

**Faculty of Engineering
South Eastern University of Sri Lanka**

**Curriculum of the Bachelor of the Science of
Engineering Degree Programme**

ELECTRICAL AND ELECTRONIC ENGINEERING



**Faculty of Engineering
South Eastern University of Sri Lanka
Olivil # 32360
Sri Lanka**

Section I - Curriculum of the First Year Common Core Programme

SEMESTER - 1

No	Subject Code	Subject Title	GPA Credits	NGPA Credits	L (h/w)	P (h/w)	T (h/w)	CA (%)	Final Exam (%)
1	CE 13001	Strength of Materials	3 C		2	3/2	3/2	20	80
2	CS 13001	Introduction to Computing	3 C		2	3		50	50
3	EE 13001	Principles of Electrical Engineering	3 C		2	3/2	3/2	20	80
4	ID 11001	English-I	1 C				3	50	50
5	ID 13002	Mathematics- I	3 C		3		1	20	80
6	ME 13001	Applied Mechanics	3 C		2	3/2	3/2	20	80
7	ME 12002	Engineering Drawing	2 C		1	3		50	50
		Total	18 C		12	10.5	8.5		

SEMESTER - 2

No	Subject Code	Subject Title	GPA Credits	NGPA Credits	L (h/w)	P (h/w)	T (h/w)	CA (%)	Final Exam (%)
1	EN 23001	Principles of Electronics	3 C		2	3/2	3/2	20	80
2	ID 22001	Engineer in Society	2 C		2		1	20	80
3	ID 21002	English-II	1 C				3	50	50
4	ID 23003	Mathematics- II	3 C		3		1	20	80
5	ME 23001	Engineering Materials and Processes	3 C		2	3/2	3/2	50	50
6	ME 22002	Presentation of Engineering Information	2 C		1	3		50	50
7	ME 23003	Thermo Fluids	3 C		2	3/2	3/2	20	80
8	ID 21004	Introduction to Sinhala Language	1 E		1			20	80
9	ID 21005	Introduction to Tamil Language			1			20	80
		Total	17C+1E		14	7.5	9.5		

Section II - Curriculum of the Electrical and Electronic Engineering
Field of Specialization

SEMESTER 3

No	Subject Code	Subject Title	GPA Credits	NGPA Credits	L (h/w)	P (h/w)	T (h/w)	CA (%)	Final Exam (%)
01	ID 32001	Calculus	2 C		2		1	30	70
02	ID 32002	Differential Equations	2 C		2		1	30	70
03	ID 32003	Engineering Economics	2 C		2		1	30	70
04	ID 31004	Presentation Skills	1 C				2	50	50
05	EE 32001	Electrical Circuit Analysis	2 C		2		1	30	70
06	EE 32002	Electrical Measurements	2 C		2	3/2		30	70
07	EE 33003	Theory of Electricity	3 C		2	3/2	3/2	30	70
08	CS 33001	Computer Architecture	3 C		2	3		30	70
09	EN 33001	Digital Electronics	3 C		2	3/2	3/2	30	70
10	EN 33002	Introduction to Telecommunications	3 C		2	3/2	3/2	30	70
11		Subject from ID Electives (Basket A)*	1 E						
		Total	23 C + 01 E						

*At least one module shall be taken from Basket A of ID Electives offered in Semesters 3, 5 and 7.

SEMESTER 4

No	Subject Code	Subject Title	GPA Credits	NGPA Credits	L (h/w)	P (h/w)	T (h/w)	CA (%)	Final Exam (%)
01	ID 42001	Accounting for Engineers	2 C		2		1/2	30	70
02	ID 42003	Linear Algebra	2 C		2		1	30	70
03	ID 42004	Probability & Statistics	2 C		2		1	30	70
04	ID 41005	Report Writing	1 C				2	50	50
05	EE 42001	Field Theory	2 C		2		1	30	70
06	EE 42002	Introduction to Power Systems	2 C		2		1	30	70
07	CS 43002	Operating Systems	3 C		2	3/2	3/2	20	80
08	EN 43001	Analog Electronics	3 C		2	3/2	3/2	30	70
09	EN 43002	Signals & Systems	3 C		2	3/2	3/2	30	70
10		Subject from ID Electives (Basket B)**	2 E						
		Total	20 C + 02 E						

**At least one module shall be taken from Basket B of ID Electives offered in Semesters 4, 6 and 8.

No.	Subject Code	Subject Title	GPA Credits	NGPA Credits	L (h/w)	P (h/w)	T (h/w)	CA (%)	Final Exam (%)
11	ID 03001	Industrial training (Duration 12 weeks)		3 C				100	--
		Total		3 C					

SEMESTER 5

No	Subject Code	Subject Title	GPA Credits	NGPA Credits	L (h/w)	P (h/w)	T (h/w)	CA (%)	Final Exam (%)
01	ID 52001	Industrial Management	2 C		2		1/2	30	70
02	ID 52002	Numerical Methods	2 C		2		1	30	70
03	CS 53001	Computer Networks	3 C		2	3		30	70
04	CS 53003	Data Structures and Algorithms	3 C		2	3/2	3/2	30	70
05	EE 52001	Introduction to Electrical Machines	2 C		2		1	30	70
06	EE 53002	Power Systems I	3 C		2	3/2	3/2	30	70
07	EN 53001	Communication Theory	3 C		2	3/2	3/2	30	70
08	EN 52002	Power Electronics	2 C		2	3/2		30	70
09		Subject from ID Electives (Basket A)*	1 E						
		Total	20 C + 01 E						

*At least one module shall be taken from Basket A of ID Electives offered in Semesters 3, 5 and 7.

SEMESTER 6

No	Subject Code	Subject Title	GPA Credits	NGPA Credits	L (h/w)	P (h/w)	T (h/w)	CA (%)	Final Exam (%)
01	EN 63001	Communication Systems I	3 C		2	3/2	3/2	30	70
02	EN 63002	Control Systems	3 C		2	3/2	3/2	20	80
03	EN 62003	Electromagnetics	2 C		3/2	1/2	1	30	70
04	EE 63001	Electrical Installations	3 C		2	3/2	3/2	30	70
05	EE 63002	Electrical Machines & Drives I	3 C		2	3/2	3/2	30	70
06		Subject from ID Electives (Basket B)**	2 E						
		Total	14 C + 02 E						

**At least one module shall be taken from Basket B of ID Electives offered in Semesters 4, 6 and 8.

No	Subject Code	Subject Title	GPA Credits	NGPA Credits	L (h/w)	P (h/w)	T (h/w)	CA (%)	Final Exam (%)
07	ID 03002	Industrial Training (Duration 12 Weeks)		3 C				100	-
		Total		3 C					

SEMESTER 7

No	Subject Code	Subject Title	GPA Credits	NGPA Credits	L (h/w)	P (h/w)	T (h/w)	CA (%)	Final Exam (%)
01	ID 72001	Industrial Law	2 C		2		1/2	30	70
02	EN 73001	Robotics	3 C		2	3		30	70
03	EE 73001	Power Systems II	3 C		2	3/2	3/2	30	70
04	EE 74099 / EN 74099	Research Project (Part 1)	4 C		8			-	-
05		Subject from EE Electives or EN Electives	2 E						
06		Subject from ID Electives (Basket A)*	1 E						
		Total	12 C + 03 E						

*At least one module shall be taken from Basket A of ID Electives offered in Semesters 3, 5 and 7.

SEMESTER 8

No	Subject Code	Subject Title	GPA Credits	NGPA Credits	L (h/w)	P (h/w)	T (h/w)	CA (%)	Final Exam (%)
01	ID 82001	Entrepreneurship & Intellectual Property	2 C		2		1/3	30	70
02	EN 83001	Communication Systems II	3 C		3		3/2	30	70
03	EN 83002	Mechatronic Applications	3 C		3	3/2	1	30	70
04	EE 84099 / EN 84099	Research Project (Part 2)	4 C		8			100	--
05		Subject from EE Electives or EN Electives	2 E						
06		Subject from ID Electives (Basket B)**	2 E						
		Total	12 C + 04 E						

**At least one module shall be taken from Basket B of ID Electives offered in Semesters 4, 6 and 8.

ID ELECTIVES (Basket A)#

No	Subject Code	Subject Title	GPA Credits	NGPA Credits	L (h/w)	P (h/w)	T (h/w)	CA (%)	Final Exam (%)
01	ID 01001	Introduction to English Literature	1E		1		1/2	30	70
02	ID 01002	English Poetry and Short Story	1E		1		1/2	30	70
03	ID 01003	Classical English Fiction	1E		1		1	30	70

ID ELECTIVES (Basket B) #

No	Subject Code	Subject Title	GPA Credits	NGPA Credits	L (h/w)	P (h/w)	T (h/w)	CA (%)	Final Exam (%)
01	ID 02011	Climate Change	2E		2		1/2	30	70
02	ID 02012	Disaster Management	2E		2		1/2	30	70
03	ID 02013	Psychology for Life	2E		2		1/2	30	70
04	ID 02014	Ethnic Cohesion and Peace Building	2E		2		1/2	40	60

Department of Interdisciplinary Studies will announce the modules to be offered in a particular semester based on the availability of resource persons and number of students registering to follow the modules.

EE ELECTIVES##

No	Subject Code	Subject Title	GPA Credits	NGPA Credits	L (h/w)	P (h/w)	T (h/w)	CA (%)	Final Exam (%)
01	EE 02001	Energy Studies	2 E		2		1	30	70
02	EE 02002	Electrical Machines & Drives II	2 E		3/2	1	1/2	30	70
03	EE 02003	High Voltage Engineering	2 E		3/2	1	1/2	30	70

EN ELECTIVES##

No	Subject Code	Subject Title	GPA Credits	NGPA Credits	L (h/w)	P (h/w)	T (h/w)	CA (%)	Final Exam (%)
01	EN 02003	Electronic Instrumentation	2 E		2		1	30	70
02	EN 02002	Industrial Electronics	2 E		2		1	30	70
03	EN 02001	Digital System Design	2 E		2			30	70

The department will announce the modules to be offered in a particular semester based on the availability of resource persons and number of students registering to follow the modules.

Section III - Credit Requirements for the Electrical and Electronic Engineering
Field of Specialization

Programme	Common Core Programme		Specialization Programme								Minimum Credits Required
	1	2	3	4	Industrial Training	5	6	Industrial Training	7	8	
Semester											
Common Core Subjects	14	11									25
ID Core Subjects	4	6									10
ID Electives		2									1
Specialization Core Subjects			16	13		16	14		6	6	71
Specialization Electives			-	-		-	-		12 [^]		4
Specialization Project			-	-		-	-		4	4	8
ID Core Subjects			7	7		4	-		2	2	22
ID Electives			3 (Basket A - in Semesters 3/5/7) [#] + 8 (Basket B - in Semesters 4/6/8) [#]								3
Compulsory GPA Credit Requirement	18	18	23	20		20	14		12	12	
Minimum Non-GPA Credit Requirement					3			3			6
Total GPA Credit Requirement											144
Total Minimum Credit Requirement											150
<p># At least one module shall be taken from each basket. [^] The department will announce the modules to be offered in a particular semester based on the availability of resource persons and number of students registering to follow the modules.</p>											

SPECIALIZATION ELECTIVES

CREDITS

Electrical Engineering

EE 02001	Energy Studies	2 E
EE 02002	Electrical Machines & Drives II	2 E
EE 02003	High Voltage Engineering	2 E

Electronic Engineering

EN 02003	Electronic Instrumentation	2 E
EN 02002	Industrial Electronics	2 E
EN 02001	Digital System Design	2 E