

Templates for programs Civil Engineering (CE)

Template for BT Program in Civil Engineering

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
SCHEME-1 (9) ELC111/ELC112/ELC113	ETH111 (3)	SCHEME-2 EME (CE212-9) *	SCHEME-3 HSS-I (9-11)	ESO208A [11] (E/SO)	SCHEME HSS-II (9)	SCHEME HSS-II (9)	SCHEME HSS-II (9)
MTH 111 (6)	MTH 113 (6)	ESO202 [11] (E/SO)	ESC201 (14)	CE351 [10] (DC)	CE441M [5] (DC)	DE-5 [9]	DE-8 [9]
MTH 112 (6)	MTH 114 (6)	MSO203M [6] (E/SO)	TA212 [3] § (E/SO)	CE361 [6] (DC)	DE-2 [9]	DE-6 [9]	OE-4 [9]
PHY 112 (11)	PHY 115 (11)	HSO201 [11] (E/SO)	CE272 [9] (DC)	CE331 [8] (DC)	DE-3 [9]	DE-7 [5]	OE-5 [9]
PHY 111 (3)	CHM 111 (3)	CE261 (10) (DC)	CE252 [11] (DC)	CE311 [4] (DC)	DE-4 [9]	OE-2 [9]	OE-6 [6]
TA 111 (9)	ESC 111 (7)	CE243 (8) (DC)	CE214 [9]	CE381 [9] (DC)	OE-1 [9]	OE-3 [9]	
CHM 112 (4)	ESC 112 (7)	CE341 [2] (DC)		DE-1 [9]			
CHM 113 (4)	LIF111 (6)	TA211 [3] (E/SO)			UGP-1 (CE332) Extra Credits (DE) [4]		UGP-4 (CE493) Extra Credits (DE) [9]
PE111 (3)	PE112 (3)						
55	52	60	55-57	57	50	50	42

1. \*All CE student must opt for environment part from the EME basket in semester 3.
2. Students need to ensure that the courses chosen as DE must include
  - i) at least one course from CE371 and CE372, and
  - ii) at least one course from CE412, CE432, CE462, CE481.
  - iii) Total DE credits should be minimum of 68.
3. The DE basket may also contain departmental PG courses. However, some of the 300 level DE courses are pre-requisite to those PG courses.
4. UGP-1 and UGP-4 do not count towards DE/OE credits or minimum graduation requirements. Courses that are mandatorily offered in DE:
  - Odd semester – CE371, CE481.
  - Even semester – CE372, CE334, CE362, CE382, CE412, CE462, CE432,
  - Other courses – CE491, CE492, CE605A, CE606A.

– Credit Table for BT program in Civil Engineering		
Course type	Allowable Credit	Credit in the department
Institute Core (IC)	112	112
E/SO	18-45	45
Department requirements	144-179	159 (91 DC + 68 DE)
Open electives (OE)	51-57	51
SCHEME	54-58	54-58
Total for 4-year BT/BS	391-420	421-425*

\* Exceeds the credit range recommended by UGARC

Template for BTH Program in Civil Engineering

Template for 3 <sup>rd</sup> to 8 <sup>th</sup> semester for BTH program in Civil Engineering					
Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
SCHEME-2 EME (CE212- 9)*	SCHEME-3 HSS-I (9-11)	ESO208A [11] (E/SO)	SCHEME HSS-II (9)	SCHEME HSS-II (9)	SCHEME HSS-II (9)
ESO202 [11] (E/SO)	ESC201 (14)	CE351 [10] (DC)	CE441M [5] (DC)	DE-5 [9]	DE-9 [9]
MSO203M [6] (E/SO)	TA212 [3] (E/SO)	CE361 [6] (DC)	DE-2 [9]	DE-6 [9]	OE-4 [9]
HSO201 [11] (E/SO)	CE272 [9] (DC)	CE331 [8] (DC)	DE-3 [9]	DE-7 [5]	OE-5 [9]
CE261 (10) (DC)	CE252 [11] (DC)	CE311 [4] (DC)	DE-4 [9]	OE-2 [9]	OE-6 [6]
CE243 (8) (DC)	CE214 [9] (DC)	CE381 [9] (DC)	OE-1 [9]	OE-3 [9]	DE-10 (9)
CE341 [2] (DC)		DE-1 [9]		DE-8 (9)	DE-11 (9)
TA211 [3] (E/SO)			UGP-1 (CE332A) Extra Credits (DE) [4]		UGP-4 CE493A) Extra Credits (DE) [9]
60	55-57	57	50	59	60

1. \*All CE student must opt for environment part from the EME in semester 3.
2. Students need to ensure that the courses chosen as DE must include
  - i. at least one course from CE371 and CE372, and
  - ii. at least one course from CE412, CE432, CE462, CE481;
  - iii. two UGPs (CE491 and CE492); and
  - iv. minimum 27 credits of DE (6/7 level) courses.
  - v. Total DE credits should be minimum of 95.
3. The DE basket may also contain departmental PG courses. However, some of the 300 level DE courses are pre-requisite to those PG courses.
4. UGP-1 and UGP-4 do not count towards DE/OE credits or minimum graduation. requirements.
  - CPI criteria for BTH: 8.5

Courses that are mandatorily offered in DE:

- Odd semester – CE371, CE481, Even semester – CE372, CE334, CE362, CE382, CE412, CE462, CE432, Other courses – CE491, CE492, CE605A, CE606A.

Template for BTM Program in Civil Engineering

Template for 3 <sup>rd</sup> to 8 <sup>th</sup> semester for BTM program in Civil Engineering					
Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
SCHEME-2 EME (CE212-9)*	SCHEME-3 HSS-I (9-11)	ESO208A [11] (E/SO)	SCHEME HSS-II (9)	SCHEME HSS-II (9)	SCHEME HSS-II (9)
ESO202 [11] (E/SO)	ESC201 (14)	CE351 [10] (DC)	CE441M [5] (DC)	MTB-1 [9]	MTB-4 [9]
MSO203M [6] (E/SO)	TA212 [3] (E/SO)	CE361 [6] (DC)	DE-2 [9]	MTB-2 [9]	MTB-5 [9]
HSO201 [11] (E/SO)	CE272 [9] (DC)	CE331 [8] (DC)	DE-3 [9]	DE-5 [5]	MTB-6 [9]
CE261 (10) (DC)	CE252 [11] (DC)	CE311 [4] (DC)	DE-4 [9]	OE-2 [9]	OE-3 [6]
CE243 (8) (DC)	CE214 [9] (DC)	CE381 [9] (DC)	OE-1 [9]	MTB-3 [9]	
CE341 [2] (DC)		DE-1 [9]			
TA211 [3] (E/SO)			UGP-1 (CE332) Extra Credits (DE) [4]		UGP-4 (CE493) Extra Credits (DE) [9]
60	55-57	57	50	50	42

1. \*All CE student must opt for environment part from the EME basket in semester 3.
2. Students need to ensure that the courses chosen as DE must include
  - iv) at least one course from CE371 and CE372, and
  - v) at least one course from CE412, CE432, CE462, CE481.
  - vi) Total DE credits should be minimum of 41.
3. The DE basket may also contain departmental PG courses. However, some of the 300 level DE courses are pre-requisite to those PG courses.
4. UGP-1 and UGP-4 do not count towards DE/OE credits or minimum graduation requirements. Courses that are mandatorily offered in DE:
  - Odd semester – CE371, CE481.
  - Even semester – CE372, CE334, CE362, CE382, CE412, CE462, CE432
  - Other courses – CE491, CE492, CE605A, CE606A.

Template for five-year dual degree in Civil Engineering

Template for 3 <sup>rd</sup> to 10 <sup>th</sup> semester for BT-MT dual degree program in Civil Engineering (Category A)							
Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8	Semester 9	Semester 10
SCHEME-2 EME (CE212-9)*	SCHEME-3 HSS-I (9-11)	ESO208A [11] (E/SO)	SCHEME HSS-II (9)	SCHEME HSS-II (9)	SCHEME HSS-II (9)	CE699A (36) M. Tech Thesis	CE699A (36) M. Tech Thesis
ESO202 [11] (E/SO)	ESC201 (14)	CE351 [10] (DC)	CE441M [5] (DC)	DE-5 [9]	PGOE-4 [9]		
MSO203M [6] (E/SO)	TA212 [3] (E/SO)	CE361 [6] (DC)	DE-2 [9]	DE-6 [9]	PGOE-5 [9]	Additional PG-OE courses in consultation and with consent of thesis supervisor	CE698A (0) M. Tech Seminar
HSO201 [11] (E/SO)	CE272 [9] (DC)	CE331 [8] (DC)	DE-3 [9]	PGOE-1 [9]	PGOE-7 [9]		
CE261 (10) (DC)	CE252 [11] (DC)	CE311 [4] (DC)	DE-4 [9]	PGOE-2 [9]	PGOE-8 [9]		
CE243 (8) (DC)	CE214 [9] (DC)	CE381 [9] (DC)	OE-1 [9]	PGOE-3 [9]		Any remaining courses from the BT template	
CE341 [2] (DC)		DE-1 [9]					
TA211 [3] (E/SO)			UGP-1 (CE332) Extra Credits (DE) [4]		UGP-4 (CE493 ) Extra Credits (DE) [9]		
60	55-57	57	50	54	45	Max. 45	Max. 45

1. \*All CE student must opt for environment part from the EME basket in semester 3.
2. Up to 42 OE and 14 DE credits may be waived from the minimum BT template requirement.
3. Students need to ensure that the courses chosen as DE must include
  - i) at least one course from CE371 and CE372, and
  - ii) at least one course from CE412, CE432, CE462, CE481.

iii) Total DE credits should be minimum of 54.

4. Minimum 63 credits of PG courses and 72 credits of M. Thesis is required.
5. Students, opting for the dual degree programme within CE, please check the list of mandatory PG courses for the respective specialization.
6. The DE basket may also contain departmental PG courses. However, some of the 300 level DE courses are pre-requisite to those PG courses.
7. UGP-1 and UGP-4 do not count towards DE/OE credits or minimum graduation requirements.
8. Students opting for the dual degree programme within CE are allowed to take CE491 or CE492 as DEs or as OE.

Template for 7 <sup>th</sup> to 10 <sup>th</sup> semester for dual degree program in Civil Engineering- Environmental Engineering (Category B)				
Semester 3 – Semester 6	Semester 7	Semester 8	Semester 9	Semester 10
BT / BS Template of Parent Department (BSBE, CHE, CHM, ECO, ME, MME, MTH, PHY)	CE664A [9]	CE667A [5]	CE699A [36] (M. Tech. Thesis)	CE699A [36] (M. Tech. Thesis)
	CE665A [9]	CE668A [10]		CE698A [0] (M. Tech. Seminar)
	CE666A [9]			
		At least additional 21 PG-OE credits in consultation and with consent of thesis supervisor		
	Other Courses from BT template of parent Department			
	Max 65	Max 65	Max 65	Max 65

1. 36 OE credits waived from the BT/BS program of the parent department.
2. Minimum 63 credits of PG course and 72 credits of M. Tech thesis required.
3. These 63 PG course credits may include 1 UG course taken for PG credits on advice of the thesis supervisor.
4. Another UG/PG course (over and above the first 63 PG credits) may also be taken for PG credits on advice of the thesis supervisor.

Template for 7 <sup>th</sup> to 10 <sup>th</sup> semester for dual degree program in Civil Engineering- Hydraulics and Water Resources (Category B)				
Semester 3 – Semester 6	Semester 7	Semester 8	Semester 9	Semester 10
BT / BS Template of Parent Department (AE, CHE, ME)	CE610A [9]	CE612A [9]	CE699A [36] (M. Tech. Thesis)	CE699A [36] (M. Tech. Thesis)
	CE611A [9]	CE613A [9]		CE698A [0] (M. Tech. Seminar)
	At least additional 27 PG-OE credits in consultation and with consent of thesis supervisor			
	Other Courses from BT template of parent Department			
	Max 65	Max 65	Max 65	Max 65

1. 36 OE credits waived from the BT/BS program of the parent department.
2. Minimum 63 credits of PG course and 72 credits of M. Tech thesis required.
3. These 63 PG course credits may include 1 UG course taken for PG credits on advice of the thesis supervisor.
4. Another UG/PG course (over and above the first 63 PG credits) may also be taken for PG credits on advice of the thesis supervisor.

Template for 7th to 10th semester for dual degree program in Civil Engineering- Geoinformatics (Category B)				
Semester 3 – Semester 6	Semester 7	Semester 8	Semester 9	Semester 10
BT / BS Template of Parent Department (CSE, MTH, PHY)	CE331 [8] (UG Pre-Requisite)	CE334 [8] (as PG)	CE699A [36] (M. Tech. Thesis)	CE699A [36] (M. Tech. Thesis)
	CE671A [11]			CE698A [0] (M. Tech. Seminar)
	CE677A [9]			
		At least additional 35 PG-OE credits in consultation and with consent of thesis supervisor		
	Other Courses from BT template of parent Department			
		Max 65	Max 65	Max 65

1. 36 OE credits waived from the BT/BS program of the parent department.
2. Minimum 63 credits of PG course and 72 credits of M. Tech thesis required.
3. These 63 PG course credits include 1 UG course (CE334 [8]) taken for PG credits.
4. Another UG/PG course (over and above the first 63 PG credits) may also be taken for PG credits on advice of the thesis supervisor.



Template for 7 <sup>th</sup> to 10 <sup>th</sup> semester for dual degree program in Civil Engineering- Transportation Engineering (Category B)				
Semester 3 – Semester 6	Semester 7	Semester 8	Semester 9	Semester 10
BT / BS Template of Parent Department (AE, ECO, ME, MTH, PHY)	CE682A [9]	CE684b [5]	CE699A [36] (M. Tech. Thesis)	CE699A [36] (M. Tech. Thesis)
	CE683A [9]	CE685a [5]		CE698A [0] (M. Tech. Seminar)
		CE780A [9]		
	At least additional 26 PG-OE credits in consultation and with consent of thesis supervisor			
	Other Courses from BT template of parent Department			
	Max. 65	Max. 65	Max. 65	Max. 65

1. 36 OE credits waived from the BT/BS program of the parent department.
2. Minimum 63 credits of PG course and 72 credits of M. Tech thesis required.
3. These 63 PG course credits may include 1 UG course taken for PG credits on advice of the thesis supervisor.
4. Another UG/PG course (over and above the first 63 PG credits) may also be taken for PG credits on advice of the thesis supervisor.

Template for Double Major: Second Major in Civil Engineering

Template for 7 <sup>th</sup> to 10 <sup>th</sup> semester for double major with second major in Civil				
Semester 3 – Semester 6	Semester 7	Semester 8	Semester 9	Semester 10
BT/BS Template of Parent Department	CE341 [2] (DC)	CE272 [9] (DC)	CE351 [10] (DC)	CE411 [5] (DC)
	CE243 [8] (DC)	CE252 [11] (DC)	CE361 [6] (DC)	DE [9]
	CE331 [8] (DC)	CE214 [9] (DC)	CE381 [9] (DC)	DE [9]
			CE311 [4] (DC)	DE [9]
			DE [9]	DE [9]
Pre-Requisites	Other Courses from BT template of parent Department			
1) ESO204 or equivalent else CE261 in 7th Sem	Max 65	Max 65	Max 65	Max 65
2) ESO202				
3) CE212 as part of SCHEME else in 7th				

Students need to ensure that the courses chosen as DE must include –

- i. at least one course from CE371 and CE372, and
  - ii. at least one course from CE412, CE432, CE462, CE481.
  - iii. Total DE credits should be minimum of 45.
2. The DE basket may also contain departmental PG courses. However, some of the 300 level DE courses are pre-requisite to those PG courses.
  3. UGP-1 and UGP-4 do not count towards DE/OE credits or minimum graduation requirements.
  4. 36 OE credits waived from the BT/BS program of the parent department. Courses that are mandatorily offered in DE:
    - Odd semester – CE371, CE481.
    - Even semester – CE372, CE334, CE362, CE382, CE412, CE462, CE432.
    - Other courses – CE491, CE492, CE605A, CE606A.