

Programme Name	Diploma in Engineering (Instrumentation & Control Systems)
Programme Description	<p>Diploma in Electronics Engineering (Instrumentation & Control Systems) is a 3-year diploma programme that can be completed in 2 ½ years of university study followed by a compulsory 6 months of industrial attachment. The programme is designed to prepare aspiring students for the following engineering attributes:</p> <ul style="list-style-type: none"> ➤ <i>Apply a combination of highly developed technical skills and appropriate manual skills in the analysis and solution of technical problems in a chosen area of specialisation in Instrumentation & Control Engineering.</i> ➤ <i>Apply skills in standard design, testing, commissioning, inspection, plant operation & maintenance, manufacturing or field work.</i> ➤ <i>Employ systematic and logical approaches to problem solving.</i> ➤ <i>Transfer and apply theoretical concepts and technical skills to a range of situations.</i> ➤ <i>Integrate the theoretical and practical aspects of instrumentation and control engineering.</i> ➤ <i>Supervise and manage technical work, after appropriate experience and further information.</i> ➤ <i>To provide backup skills in networking of physical entities in an industrial set up (regional or national) which provides supervisory role inclusive of control through programmable logic controller units by way of software programs like the world renowned SCADA.</i> <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 semester there were industry aligned capstone project followed by an Industrial Attachment of six months to provide hands on experience in an industrial scenario to students to make them work-ready as they enter employment.</p>
Majors	Instrumentation & Control Systems
Minimum Requirements	<ol style="list-style-type: none"> 1. Pass in Year 12 with 240 marks English, Mathematics, Physic/ Introduction to Technology/ Chemistry and any 1 other science or technology related subject. 2. Successful completion of Certificate IV in Electrical Engineering 3. Mature applicants with some relevant industry experience.
Duration	3 Years
Programme Type	<i>This diploma programme is registered with the Fiji Higher Education Commission and is vetted by the Engineers New Zealand (formerly IPENZ) under the World Engineering Conventional Body namely the Dublin Accord (2002): So the diploma is recognized and acceptable world-wide. Simply put, it is portable to enable the holder of the diploma employment as an engineering technician also outside Fiji.</i>
College Name	College of Engineering, Science and Technology
Campus	Derrick
Credit Points	360

Programme Structure			
Course Code	Course Title	Pre- requisite	Credit Points
Semester 1			
EED400	Electrical Principles	MER	12
EED402	Electrical Drawings	MER	12
EED500	Engineering Science	MER	12
MTH410	Engineering Mathematics I	MER	12
COM402	Technical Communication for Engineers	MER	12
Total Credit Points			60
Semester 2			
EED401	<u>Electrical Measurements and Components</u>	EED400	12
EED501	Circuit Analysis	EED400 EED500	12
EED503	Analogue and Digital Electronics	MTH410 EED400	12
EED504	<u>Electronics Workshop Practice</u>	EED402	12
MTH519	Engineering Mathematics II	MTH410	12
Total Credit Points			60
Semester 3			
EED505	Analogue Electronics	EED503, EED501	12
EED506	Digital Electronics	EED503	12
EED517	Power Systems and Machines	EED501	12
EED520	Electronics Instrumentation	EED501 EED503	12
EED541	Computer Architecture and Programming	EED503 MTH519	12
Total Credit Points			60
Semester 4			
EED618	Power Control Electronics	EED505	12

		EED520	
EED621	Control Systems Engineering	EED520	12
EED642	Microcontroller Applications	EED506	12
EED665	Programmable Logic Controller	EED505 EED517	12
MTH619	Engineering Mathematics III	MTH519	12
	Total Credit Points		60
	Semester 5		
EED601	Electrical Engineering Modelling	MTH619	12
EED620	Process Instrumentation and Control	EED621	12
EED650	Supervisory Control and Data Acquisition	EED665	12
PED602	Engineering Capstone Project	PASS all COURSES in Semester 1 - 4	12
PED601	Engineering Project Management	Semester 4 Courses	12
			60
		Total Credit Points	300
	Semester 6		
IAA600	Industrial Attachment	Completion of 6 months of relevant industrial attachment	60
	Total Credit Points		360