

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

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

CIVIL 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 Civil 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	CE 32001	Construction Materials	2 C		2	3/4		30	70
06	CE 33002	Fluid Mechanics	3 C		2.5	3/4	3/4	30	70
07	CE 33003	Mechanics of Materials	3 C		2.5	3/4	3/4	30	70
08	CE 33004	Surveying I	3 C		2	3		30	70
09		Subject from ID Electives (Basket A)*	1 E						
		Total	18 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	CE 42001	Civil Engineering Construction	2 C		2	3/4		30	70
06	CE 42002	Design of Steel Structures	2 C		1.5		3/2	40	60
07	CE 43003	Hydraulic Engineering	3 C		2.5	3/4	3/4	30	70
08	CE 43004	Soil Mechanics and Geology I	3 C		2	3/2	3/2	30	70
09	CE 42005	Structural Analysis I	2 C		2		1	30	70
10	CE 43006	Surveying II	3 C		2	3		30	70
11		Subject from ID Electives (Basket B)**	2 E						
		Total	22 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 (%)
12	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 52002	Numerical Methods	2 E		2		1	30	70
02	CE 53001	Construction Planning and Cost Estimation	3 C		2.5		3/2	30	70
03	CE 52002	Design of Reinforced Concrete Structures I	2 C		1.5		3/2	40	60
04	CE 53003	Engineering Hydrology	3 C		2.5	3/4	3/4	30	70
05	CE 53004	Highway and Traffic Engineering I	3 C		2.5		3/2	30	70
06	CE 53005	Principles of Environmental Engineering	3 C		2.5	3/4	3/4	30	70
07	CE 53006	Soil Mechanics and Geology II	3 C		2	3/2	3/2	30	70
08	CE 52007	Structural Analysis II	2 C		2		1	30	70
09		Subject from ID Electives (Basket A)*	1 E						
		Total	19 C + 03 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	CE 62001	Advanced Structural Analysis	2 C		2		1	30	70
02	CE 63002	Construction Management	3 C		2.5		3/2	30	70
03	CE 62003	Design of Reinforced Concrete Structures II	2 C		1.5		3/2	40	60
04	CE 63004	Environmental Engineering Design	3 C		2.5	3/4	3/4	40	60
05	CE 63005	Geotechnical Engineering	3 C		2.5		3/2	30	70
06	CE 63006	Highway and Traffic Engineering II	3 C		2.5	3/4	3/4	30	70
07	CE 63007	Hydraulic Design	3 C		2.5		3/2	40	60
08	CE 61008	Survey Camp	1 C				45	100	00
09		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 (%)
10	ID 03002	Industrial Training (Duration 12 weeks)		3 C				100	-
		Total		3C					

SEMESTER 7

No.	Subject Code	Subject Title	GPA Credits	NGPA Credits	L (h/w)	P (h/w)	T (h/w)	CA (%)	Final Exam (%)
01	CE 72001	Coastal Engineering	2 E		2			30	70
02	CE 72002	Design of Masonry and Timber Structures	2 C		1.5		3/2	40	60
03	CE 72003	Design of Water Retaining and Pre-stressed Concrete Structures	2 C		1.5		3/2	40	60
04	CE 73004	Geotechnical Engineering Design	3 C		2.5		3/2	40	60
05	CE 72005	Highway Construction and Maintenance	2E		1.5	3/4	3/4	30	70
06	CE 72006	Project Management	2 C		1.5		3/2	30	70
07	CE 72007	Remote Sensing and Geographic Information Systems (RS and GIS)	2E		1.5		3/2	30	70
08	CE 72008	Water and Wastewater Engineering	2E		1.5	3/4	3/4	30	70
09	CE 72098	Comprehensive Design Project (Part 1)	2 C		4			-	-
10	CE 72099	Research Project (Part 1)	2 C		4			-	-
11		Subject from ID Electives (Basket A)*	1 E						
		Total	13 C + 09 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	CE 82001	Bridge Engineering	2 E		1.5		3/2	30	70
03	CE 82002	Computer Based Structural Analysis	2 E		1.5		3/2	30	70
04	CE 82003	Environmental Management	2 E		1.5		3/2	30	70
05	CE 82004	Ground Improvement Techniques	2 E		1.5		3/2	30	70
06	CE 82005	Irrigation Engineering	2 E		2			30	70
07	CE 82006	Transportation Planning	2 E		1.5		3/2	30	70
08	CE 82007	Water Resources Engineering	2 E		2			30	70
09	ME 83001	Building Services Engineering	3 E		2.5		3/2	30	70
10	CE 82098	Comprehensive Design Project (Part 2)	2 C		4			100	00
11	CE 82099	Research Project (Part 2)	2 C		4			100	00
12		Subject from ID Electives (Basket B)**	2 E						
		Total	06 C + 19 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

The 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.

Section III – Credit Requirements for the Civil Engineering Field of Specialization

Programme	Common Core Programme		Specialization Programme								Minimum Credits Required
	1	2	3	4	Industrial Engineering	5	6	Industrial Engineering	7	8	
Common Core Subjects	14	11									
ID Core Subjects	4	6									10
ID Electives		2									1
Specialization Core Subjects			11	15		19	20		9	-	74
Specialization Electives			-	-		-	-		8 [^]	17 [^]	4*
Specialization Projects			-	-		-	-		4	4	8
ID Core Subjects			7	7		-	-		-	2	16
ID Electives			3 (Basket A - in Semesters 3/5/7) [#] + 8 (Basket B - in Semesters 4/6/8) [#] + 2 (in Semester 5) [^]								3*
Minimum GPA Credit Requirement	18	18	18	22		19	20		13	12	
Compulsory 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. [*] Minimum 10 credits shall be earned from Specialization Electives and ID Electives. [^] The respective 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

Water & Environmental Engineering

CE 72001	Coastal Engineering	2E
CE 72008	Water and Wastewater Engineering	2E
CE 82003	Environmental Management	2E
CE 82005	Irrigation Engineering	2E
CE 82007	Water Resources Engineering	2E

Geotechnical & Highway Engineering

CE 72005	Highway Construction and Maintenance	2E
CE 82006	Transportation Planning	2E
CE 82004	Ground Improvement Techniques	2E

Structural Engineering

CE 82001	Bridge Engineering	2E
CE 82002	Computer Based Structural Analysis	2E

Other Subjects

CE 72007	Remote Sensing and Geographic Information Systems (RS and GIS)	2E
ME 83001	Building Services Engineering	3E