physics or Introduction to Technology or Chemistry and 50% or more in 1 other Science or Technology subject OR Foundation Science with GPA of 3.00 or more.
Duration	4 Years
College Name	College of Engineering, Science and Technology
Campus	Derrick
Credit Points	480

Programme			
Course Code	Course Title	Pre- requisite	Credit Points
	Semester 1		
COM 502	Engineering Communication and Practices	Minimum Entry Requirement (MER)	15
MEB 502	Engineering Materials	MER	15
CEB 603	Computer Aided Drafting and Modelling	MER	15
MTH 517	Mathematics for Engineers I	MER	15
MER	Total Credit Points		60
	Semester 2		
EEB501	Introduction to Electrical and Electronics Engineering	SEM 1 UNITS	15
CSC 501	C++ Programming for Engineers	SEM 1 UNITS	15
MEB 503	Engineering Mechanics	SEM 1 UNITS	15
MTH 518	Mathematics for Engineers II	SEM 1 UNITS	15
MER	Total Credit Points		60
	Semester 3		
MTH 618	Mathematics for Engineers III	SEM 2 UNITS	15
EEB 601	Circuit Theory	SEM 2 UNITS	15
EEB 602	Analog Electronics	SEM 2 UNITS	15

EEB 603	Digital Electronics	SEM 2 UNITS	15
	Total Credit Points		60
	Semester 4		
EEB 604	Engineering Computations and Modelling	SEM 3 UNITS	15
EEB 605	Engineering Electromagnetics	SEM 3 UNITS	15
EEB 681	Engineering Planning	SEM 3 UNITS	15
PEB 601	Design Project I	SEM 3 UNITS	15
	Total Credit Points		60
	Semester 5		
EEB 721	Principles of Measurement and Instrumentation	SEM 4 UNITS	15
EEB 731	Signals and Systems	SEM 4 UNITS	15
EEB 741	Embedded System Design	SEM 4 UNITS	15
PEB 702	Engineering and Society	SEM 4 UNITS	15
	Total Credit Points		60
	Semester 6		
EEB 701	Industrial Electronics	SEM 5 UNITS	15
EEB 722	Control Systems	SEM 5 UNITS	15
EEB 723	Industrial Instrumentation	SEM 5 UNITS	15
PEB 701	Design Project II	SEM 5 UNITS	15
			60
	Semester 7		
EEB 821	Advanced Digital Control	SEM 6 UNITS	15
EEB 831	Digital Signal Processing	SEM 6 UNITS	15
EEB 851	Industrial Automation	SEM 6 UNITS	15

PEB 801	Capstone Design Project I	SEM 6 UNITS	15
			60
	Semester 8		
EEB 841	VHDL & Logic Synthesis	SEM 7 UNITS	15
EEB881	Innovation Management & New Product Development	SEM 7 UNITS	15
PEB 802	Capstone Design Project II	SEM 7 UNITS	30
			60
	Industrial Attachment	Completion of 6 months of relevant industrial attachment	
Total Credit Points			480