

**B. SC. IN CIVIL ENGINEERING**  
Semester-wise Course and Credit Distribution  
SYLLABUS

1st Year 1st Semester

Sl.	Course Code	Course Title	Theory		Sessional		Total Credits
			Contact hrs./week	Credit	Contact hrs./week	Credit	
1	CE 1105	Basic Surveying and Introduction to GIS	3.0	3.00	--	--	3.00
2	Math 1101	Mathematics I	3.0	3.00	--	--	3.00
3	Phy 1101	Physics I	3.0	3.00	--	--	3.00
4	Chem 1101	Chemistry	3.0	3.00	--	--	3.00
5	Hum 1101	Sociology	2.0	2.00	--	--	2.00
6	CE 1100	Civil Engineering Drawing	--	--	3.0	1.50	1.50
7	CE 1102	Workshop Practices Sessional	--	--	3.0	1.50	1.50
8	CE 1106	Field Surveying	(2 weeks of field work after semester final exam)			1.00	1.00
<b>Total</b>			14.0	14.00	6.0	4.00	18

Contact hours: 14.0 (T)+ 6.0 (S) = 20.0 hrs./week

No. of theory courses : 5

Total Credits: 18.00

No. of sessional courses : 3

**N.B.:** Any student of 4-year diploma in engineering, willing to obtain exemption of the courses of 1st Year 1st Semester, will have to submit application to the Head of the concerned department for approval.

1st Year 2nd Semester

Sl.	Course Code	Course Title	Theory		Sessional		Total Credits
			Contact hrs./week	Credit	Contact hrs./week	Credit	
1	CE 1211	Engineering Mechanics	3.0	3.00	---	--	3.00
2	Math 1201	Mathematics II	3.0	3.00	--	--	3.00
3	Ban 1201	বাংলা ভাষা ও সাহিত্য (Bengali Literature and Language )	2.0	2.00	--	--	2.00
4	Hum 1201	English	3.0	3.00	--	--	3.00
5	CSE 1201	Introduction to Computer Fundamentals and Programming	3.00	3.00	--	--	3.00
6	EEE 1265	Basic Electrical Engineering	3.0	3.00	--	--	3.00
7	CE 1204	Computer Aided Drawing for Civil Engineers	--	--	3.0	1.50	1.50
8	Hum 1202	English Skills Practices	--	--	2.0	1.00	1.00
9	Chem 1202	Inorganic Quantitative Analysis	--	--	2.0	1.00	1.00
<b>Total</b>			17.0	17.00	7.0	3.50	20.50

Contact hours: 17.0 (T)+ 7.0 (S) = 24.0 hrs./week

No. of theory courses : 6

Total Credits: 20.50

No. of sessional courses : 3

2nd Year 1st Semester

Sl.	Course Code	Course Title	Theory		Sessional		Total Credits
			Contact hrs./week	Credit	Contact hrs./week	Credit	
1	CE 2101	Engineering Materials	3.0	3.00	--	--	3.00
2	CE 2111	Mechanics of Solids I	3.0	3.00	--	--	3.00
3	Math 2101	Mathematics III	3.0	3.00	--	--	3.00
4	Phy 2101	Physics II	3.0	3.00	--	--	3.00
5	Hum 2101	বাংলাদেশের অভ্যুদয়ের ইতিহাস(History of Emergence of Bangladesh)	3.0	3.00	--	--	3.00
6	CE 2102	Engineering Materials Sessional	--	--	3.0	1.50	1.50
7	CE 2106	Quantity Surveying	--	--	3.0	1.50	1.50
8	CSE 2102	Computer Programing Sessional	--	--	3.0	1.50	1.50
9	Phy 2102	Physics Sessional	--	--	2.0	1.00	1.00
<b>Total</b>			15.0	15.00	11.0	5.50	20.50

Contact hours: 15.0 (T)+11.0 (S) = 26.0 hrs./week

No. of theory courses : 5

Total Credits: 20.50

No. of sessional courses : 4

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**2nd Year 2nd Semester**

Sl.	Course Code	Course Title	Theory		Sessional		Total Credits
			Contact hrs./week	Credit	Contact hrs./week	Credit	
1	CE 2203	Numerical Analysis	2.0	2.00	--	--	2.00
2	CE 2211 Prq. CE 2111	Mechanics of Solids II	3.0	3.00	--	--	3.00
3	CE 2241	Engineering Geology and Geomorphology	3.0	3.00	--	--	3.00
4	CE 2261	Fluid Mechanics	3.0	3.00	--	--	3.00
5	Math 2201	Mathematics IV	3.0	3.00	--	--	3.00
6	CE 2201	Professional Practices, Communication, Ethics and Environmental Protection	3.0	3.00	--	--	3.00
7	CE 2200	Details of Construction	--	--	3.0	1.50	1.50
8	CE 2212	Mechanics of Solids Sessional	--	--	3.0	1.50	1.50
9	CE 2262	Fluid Mechanics Sessional	--	--	3.0	1.50	1.50
<b>Total</b>			17.0	17.0	9.0	4.50	21.50

Contact hours: 17.0 (T) +9.0 (S) = 26.0 hrs./week

No. of theory courses : 6

Total Credit: 21.50

No. of sessional courses : 3

**3rd Year 1st Semester**

Sl.	Course Code	Course Title	Theory		Sessional		Total Credits
			Contact hrs./week	Credit	Contact hrs./week	Credit	
1	CE 3111 Prq. CE 2211	Structural Analysis and Design I	3.0	3.00	--	--	3.00
2	CE 3113	Design of Concrete Structures I	3.0	3.00	--	--	3.00
3	CE 3131	Environmental Engineering I	3.0	3.00	--	--	3.00
4	CE 3141	Geotechnical Engineering I	3.0	3.00	--	--	3.00
5	CE 3161 Prq. CE 2261	Open Channel Hydraulics	3.0	3.00	--	--	3.00
6	Hum 3101	Principles of Accounting	2.0	2.00	--	--	2.00
7	CE 3112	Structural Analysis and Design I Sessional	--	--	3.0	1.50	1.50
8	CE 3162	Open Channel Hydraulics Sessional	--	--	3.0	1.50	1.50
9	CSE 3102	Engineering Computation Sessional	--	--	3.0	1.50	1.50
<b>Total</b>			17.0	17.00	9.0	4.50	21.50

Contact hours: 17.0 (T) + 9.0 (S) = 23.0 hrs./week

No. of theory courses : 6

Total Credits: 21.50

No. of sessional courses : 3

**3rd Year 2nd Semester**

Sl.	Course Code	Course Title	Theory		Sessional		Total Credits
			Contact hrs./week	Credit	Contact hrs./week	Credit	
1	CE 3211 Prq. CE 3113	Design of Concrete Structures II	3.0	3.00	--	--	3.00
2	CE 3231	Environmental Engineering II	3.0	3.00	--	--	3.00
3	CE 3251	Transportation Engineering I	3.0	3.00	--	--	3.00
4	CE 3261	Hydrology, Irrigation and Flood Control	3.0	3.00	--	--	3.00
5	Hum 3201	Engineering Economics	2.0	2.00	--	--	2.00
6	CE 3212	Bridge Design Sessional	--	--	3.0	1.50	1.50
7	CE 3214	Building Design Sessional	--	--	3.0	1.50	1.50
8	CE 3232	Environmental Engineering I Sessional	--	--	3.0	1.50	1.50
9	CE 3242	Geotechnical Engineering I Sessional	--	--	3.0	1.50	1.50
<b>Total</b>			14.0	14.00	12.0	6.00	20.00

Contact hours: 14.0 (T)+12.0 (S) = 26.0 hrs./week

No. of theory courses : 5

Total Credits: 20.00

No. of sessional courses : 4

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**4th Year 1st Semester**

Sl.	Course Code	Course Title	Theory		Sessional		Total Credits
			Contact hrs./week	Credit	Contact hrs./week	Credit	
1	CE 4000	Undergraduate Thesis	--	--	3.0	1.50	*1.50
2	CE 4002	Capstone Project	--	--	3.0	1.50	**1.50
3	CE 4101	Project Planning and Construction Management	3.0	3.00	--	--	3.00
4	CE 4113 Prq. CE 3213	Structural Analysis and Design II	3.0	3.00	--	--	3.00
5	CE 4115	Design of Steel Structures I	3.0	3.00	--	--	3.00
6	CE 4141	Geotechnical Engineering II	3.0	3.00	--	--	3.00
7	CE 4151 Prq. CE 3251	Transportation Engineering II	3.0	3.00	--	--	3.00
8	CE 4114 Prq. CE 3113	Computer Aided Analysis and Design of Structures Sessional I	--	--	3.0	1.50	1.50
9	CE 4152 Prq. CE 3251	Transportation Engineering I Sessional	--	--	3.0	1.50	1.50
<b>Total</b>			15.0	15.00	12.0	6.00	21.00

**Contact hours: 15.0 (T)+12.0 (S) = 27.0 hrs/week**

**No. of theory courses : 5**

**Total Credits: 21.00**

**No. of sessional courses : 4**

\*This credit in addition to 3.00 credits of 4th year 2nd semester for Undergraduate Thesis will be assessed at the end of 4th year 2nd semester.

\*\* This credit in addition to 3.00 credits of 4th year 2nd semester for Capstone Project will be assessed at the end of 4th year 2nd semester.

**4th Year 2nd Semester**

Option	Course Code	Course Title	Theory		Sessional		Total Credits
			Contact hrs./week	Credit	Contact hrs./week	Credit	
	CE 4000	Undergraduate Thesis	--	--	3.0	1.5	1.5
	CE 4002	Capstone Project	--	--	3.0	1.5	1.5
	CE 4201	Socio-economic Aspects of Development Projects	3.0	3.00	--	--	3.00 (Any one)
	CE 4205	Business and Career Development	3.0	3.00	--	--	
I	CE 4211	Introduction to Composite Structures	2.0	2.00	--	--	2.00
	CE 4213	Prestressed Concrete	2.0	2.00	--	--	2.00
	CE 4217	Introduction to Finite Element Method	2.0	2.00	--	--	2.00
	CE 4219	Structural dynamics	2.0	2.00	--	--	2.00
	CE 4221	Introduction to Design of Timber Structures	2.0	2.00	--	--	2.00
	CE 4216 Prq. CE 3111	Computer Aided Analysis and Design of Structures Sessional II	--	--	3.0	1.50	1.50
II	CE 4231	Environmental Engineering III	2.0	2.00	--	--	2.00
	CE 4233	Environmental Engineering IV	2.0	2.00	--	--	2.00
	CE 4235	Environmental Engineering V	2.0	2.00	--	--	2.00
	CE 4232	Environmental Engineering Sessional II	--	--	3.0	1.50	1.50
III	CE 4243	Earth Retaining Structures	2.0	2.00	--	--	2.00
	CE 4245	Elementary Soil Dynamics	2.0	2.00	--	--	2.00
	CE 4247	Soil-Water Interaction	2.0	2.00	--	--	2.00
	CE 4242	Geotechnical Engineering II Design Sessional	--	--	3.0	1.50	1.50
IV	CE 4251	Transportation Engineering III	2.0	2.00	--	--	2.00
	CE 4253	Transportation Engineering IV	2.0	2.00	--	--	2.00
	CE 4255	Transportation Engineering V	2.0	2.00	--	--	2.00
	CE 4252	Transportation Engineering Sessional II	--	--	3.0	1.50	1.50
V	CE 4265	River and Coastal Engineering	2.0	2.00	--	--	2.00
	CE 4267	Hydraulic Structures	2.0	2.00	--	--	2.00
	CE 4269	Ground Water Engineering	2.0	2.00	--	--	2.00
	CE 4266	Water Resources Engineering Sessional	--	--	3.0	1.50	1.50
<b>Total</b>			11.0	11.0	12.0	6.00	17.00

**Contact hours: 11.0 (T)+12.0 (S) = 23.0 hrs/week**

**No. of theory courses : 5**

**Total Credit: 17.00**

**No. of sessional courses : 3**

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# From optional courses, students shall take two optional thesis related theory courses & the corresponding sessional course from any optional group of I to V as major courses and two more optional theory courses from other options of I to V and another corresponding sessional course as minor courses.

**Course Flow Diagram:**

Categories of Courses	Credits
Language	6.00
General Education	9.00
Basic Sciences	11.00
Mathematics	12.00
Other Engineering	9.00
Civil Engineering Core	93.00
Technical Elective	14.00
Undergraduate Thesis	3.00
Capstone Project	3.00
Internship	Non-Credit
<b>Total</b>	<b>160.00</b>