

2020

FACULTY OF ENGINEERING
STUDENT GUIDE

# THE NEXT YOU

The goals and decisions you pursue today will take you to the next level. If your decision is to be "Tomorrow's Great", you should join SLIIT Higher Education, a globally recognised Institute

### **BE SMART. BE WISE**

"The Next You" is determined by your next level of education in the fields of;

COMPUTING | BUSINESS | ENGINEERING | HUMANITIES AND SCIENCES | ARCHITECTURE

- ► Scholarships worth over Rs. 50 Million
- ► A grant of Rs. 120 Million for new scientific research
- ► Internationally accredited lecture panel
- ► Educational facilities of international standards

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# **PROFESSOR**

SAMAN

HLAKASIRI

DEAN - FACULTY OF ENGINEERING

### MESSAGE FROM THE DEAN

At the Faculty of Engineering, we aim to produce world class graduates readily employable in industry. The faculty pursues the institute's mission by focusing on excellence in higher learning, research and other professional activities in engineering. A new engineering complex with state-of-the art facilities is available for students to achieve high level of learning experience under the guidance of a highly qualified academic staff. A new fourteen storey complex is being constructed to accommodate the increasing demand for the courses offered at the Faculty.

The Faculty of Engineering comprises of five academic departments. The faculty at present offers Ministry of Higher Education, Sri Lanka approved four year Bachelor of Science of Engineering Degrees in four disciplines; Electrical and Electronic Engineering, Civil Engineering, Mechanical Engineering and Materials Engineering. Under these four major disciplines, we offer over eight specializations, including the specialization in Mechatronic Engineering. Further, the Faculty offers four year Bachelor of Engineering degrees in three disciplines: Civil and Construction Engineering; Electrical and Electronic Engineering and Mechanical Engineering in partnership with the Curtin University, Australia. All the Curtin degree programs offered in the Faculty are accredited by Engineers Australia, and as a result all our Curtin graduates get two year work visa in Australia after their graduation. In addition, the Department of Quantity Surveying in the Faculty of Engineering offers the three year Bachelor of Science Honours degree in Quantity Surveying in partnership with the Liverpool John Mores (LJMU), UK.

As a leading higher educational institute in Sri Lanka, SLIT will play a critical role in educating and developing high talent, and in attracting and retaining good local and international students, faculty and visionaries across its many disciplines.

As the Dean of the Faculty of Engineering of SLIT, I am grateful to all our staff for their continued support in raising our standards to greater heights, their valuable suggestions for improving the academic standard and the research and other innovative work it undertakes. There has never been a more important stage to engage and transform the talent base that can look beyond traditional economic and social boundaries. Sri Lanka's future will indeed depend on that.

### **SUCCESS STORIES**



**BINURA PERERA** BSC (HONS) IN MECHANICAL ENGINEERING GROUP SENIOR MECHANICAL ENGINEER, **BRANDIX APPAREL LIMITED** 

Serving as a Mechanical Engineer of the central sustainability team of Brandix Apparel Limited, I manage the energy performance and carbon footprint of the group of 30+ facilities operating in India, Sri Lanka and Bangladesh.

I have been able to pioneer many sustainable engineering initiatives leading to obtaining the World Green Building Council recognition for the world's first carbon neutral apparel manufacturing facility, and the world's second highest score for a green manufacturing plant (LEED) awarded by the US green building council for Brandix Batticaloa. Having graduated with First Class in the field of Mechanical Engineering in March 2017 from the Sri Lanka Institute of Information Technology (SLIIT), I was also able to secure the award for outstanding performer of the department.

I am also an associate member of the (Institute of Mechanical Engineers) IMechE-UK, and a passed finalist of (Chartered Institute of Management accountants) CIMA -UK. Additionally, I have served as the secretary of the CIMA Sri Lanka Students' Society in 2016 and 2017.

The world class opportunities I obtained through SLIIT such as being able to work with the Bentley research centre gave me an edge in working in the industry. Further, the support to expand students' horizons via engagement of many extra-curricular activities paved the way to becoming a better citizen.



**SAMPATH** JAYALATH BENG (HONS) IN ELECTRONICS ENGINEERING LECTURER AT THE UNIVERSITY OF CAPE TOWN

A Chinese proverb says that "A journey of a thousand miles begins with a single step". In my story, the single step was the opportunity to follow BEng (Hons) in Electronics Engineering at SLIIT in 2010. In my early academic life I was a rote learner, and as such I faced tremendous difficulty until Panel of lectures at SLIIT helped me to discover that understanding basic principles is the key to success. This was the turning point in my life as a student, which helped me to excel in academic performance. At the same time, I was lucky enough to be part of an international research project during my final year at SLIIT which resulted in two international conference publications. The research exposure that I gained at SLIIT laid an important foundation for me to excel in MSc and PhD studies at the University of Cape Town, Cape Town, South Africa. Today, I am a Lecturer at the University of Cape Town. Whenever, I look back at my life, I am proud to say that SLIIT played an important role in shaping my future.



### **ENGINEERING DEGREES**

SLIIT is a pioneer in providing education in multitude of disciplines giving students with a great degree of freedom when choosing the right pathway. As such, we at the SLIIT Engineering faculty aim to instill in students the knowledge, skills and attitudes required to work in the industry as a practicing engineer. We are dedicated to educate and train each student to the highest standard and prepare them for employment across many levels. During their undergraduate studies, we provide them compulsory 6-month on-the-job training, which will give them valuable hands-on experience within their respective fields in the industry.

Our highly qualified and experienced full time academic staff, and excellent in-house state-of-the-art laboratory facilities will ensure that the students one day will leave the faculty with the best learning experience. Our graduates will find that the qualifications they earned at SLIIT are fully recognized as all the engineering degrees awarded by SLIIT are approved by the Ministry of Higher Education of Sri Lanka under the Universities Act. Furthermore, our undergraduate curriculum is prepared according to the outcome base education system to comply with the Washington Accord Accreditation through the Institution of Engineers, Sri Lanka (IESL), SLIIT is also a Member of the Association of Commonwealth Universities and International Association of Universities (IAU). At SLIIT students will also have the option of pursuing Engineering programs offered by Curtin University, Australia and the Quantity Surveying programs offered by Liverpool John Moores University (LJMU), UK, right here at SLIIT. Offering flexibility, students are able to exit a course should they be faced with restrictive circumstances and they can rejoin later subjected to relevant registration procedures approved by the SLIIT. Apart from the job opportunities given under different fields of specializations, many Postgraduate opportunities are available for our graduates both locally and overseas in reputed universities. Depending on the performance in honors degree programs, students have been able to secure full or partial scholarships to follow such postgraduate degrees. Many of our past graduates are currently following such programs. Furthermore, the Faculty of Engineering, SLIIT has been granted the permission to offer MPhil and PhD research degree programs by the Ministry of Higher Education, Sri Lanka. Students can obtain full or partial scholarships with a monthly stipend on a competitive basis to follow such programs.

### SLIIT BSc ENGINEERING HONOURS DEGREES

Duration : 4 Years

Entry : February / September

Location : Malabe
Offered : Weekdays
Examinations : Weekdays

### **ACADEMIC & PROFESSIONAL RECOGNITION**

Approved by the University Grants Commission under the Universities Act / Ministry of Higher Education in Sri Lanka (MOHE)

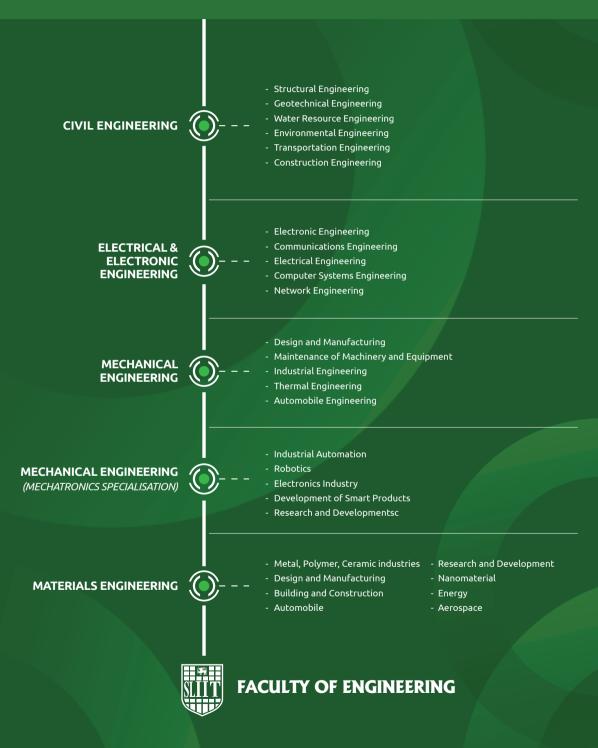
Member of the Association of Commonwealth Universities (ACU)

Member International Association of Universities (IAU)

This degree allows students the following options, upon successful completion of the prescribed modules:

End of 2nd year : Higher Diploma in Engineering
End of 4th year : BSc Eng Honours Degree

### **SPECIALISATIONS**





SEMESTER 1		CREDITS
CE1011	Engineering Mechanics	04
ME1010	Engineering Design & Processes	04
EC1021	Electrical Systems	03
MA1302	Engineering Mathematics I	03
EL1202	English Language Skills I	03
CE1912	Introduction to Sustainable Engineering	02
SEMESTER 2		
ME1030	Engineering Skills Development	03
ME1040	Engineering Principles & Communication	n 04
MT1010	Engineering Materials	04
MA1312	Engineering Mathematics II	03
EC1441	Engineering Programming	03
EL1212	English Language Skills II	02

### YEAR 02

SEMESTER 1		CREDITS
CE2011	Structural Analysis I	04
CE2712	Fluid Mechanics	04
CE2021	Properties and Mechanics of Materials	03
CE2211	Civil Engineering Methods	04
MA2302	Engineering Mathematics III	03
SEMESTER 2		
CE2812	Geotechnical Engineering I	03
CE2032	Structural Design I	04
CE2042	Structural Analysis II	04
CE2051	Advanced Mechanics of Materials	03
ME2720	Introduction to Thermal Processes	02
	Humanities I	02
CE2911	Industrial Training I	03
CE2940	Civil Engineering Surveying Camp	01

### YEAR 03

SEMESTER 1	С	REDITS
CE3012	Structural Analysis III	03
CE3712	Pumps & Open Channel Flow	03
CE3022	Structural Design II	04
CE3811	Geotechnical Engineering II	03
CE3211	Civil Engineering Project and Cost Manager	ment 03
	Humanities II	02
SEMESTER 2		
CE3611	Environmental Engineering	03
CE3822	Geotechnical Engineering III	03
CE3411	Transportation Engineering	03
CE3231	Projection Formulation	03
CE3221	Construction Technology and Methods	03
CE3922	Civil Engineering Seminar	
CE3911	Industrial Training II	03

### YEAR 04

SEMESTER 1	CREDI	TS
CE4211	Comprehensive Design Project I	03
CE4221	Civil Engineering Practice, Quality and Legislation	03
CE4912	Civil Engineering Project I	03
CE4741	Engineering Hydrology	03
Two Elective Modu	lles from the following	
CE4811	Foundation Engineering I	03
CE4411	Traffic Engineering and Planning	03
CE4711	Water Systems & Hydraulic Structures	03
CE4011	Finite Element Methods in Structural Engineering	03
CE4041	Structural Design III	03
CE4611	Environmental Engineering Design	03
SEMESTER 2		
CE4921	Sustainble Development in Civil Engineering	03
CE4251	Comprehensive Design Project II	03
CE4931	Civil Engineering Project II	03
CE4261	Construction Project Management	03
Two Elective Modu	lles from the following	
CE4821	Foundation Engineering II	03
CE4421	Pavement Design and Maintenance	03
CE4731	Environmental Hydraulics & Hydrology	03
CE4021	Structural Dynamics and High Rise Buildings	03
CE4031	Advanced Concrete Design	03

 $<sup>\</sup>hbox{$^*$ Electives to be chosen with the prior approval of the Acadamic Department}$ 



SEMESTER 1		CREDITS
CE1011	Engineering Mechanics	04
ME1010	Engineering Design & Processes	04
EC1021	Electrical Systems	03
MA1302	Engineering Mathematics I	03
EL1202	English Language Skills I	03
CE1912	Introduction to Sustainable Engineering	02
SEMESTER 2		
ME1030	Engineering Skills Development	03
ME1040	Engineering Principles & Communication	n 04
MT1010	Engineering Materials	04
MA1312	Engineering Mathematics II	03
EC1441	Engineering Programming	03
EL1212	English Language Skills II	02

### YEAR 02

SEMESTER 1	CRI	EDITS
CE2721	Fluid Mechanics and Thermodynamics	04
EC2092	Foundation of Digital Design	03
EC2202	Electrical Circuits	03
EC2492	Object Oriented Programming	03
EC2131	Microcomputers	03
MA 2302	Engineering Mathematics III	03
SEMESTER 2		
EC2122	Electronic Fundamentals	03
EC2112	Signals and Systems	03
EC2212	Electromagnetic and Electromechanical Energy Conversi	on 03
EC2730	Data Structures and Algorithms	03
EC2482	Introduction to Controls and Robotics	03
EC2402	Computer Networks	03
	Humanities I	
Industrial Trainin	g Part 1	
EC2921	Industrial Training I	

### YEAR 03

SEMESTER 1		CREDITS
EC3612	Communication Engineering I	03
EC3502	Control Systems	03
EC3061	Design Project I	03
3 Elective Mode	ules from the following *	
EC3012	Electronic Design	03
EC3212	Power Systems Analysis	03
EC3202	Engineering Electromagnetics	03
EC3462	Embedded Systems Engineering I	03
EC3472	Digital Multimedia Content	03
EC3482	Foundations in Computer Engineering	03
EC3232	Electrical Installations	03
EC 3702	Real Time Operating System	03
EC3042	Physical and Optoelectronics	03
SEMESTER 2		
EC3071	Design Project II	03
ME3081	Engineering Management	03
EC3522	Data Communication and Networking	03
3 Elective Mode	ules from the following *	
EC3102	Advanced Digital Design	03
EC3022	Radio Frequency and Microwave Electro	onics 03
EC3032	Power Electronics	03
EC3242	Power Systems Protection	03
EC3192	Electrical Machines and Stability	03
EC3532	Advanced Control Systems	03
EC3622	Communication Engineering II	03
EC3641	Digital Access Systems	03
EC3712	Embedded Software Engineering	03
EC3722	Information Security	03
EC3540	Computing for Engineers	03
	Humanities II	
Industrial Trainin	g Part 2	
EC3901	Industrial Training II	

### YEAR 04

SEMESTER 1	CRED	ITS
EC4040	Electronic Engineering Project	04
EC4901	Legal Framework & Sustainability in Electrical Engineering	02
3 Elective Mod	ules from the following *	
EC4012	Power Electronics & Drives	03
EC4202	Electrical Utility Engineering	03
EC4421	Network Design & Performance Evaluation	03
EC4432	Embedded Systems Engineering II	03
EC4441	Advanced Computer Architecture	03
EC4632	Communication Signal Processing	03
EC4642	Optical Communications	03
EC4651	Next Generation Networks	03
EC4661	Radio Frequency & Microwave Systems	03
EC4702	Models of Computations	03
ME4111	Industrial Management & Marketing	03
<b>SEMESTER 2</b>		
EC4040	Electronic Engineering Project	04
4 Elective Mod	dules from the following *	
EC4462	Computer Structures	03
EC4031	Medical Electronics	03
EC4212	Electrical Power Transmission & Distribution	03
EC4231	Electromagnetic Propagation	03
EC4552	Digital Signal Processing	03
EC4241	Introduction to Smart Grid Control	03
EC4471	Information Theory & Error Control Coding	03
EC4482	Computer Vision & Image Processing	03
EC4492	Neural & Fuzzy Systems	03
EC4502	Instrumentation & Control	03
EC4511	Industrial Automation & Process Control	03
EC4522	Network Management & Security	03
EC4531	Internet Technologies	03
EC4541	Distributed Computing	03
EC4672	Wireless Communications	03
EC4252	Renewable Energy Systems	03

 $<sup>{\</sup>it *Electives to be chosen with the prior approval of the Acadamic Department}\\$ 



SEMESTER 1		CREDITS
CE1011	Engineering Mechanics	04
ME1010	Engineering Design & Processes	04
EC1021	Electrical Systems	03
MA1302	Engineering Mathematics I	03
EL1202	English Language Skills I	03
CE1912	Introduction to Sustainable Engineering	02
SEMESTER 2		
ME1030	Engineering Skills Development	03
ME1040	Engineering Principles & Communication	n 04
MT1010	Engineering Materials	04
MA1312	Engineering Mathematics II	03
EC1441	Engineering Programming	03
EL1212	English Language Skills II	02

### YEAR 02

SEMESTER 1	•	CREDITS
MT2010	Material Structure and Defects	03
CE2721	Fluid Mechanics and Thermodynamics	04
ME2011	Mechanics of Solids I	03
MT2020	Metals & Alloys	03
MA2302	Engineering Mathematics III	03
SEMESTER 2		
		00
ME2030	Manufacturing Processes I	03
MT2040	Ceramics Engineering	03
MT2050	Chemical Thermodynamics & Phase Equi	libria 03
MT2060	Material Processing	03
MT2070	Material Characterisation Techniques	03
CE3910	Humanities I	
MT2080	Industrial Training I	

### YEAR 03

**SEMESTER 1** 

ME3031	Mechanics of Solids II	04
MT3010	Plastics & Rubber	03
ME3100	Manufacturing Processes II	03
MT3020	Phase Transformation & Kinetics	03
MT3030	Construction & Building Materials	03
CE3910	Humanities II	
SEMESTER 2		
MT3040	Corrosion Engineering	03
MT3050	Nanomaterials & Nanotechnology	03
ME3081	Engineering Management	03
MT3060	Composite Materials	03
ME3091	Law for Engineers	03
MT3070	Welding & Joining Processes	03
MT3080	Industrial Training II	

### YEAR 04

**CREDITS** 

SEMESTER 1		CREDITS		
MT4010	Materials Engineering Project I	04		
ME4111	Industrial Management & Marketing	03		
3 Elective Modu	les from following:			
MT4030	Advanced Engineering Materials	03		
MT4050	Materials Modelling	03		
MT4060	Surface Engineering	03		
MT4070	Magnetic Materials	03		
ME4091	Energy Technology and Sustainability	03		
SEMESTER 2				
MT4080	Materials Engineering Project II	04		
MT4090	Material Application & Design	03		
MT4100	Recycling & Sustainable Materials	03		
2 Elective Modu	les from following:			
MT4110	High Temperature Materials	03		
MT4120	Advanced Manufacturing Processes	03		
MT4130	Energy Materials	03		
MT4140	Bio-Materials	03		
MT4150	Electronic Materials	03		

 $<sup>{\</sup>it *Electives}\ to\ be\ chosen\ with\ the\ prior\ approval\ of\ the\ Acadamic\ Department$ 



SEMESTER 1		CREDITS
CE1011	Engineering Mechanics	04
ME1010	Engineering Design & Processes	04
EC1021	Electrical Systems	03
MA1302	Engineering Mathematics I	03
EL1202	English Language Skills I	03
CE1912	Introduction to Sustainable Engineering	02
SEMESTER 2		
ME1030	Engineering Skills Development	03
ME1040	Engineering Principles & Communication	04
MT1010	Engineering Materials	04
MA1312	Engineering Mathematics II	03
EC1441	Engineering Programming	03
EL1212	English Language Skills II	02

### YEAR 02

SEMESTER 1		CREDITS
ME2011	Mechanics of Solids I	03
CE2712	Fluid Mechanics I	04
ME2021	Mechanics of Machines I	04
ME2031	Engineering Drawing	04
MA2302	Engineering Mathematics III	03
SEMESTER 2		
ME2041	Thermodynamics	03
ME2051	Mechanical Design I	03
ME2100	Manufacturing Processes I	03
ME2170	Electrical Plant	03
ME2081	Engineering Sustainable Development	03
	Humanities I	
Industrial Trainin	g Part 1	
ME2911	Industrial Training I	

### YEAR 03

SEMESTER 1		CREDITS
ME3011	Thermal Engineering Processes	03
ME3100	Manufacturing Processes II	03
ME3031	Mechanics of Solids II	04
ME3041	Mechanics of Machines II	04
	Humanities II	
SEMESTER 2		
ME3052	Mechanical Design II	03
ME3061	Fluid Flow Modelling	03
ME3020	Automatic Control I	03
ME3640	Mechatronics Systems	03
ME3081	Engineering Management	03
ME3091	Law for Engineers	03
	Industrial Training Part 2	
ME3911	Industrial Training II	

### YEAR 04

SEMESTER 1		CREDITS
ME4010	Mechanical Engineering Project I	04
ME4071	Production and Operations Management	03
ME4111	Industrial Management and Marketing	03
3 Elective Modu	les from the following:	
ME4021	Advanced Engineering Materials	03
ME4030	Vibration	03
ME4050	Computer Aided Engineering	03
ME4081	Computer Aided Design and Manufacture	e 03
ME4091	Energy Technology and Sustainability	03
ME4101	Refrigeration and Air Conditioning	03
SEMESTER 2		
ME4120	Mechanical Engineering Project II	04
ME4131	Professional Practice	03
ME4181	Industrial Engineering	03
3 Elective Modu	les from the following:	
ME4140	Design for Manufacturing	03
ME4150	Automatic Control II	03
ME4160	Product Design	03
ME4170	Noise	03
ME4190	Advanced Manufacturing Processes	03
ME4201	Energy Conservation & Management	03
ME4210	Fluid Power Systems and Machinery	03
ME4220	Automotive Engineering	03

 $<sup>{\</sup>it *Electives to be chosen with the prior approval of the Acadamic Department}\\$ 



## MECHANICAL ENGINEERING

(MECHATRONICS SPECIALISATION)

Mechatronics is the synergistic integration of mechanics, electronics, controls and computer engineering towards the development of smart products and systems. Mechatronic engineers develop automation solutions to improve quality of life, enhance product quality and replace manual labour.

The Mechanical Engineering Degree (Mechatronics Specialization) starts with an overview of general engineering. The students will then follow courses that have a focus on Mechatronics which includes automation, embedded systems, instrumentation, drive systems and robotics. The students will undergo compulsory industrial training of 3 months each at the end of 2nd and 3rd years.

### **GRADUATE OPPORTUNITIES**

- Industrial Automation
- Robotics
- Electronics Industry
- Development of Smart Products
- Research and Development

### ENTRY REQUIREMENTS

Minimum of two "C" passes and one "S" pass in GCE Advanced Level (Local) in the Physical Science Stream (Combined Mathematics, Physics and Chemistry) in one and the same sitting and a pass at the Aptitude test conducted by SLIIT OR Minimum of two "B" passes and one "C" pass in GCE Advanced Level (Cambridge or Edexcel) covering Combined Mathematics, Physics and Chemistry in one and the same sitting and a pass at the Aptitude test conducted by SLIIT

SEMESTER 1		CREDITS
CE1011	Engineering Mechanics	04
ME1010	Engineering Design & Processes	04
EC1021	Electrical Systems	03
MA1302	Engineering Mathematics I	03
EL1202	English Language Skills I	03
CE1912	Introduction to Sustainable Engineering	02
SEMESTER 2		
ME1030	Engineering Skills Development	03
ME1040	Engineering Principles & Communication	n 04
MT1010	Engineering Materials	04
MA1312	Engineering Mathematics II	03
EC1441	Engineering Programming	03

English Language Skills II

### YEAR 02

SEMESTER 1 EC2092 ME2021 EC2202 ME2031 MA2302 EC2131	EC2092 Foundations of Digital Design ME2021 Mechanics of Machines I EC2202 Electrical Circuits ME2031 Engineering Drawing MA2302 Engineering Mathematics III	
SEMESTER 2		
ME2510	Electronics for Mechatronic Engineers	03
ME2541	Mechatronic Systems Engineering	03
ME2571	ME2571 Mechatronic Systems Modelling	
ME2041	Thermodynamics	03
EC2212	Electromagnetic and Electromechanical Energy Conversi	on 03
ME2100	Manufacturing Processes I Humanities I	03
Industrial Train	ing Part 1	
ME2911	Industrial Training I	

### **YEAR 03**

SEMESTER 1 EC3462

EL1212

ME3620	Control Systems	03
ME3100	Manufacturing Processes II	03
ME3531	Solid Mechanics and Mechanical Design	03
ME3110	Fluid Mechanics and Hydraulic Machinery	03
	Humanities II	
SEMESTER 2	!	
EC3032	Power Electronics	03
EC3102	Advanced Digital Design	03
ME3081	Engineering Management	03
ME3091	Law for Engineers	03
ME3580	Automation Systems	03
Industrial Tra	ining Part 2	
ME3911	Industrial training II	

Embedded Systems Engineering I

### YEAR 04

02

**CREDITS** 

03

SEMESTER 1		CREDITS
MF4560	Mechatronic Engineering Project I	04
MF4521	Advanced Automation Systems	03
MF4071	Production and Operations Management	03
MF4111	Industrial Management & Marketing	03
	les from the following:	03
	•	00
EC 4012	Power Electronics and Drives	03
ME4081	Computer Aided Design and Manufacture	
ME4541	Robotics and Autonomous Systems	03
EC4432	Embedded Systems Engineering II	03
ME4091	Energy Technology and Sustainability	03
SEMESTER 2		
ME4590	Mechatronic Engineering Project II	04
ME4181	Industrial Engineering	03
ME4131	Professional Practice	03
3 Elective Modules from the following:		
EC4482	Computer Vision and Image Processing	03
ME4150	Automatic Control II	03
ME4550	Object Oriented Programming for Mechatronics En	gineers 03
ME4220	Automotive Engineering	03
EC4492	Neural and Fuzzy Systems	03
ME4570	Micro- Mechatronics	03

 $<sup>{\</sup>it *Electives to be chosen with the prior approval of the Acadamic Department}\\$ 



### **QUANTITY SURVEYING**

The study programme will cover subject areas ranging from measurement, estimating and costing, contract administration, project management and quantity surveying practice. The teaching staff consist of experienced academic and professional Quantity Surveyors, Engineers, and other highcalibre subject specialists. The LJMU degree in Quantity Surveying, will open up many other professional avenues for graduates. This degree will also allow entry to Masters programmes in areas such as Contracts and Negotiation, Procurement Advising and Consultation, Arbitration, Cost Controlling, Cost Planning and Project Management.

### **GRADUATE OPPORTUNITIES**

The Quantity Surveying programme being nested at the Faculty of Engineering of SLIIT, offer students a unique chance to collaborate with other professionals involved in the construction field such as Engineers and Architects, for an overall understanding of the building process and project experience.

Duration : 3 Years
Entry : January / June

Location : Malabe

Offshore : Weekdays / Weekend Examinations : Weekdays / Weekend

### **ENTRY REQUIREMENTS**

- GCE Advanced Level (Any Stream ) 3 simple passes (Local Curriculum)
- Minimum 3 "D" passes (Cambridge / Edexcel curriculum)
- "C" Pass for Mathematics and English at GCE Ordinary Level
- A pass in the Aptitude Test conducted by SLIIT

SEMESTER 1		CREDITS	
MA1101	Mathematics for Quantity surveyors	02	
QS1511	Construction Technology 1	04	
QS1521	Science And Materials	04	
QS1451	Construction Drawing	03	
QS1910	Communication Skills I	02	
SEMESTER 2			
QS1121	Measurement and Costing	04	
QS1811	Introduction To Law	04	
QS1490	IT Applications for Quantity Surveying II	04	
QS1711	Management Theory And Practice	04	
QS1920	Communication Skills II	02	

### YEAR 02

### **SEMESTER 1**

QS2111	Advanced Measurement And Contract Administration	04
QS2531	Construction Technology 2	04
QS2550	Land Surveying	02
QS2640	Construction And Property Economics	04
QS2721	Construction Project Management	04
SEMESTER	₹2	
QS2211	Construction Procurement	04
QS2311	Collaborative Interdisciplinary Project 2	02
QS2411	Research Methods	03
QS2441	Specification Writing	02
QS2821	Construction Contract Law	04

### YEAR 03

Semester 1		UK CREDITS
6536BESL	Advanced Quantity Surveying Project	10
6537BESL	Contract and Procurement Strategies	20
6539BESL	Project Economics and Management	20
Semester 2		
6535BESL	Research Project (Dissertation)	30
6538BESL	Engineering Measurement	20
6540BESL	Business Management and Entrepreneurship	20

 $<sup>{\</sup>it *Electives}\ to\ be\ chosen\ with\ the\ prior\ approval\ of\ the\ Acadamic\ Department$ 



# INTERNATIONAL DEGREE PROGRAMMES TO COMPLETE AT SLIIT

# BEng (Hons) In CIVIL & CONSTRUCTION ENGINEERING

### **ABOUT THE PROGRAMME**

Civil engineers design and construct bridges, roads, harbours, highways, dams, irrigation and water supplies, hydro-electric projects, high-rise buildings and other prominent structures. As our built environment becomes increasingly complicated, ambitious construction projects can only be completed by teams of people with different skills, working together. The civil engineer is important in this process. You will learn to apply your basic engineering knowledge for structural analysis and design, materials, geotechnical engineering, construction engineering, hydraulics and professional practice.

# BEng (Hons) In ELECTRONIC ENGINEERINGING

### **ABOUT THE PROGRAMME**

There is hardly any aspect of modern civilisation that is not dependent upon electrical energy. It is used for heating, cooling, lighting, transportation, manufacturing and production, minerals processing, to name just a few areas of application.

Electrical power engineering considers these applications of electrical energy, together with its generation, transmission and distribution, as well as the harnessing of sources of renewable and sustainable energy. Electronic engineering is one of the fastest growing technology areas globally, and job opportunities in this field are numerous. With the rapid progress of the information society, the role of electronic communication and embedded systems (Internet of Things or IoT), is becoming even more crucial. Students undertaking this major can select their elective units towards Electrical Power Engineering or Electronic Engineering as they progress in their degree.

# BEng (Hons) In MECHANICAL ENGINEERING

### **ABOUT THE PROGRAMME**

Mechanical engineers analyse and develop technical systems that involve motion. They help society to harness the energy and forces that exist in nature. The conception, design, manufacturing, maintenance and management of systems, ranging from micromechanical devices through to massive power generating turbines, are all within the scope of mechanical engineering. Modern air and ground transport systems, and thermal power generation are a few key examples of mechanical engineering accomplishments.









ROBOFEST is the annual robotic competition which involves one of the most ROBOFEST is the annual robotic competition which involves one of the most important academic aspects of the Department of Electrical and Electronic Engineering of Sri Lanka Institute of Information Technology. The main goal of SLIIT ROBOFEST is to inspire and give the future minds the opportunity in designing, building and adapting to the new technologies with the advancements and evolutions of the world of robotics enhancing their theoretical and practical knowledge.

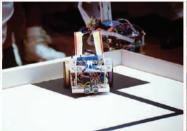
The competition was initiated in the year of 2010 where the participants were limited to the students of SLIIT and afterwards it was expanded under 3 categories; School, University and Open, opening up the opportunities for anyone who is interested in the competition to participate

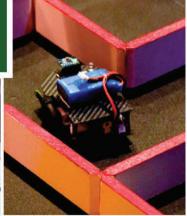
anyone who is interested in the competition to participate.

Having more than 130 school registrations and more than 30 university registrations for the last year's competition reflected the interest of the young inventors as well as the enthusiasm of the industrial personnel towards the world of robotics during the past few years. This year, the department of Electrical and Electronic Engineering of Faculty of Engineering of SLIIT proudly organizes the Robofest2019 for the 10th consecutive year, with standards of an international level competition. Similar to the years before, ROBOFEST 2019 is organized focusing on all the

students in schools and undergraduates around the country, paving the path for them to follow their passion where the students are allowed to compete in teams of 5 members, giving all the registrants the exposure and the chance to show their talents and potential on the day of the competition, opening up the door for them to achieve international levels.











# FACULTY OF ENGINEERING UNIQUE SELLING PROPOSITIONS

Well-experienced, highly-qualified, full-time academic staff including 8 Professors & 22 lecturers with PhDs

Transition to university life through the first-year unit (EFY)

Curricula prepared in line with the Outcome Based Education (OBE) system, targeting local and foreign accreditations of degrees

Curricula also developed in consultation with relevant industries to produce more finely-tuned graduates suited to both local and foreign landscapes

Received accreditation by Engineers Australia (EA) for Curtin degrees

Awaiting accreditation by the IESL review panel under Washington Accord

Well-rounded graduates with industry exposure during the degree through industrial training, industry visits, individual and group research and design projects

Engineers graduate with essential skills in addition to engineering skills

Cultivating leadership, communication skills, teamwork and ethics through various projects and extracurricular activities such as SLIIT's Got Talent, Young Engineering Expo, Esala Pandol, RoboFest, etc.

### **EMPLOYMENT OPPORTUNITIES INCLUDE:**

- Civil Engineers, Highway Engineers and Environmental Engineers in design, construction and planning
- Electrical and Electronics Engineers in Computer Systems Engineering, Electrical Engineering, and Robotics & Automation
- Mechanical and Mechatronics engineers in design, fabrication and operations
- Materials engineers in design, manufacturing and Nano-materials
- Quantity Surveyors
- Managerial positions

### **HEADS OF DEPARTMENTS**



**DR. NIHAL SOMARATNA** 

Head, Department of Civil Engineering BSc. Eng (Peradeniya), MS (Illinois), PhD (Illinois), MIESL, CEng.



DR. NIMSIRI ABHAYASINGHE

Head, Department of Electrical and Electronic Engineering BSc. Eng (Moratuwa), MSc (Moratuwa), PhD (Curtin), MIEEE



DR. W. K. WIMALSIRI

Head, Department of Mechanical Engineering BSc. Eng (Moratuwa), PhD (UK), MIESL, CEng, CMarEng, FIMarEst



DR. MUDITH KARUNARATNE

Head, Department of Materials Engineering BSc. Eng (Moratuwa), PhD (Cambridge)

# **FACULTY OF ENGINEERING ACADEMIC STAFF**

Prof.	Thilakasiri H.S.	BSc Eng (Hons) (Moratuwa), MSc (UK), PhD (USF), CEng, FIE (SL)	Dean
Prof.	Puswewala U.G.A	BSc Eng(Hons) (Moratuwa), MEng (AIT, Thailand), PhD (Manitoba, Canada), CEng, FIE (SL)	Professor
Prof.	S.B.S Abayakoon	3.5 Abayakoon BSc(Hons) (Peradeniya), M.A.Sc, PhD (B.C, Canada)	
Prof.	Ranaweera M.P.	anaweera M.P. BSc (Hons) Eng (Ceylon), PhD (Cambridge), MASME, FSSE(SL), CEng, FIE (SL)	
Prof.	Liyanage K.M.	iyanage K.M. BSc (Hons) (Peradeniya), MEng (Japan), DEng (Japan), CEng, MIE (SL), SMIEEE	
Prof.	Perera H.S.C	era H.S.C BSc Eng(Hons) (Moratuwa), MSc Eng, PhD (AIT, Thailand)	
Prof.	Mann G.I.	BSc (Hons) (Moratuwa), MSc (Loughborough), PhD (Memorial), PEng NL Canada	Professor
Prof.	Fernando M.A.R.V.	BSc (Hons) Eng (Ceylon), PhD (Brno), CEng, FIE (SL)	Professor
Dr.	Lanel J.	BSc. Math(Hons)(OU), MSc.(USJP), MA.(USA), PhD.(USA)	Senior Lecturer (HG) & Head/MU
Dr.	Somaratna A.P.N	BSc Eng (Peradeniya), MSc , PhD (Illinois, USA), C.Eng, MIE (SL)	Senior Lecturer (HG)
Dr.	Abhayasinghe K. N	BSc Eng (Moratuwa), MSc (Moratuwa), PhD (Curtin, Australia)	Senior Lecturer (HG)
Dr.	Wimalsiri W.K	BSc Eng(Hons) (Moratuwa), PhD (Newcastle, UK), MIESL, C.Eng, CMarEng	Senior Lecturer (HG)
Dr.	Karunaratne S.A.M	BSc Eng(Hons) (Moratuwa), PhD (Cambridge, UK)	Senior Lecturer (HG)
Dr.	Tharmarajah G	BSc Eng (Moratuwa), PhD (QUB, UK)	Senior Lecturer (HG)
Dr.	Karunaratne S.C.S	BSc (Moratuwa), M.Eng, PhD (Saitama, Japan)	Senior Lecturer (HG)
Dr.	Amarasinghe R.P.N.U	BSc (Moratuwa), MSc. (TU, Thailand) , PhD (KSU, USA)	Senior Lecturer (HG)
Dr.	Gomes P.I.A	BSc Eng(Hons) (Moratuwa), MSc (Moratuwa), PhD (Saitama, Japan)	Senior Lecturer (HG)
Dr.	Perera S.V.T.J	BSc Eng(Hons) (Moratuwa), Mphil (Moratuwa), PhD (Saitama, Japan)	Senior Lecturer (HG)
Dr.	Herath S.R	BSc Eng(Hons) (Peradeniya), MEng (Nagoya, Japan), PhD (California, USA)	Senior Lecturer (HG)
Dr.	Mendis A.S.M	BSc (Moratuwa), PhD (UNSW, Australia)	Senior Lecturer (HG)
Dr.	Rathnayake R.M.U.S.	BSc Eng(Hons) (Peradeniya), M.Eng (Hokkaido, Japan), PhD (Strathclyde, UK)	Senior Lecturer (HG)
Dr.	Thilakumara R.P	BSc(Hons) (Moratuwa), PhD (Bristol, Uk)	Senior Lecturer (HG)

Dr.	Seneviratne A.L.G	BEng(Hons), PhD (QMUL, UK)	Senior Lecturer (HG)
Dr.	Kulasekere E.C	BSc Eng (Moratuwa), MSc, PhD (Miami, USA)	Senior Lecturer (HG)
Dr.	Ding M	BSc Eng, MSc Eng (Beijing, China), PhD (Kingston, Canada)	Senior Lecturer (HG)
Dr.	Wijewardane S	BSc (Moratuwa), MEng (Moratuwa), PhD (South Florida, USA)	Senior Lecturer (HG)
Dr.	Perera M.S.M	BSc Eng(Hons) (Moratuwa), PhD (Loughborough,UK)	Senior Lecturer (HG)
Dr.	Liyanage M.H	BSc Eng(Hons) (Peradeniya), MEng (AIT, Thailand), PhD (N.L, Canada)	Senior Lecturer (HG)
Dr.	Kulathunga S.M.A.I	BSc(Hons) (Moratuwa), PhD (NTU, Singapore)	Senior Lecturer (HG)
Dr.	Hettiwatte S. N.	BSc Eng (Moratuwa), MEng (Moratuwa), PhD (Manchester, UK), MIEEE	Senior Lecturer (HG)
Dr.	Hettiwatte S. N.	BSc Eng (Hons) (Moratuwa), MEng (Moratuwa), PhD (Manchester)	Senior Lecturer
Mr.	Jayasena S.	BSc(QS)Hons (Moratuwa); MSc(Building) (NUS)	Senior Lecturer (HG) & Head/QS
Mr.	Nishan De Silva	B.Sc (U.Kentucky U.S.A), M.Sc(U.Massachusetts, U.S.A)	Senior Lecturer
Ms.	Fernando G.L	BSc (Peradeniya), MEng (Moratuwa)	Senior Lecturer
Mr.	Herath H.M.G.M	BSc Eng (Moratuwa), MBA (PIM J'Pura), PMP (PMI USA), C.Eng., MIEEE	Senior Lecturer
Mr.	Silva S.K.P.N	BSc Eng(Hons) (Moratuwa), MEng (Moratuwa)	Lecturer
Ms.	Edirisinghe W.M.V.R.D	BSc Eng (KDU)	Lecturer
Mr.	Buddhika R.A.P.	BSc Eng(Hons)(Moratuwa)MSc(Moratuwa)	Lecturer
Mr.	Charith Sucharitharathna	BSc(Hons) (SLIIT), MSc (SHU, UK)	Lecturer
Mr.	Randika Perera	BSc Eng (Hons) (Moratuwa), MEng, DEng (AIT, Thailand), CEng, MIESL	Lecturer
Ms.	Kandawala D.S.A	BSc. (Hons)(SLIIT) , MSc(SLIIT)	Lecturer
Mr.	Susantha Wanniarachchi	BSc(Eng)(Hons)(Moratuwa), MPhil(Moratuwa)	Lecturer
Mr.	Pramuditha Coomasaru	PGD (Colombo), MBS (Colombo)	Lecturer
Ms.	Gunarathna K. A. N.	B.Sc QS (Hons) (Moratuwa), MA (Financial Economics) (Colombo)	Lecturer
Ms.	Malithi Samarajeewa	ADPM (NIBM), IQSSL, Dip in Commercial Arbitration	Lecturer
Ms.	Kavindika Abeynanda	BSc(Hons) (Kelaniya), MSc (Colombo)	Lecturer

# BSc HONOURS GRADES AND REQUIREMENTS

### **GRADING SYSTEM**

SLIIT uses 12 grades in assessing student performance. These are A+, A, A-, B+, B, B-, C+, C, C-, D+, D and E. To obtain a pass in a subject, a student must score a grade 'C' or above. The value of each grade and definition of student performance is shown below.

GRADE	GRADE PTS.	MARKS RANGE
A+	4.00	90 - 100
A	4.00	80 - 89
A-	3.70	75 - 79
B+	3.30	70 - 74
В	3.00	65 - 69
B-	2.70	60 - 64
C+	2.30	55 - 59
С	2.00	45 - 54
C-	1.70	40 - 44
D+	1.30	35 - 39
D	1.00	30 - 34
E	0.00	00 - 29

### **GRADE POINT AVERAGE (GPA) PER SEMESTER CLASS ATTENDANCE**

The GPA is computed by dividing the sum of the products of the number of credits for each course followed and the grade points earned for that course by a student, by the total number of credits for the courses followed during the semester by that student.

Regular attendance is expected from all students. 80% attendance is necessary as a minimum requirement to sit examinations. Inability to attend classes and/or examinations must be brought to the notice of the Manager of Student Affairs immediately.

### **WEIGHTED GRADE POINT AVERAGE (WGPA)**

FACULTY	Y1	Y2	Y3	Y4
FOC	0	20%	30%	50%
FOB 109	100/	20%	30%	40%
	10%	20%		



# WHAT HAPPEN NEX

Option 01: Apply Online apply.sliit.lk

**Option 02:**Download the application form apply.sliit.lk
Send the duly filled application form to

MANAGER STUDENT ENROLLMENT, SLIIT, NEW KANDY ROAD, MALABE

Option 03:
Obtain the application form from any of our campuses or centres

**Option 04:** Call our hotline for further information

011 754 4801

www.sliit.lk

### SLIIT MALABE CAMPUS

New Kandy Road, Malabe.

Tel: +94 11 754 4801 Fax: +94 11 241 3901

### SLIIT MATARA CENTRE

No. 24, E.H.Cooray Building, Anagarika Dharmapala Mawatha, Matara.

Tel: +94 41 754 4501 Fax: +94 41 222 1048

### SLIIT KURUNEGALA CENTRE

No 76, Mihidu Mawatha, Kurunegala.

Tel: +94 37 720 4204

### SLIIT METROPOLITAN CAMPUS

BoC Merchant Tower #28, St Michael's Road, Colombo 03.

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### SLIIT KANDY CENTRE

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