ELECTRICAL & ELECTRONIC ENGINEERING

The BSc Engineering Honors in Electrical & Electronic Engineering program is designed with a strong emphasis on both theoretical and practical learning. It equips students with essential technical knowledge and provides hands-on experience in real-world scenarios. The course structure aims to develop interdisciplinary problem-solving skills, social awareness, and the confidence needed to produce outstanding, high-caliber engineers. The curriculum is crafted in close collaboration with industry experts, ensuring that graduates are well-prepared to meet industry demands. Additionally, students will acquire the vital skills expected in the field, making them highly competent and industry-ready professionals.

CAREER OPPORTUNITIES

- Electrical Engineer
- Power Systems Engineer
- Telecommunications Engineer
- Renewable Energy Engineer
- Electronics Engineer
- Control Systems Engineer
- Automation Engineer
- Embedded Systems Engineer

STUDENTS MAY ALSO USE THE FINAL YEAR TO PURSUE SPECIALISED OPTIONS IN

- Electrical Power Engineering
- Data communication
- Robotics
- Internet Of Things and Big Data Analytics
- Telecommunication
- Renewable Energy
- Machine Learning
- Automation and Process control etc

Students are also required to complete a mandatory 24-week industrial training program, divided into two 12-week sessions, at the end of their second and third years.

ENTRY REQUIREMENTS

Local A/Ls: Minimum of 2 "C" passes & 1 "S" pass in the Physical Science stream (Covering Combined Mathematics, Physics & Chemistry).

Cambridge/Edexcel A/Ls: Minimum of 2 "B" passes & 1 "C" pass (Covering Mathematics, Physics & Chemistry).

Applicants should also pass the Aptitude Test conducted by SLIIT.

YEAR ONE

SEMESTER 01

CE1020	Statics and Hydrostatics	03
EC1022	Electrical Systems	03
MA1112	Algebra	04
ME1050	Introduction to Engineering Design and Communication	04
EL1203	English Language Skills I	03
CE1913	Introduction to Sustainable Engineering	02

SEMESTER 02

EC1450	Fundamentals of Programming	03
MA1122	Calculus	04
MT1011	Engineering Materials	04
ME1031	Engineering Skills Development	03
ME1060	Dynamics	03
EL1213	English Language Skills II	02

YEAR TWO

SEMESTER 01

ME2820	Fluid Mechanics and Thermodynamics	03
EC2093	Foundations of Digital Design	03
EC2203	Electrical Circuits	03
EC2493	Object Oriented Programming	03
EC2132	Microcomputers	03
MA2112	Fourier Analysis	03

SEMESTER 02

EC2140	Analogue Electronics	03
EC2113	Signals and Systems	03
EC2220	Electrical Machines and Power Systems	03
EC2731	Data Structures and Algorithms	03
EC2403	Computer Networks	03
MA2122	Probability and Statistics	03
	Humanities I	02
EC2923	Industrial Training I	03

YEAR THREE

SEMESTER 01

EC3810	Design and Development Project (Year Long)	03
EC3250	Electrical Measurements and Instrumentation	03
EC3613	Communication Engineering I	03
EC3503	Control Systems	03
EC3013	Electronic Design	03
EC3193	Electrical Machines and Stability	03
EC3940	Legal Environment in Electrical Engineering	02

SEMESTER 02

EC3810	Design and Development Project (Year Long)	03
ME3260	Industrial Project Management	02
EC3203	Engineering Electromagnetics	03
EC3103	Advanced Digital Design	03
EC3033	Power Electronics	03
EC3213	Power Systems Analysis	03
EC3930	Entrepreneurship Skills Development	01
	Humanities II	03
EC3903	Industrial Training Part 2	03

YEAR FOUR

SEMESTER 01

EC4850	Final Year Project (Year Long)	03
EC4570	Robotics and Controls	03
ME4112	Industrial Management and Marketing	03
EC4650	Communication Engineering II	03
EC4440	Data Communication and Networking	03
EC4710	Embedded Systems Programming	03
EC4483	Computer Vision and Image Processing	03
EC4553	Digital Signal Processing	03
EC4530	Machine Learning	03
EC4213	Electrical Power Transmission and Distribution	03
EC4261	High Voltage Engineering	03

SEMESTER 02

EC4850	Final Year Project (Year Long)	03
ME4260	Engineering Economics	02
EC4220	Power Systems Protection	03
EC4253	Renewable Energy Systems	03
EC4270	Electrical Installations	03
EC4280	Power Electronic Applications and Control	03
EC4470	Network Management and Performance Evaluation	03
EC4673	Wireless Communications	03
EC4560	Automation & Process Control	03
EC4450	Internet of Things and Big Data Analytics	03

4th year 1st semester subject baskets:

Basket 01	Basket 02	Basket 03
EC4650 Communication Engineering II (E)	EC4710 Embedded Systems Programming (E)	EC4213 Electrical Power Transmission and Distribution (E)
EC4440 Data Communication and Networking (E)	EC4483 Computer Vision and Image Processing (E)	EC4261 High Voltage Engineering (E)
EC4553 Digital Signal Processing (E)	EC4530 Machine Learning (E)	-

4th year 2nd semester subject baskets:

Basket 01	Basket 02	Basket 03
EC4220 Power Systems Protection (E)	EC4470 Network Management and Performance Evaluation (E)	EC4560 Automation & Process Control (E)
EC4270 Electrical Installations (E)	EC4673 Wireless Communications (E)	-
EC4280 Power Electronic Applications and Control (E)	EC4450 Internet of Things and Big Data Analytics (E)	-
EC4253 Renewable Energy Systems (E)	-	-