

3-Year M.Tech.in Civil Engineering (Structural Engineering)

Semester I	Credits
Elective I	3
<u>CE 6006 Seminar</u>	<u>2</u>
	5

Semester II	Credits
CE 6110 Advanced Structural Mechanics	3
Elective II	3
<u>CE 6011 Computer Methods in Civil Engineering</u>	<u>2</u>
	8

Semester III	Credits
CE 6130 Finite Element Analysis	3
CE 6131 Finite Element Lab	1
CE 6140 Structural Dynamics	3
<u>CE 6015 Master's Thesis</u>	<u>5</u>
	12

Semester IV	
CE 6212 Advanced Reinforced Concrete	3
Elective III	3
CE 6111 Structures Lab	1
<u>CE 6025 Master's Thesis</u>	<u>5</u>
	12

Semester V	Credits
Elective IV	2
Elective V	2

<u>CE 6035 Master's Thesis</u>	<u>10</u>
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14

Semester IV

<u>CE 6045 Master's Thesis</u>	<u>10</u>
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10

Total Credits	61
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List of Elective Courses

CE 6002 Design Studio	2
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CE 6120 Applied Elasticity and Plasticity	3
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CE 6160 Theory of plates and shells	3
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CE 6150 Structural stability	3
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CE 6222 Prestressed concrete design	2
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CE 6200 Condition assessment and Strengthening	3
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CE 6232 Advanced Steel design	3
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ME 5010 Mathematical Methods for Engineers	3
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CH 5050 Computational Methods for Engineers	3
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Note:

1. 1 lecture or tutorial contact hour is worth one credit and 2 lab contact hours are worth one credits.
2. The curriculum requires minimum 60-credits with the following breakdown: 8 courses which provide coverage of theory and design, 2 courses with lab content (both experimental and computational), seminar and thesis.
3. The minimum credit requirement is assigned as follows: theory and design (24 credits); laboratory (4credits); seminar (2 credits); and thesis (30credits).

3-Year M.Tech.in Civil Engineering (Geotechnical Engineering)

Semester I	Credits
Elective I	3
Elective II	3
<u>CE 6006 Seminar</u>	<u>2</u>
	8
Semester II	Credits
CE 6310 Advanced Soil Mechanics	3
Elective III	3
<u>CE 6011 Computer Methods in Civil Engineering</u>	<u>2</u>
	8
Semester III	Credits
CE 6300 Adv. Foundation Engineering	3
CE 6323 Experimental Soil Mechanics	3
Elective IV(Dept./free)	2/3
<u>CE 6015 Master's Thesis</u>	<u>2</u>
	10/11
Semester IV	
CE 6330 Soil Dynamics	3
Elective V	3

<u>CE 6025 Master's Thesis</u>	<u>4</u>
	10

Semester V	Credits
<u>CE 6035 Master's Thesis</u>	<u>12</u>
	12
Semester IV	
<u>CE 6045 Master's Thesis</u>	<u>12</u>
	12
Total Credits	60

List of Elective Courses

CE 6352 Design of Earth Structures	3
CE 6370 Soil-Structure Interaction	3
CE 6392 Designing with Geosynthetics	3
CE 6410 In-situ Testing	3
CE 6340 Ground Modification Techniques	3
CE 6360 Geotechnical Earthquake Engineering	3
CE 6390 Pavement Geotechnics	3
CE 6130 Finite Element Analysis	3
ME 5010 Mathematical Methods for Engineers	3
CH 5050 Computational Methods for Engineers	3

Note:

1. 1 lecture or tutorial contact hour is worth one credit and 3 lab contact hours are worth two credits.
2. The curriculum requires minimum 60-credits with the following breakdown: 8 courses which provide coverage of theory and design, 2 courses with lab content (both experimental and computational), seminar and thesis.
3. The minimum credit requirement is assigned as follows: theory and design (24 credits); laboratory (4 credits); seminar (2 credits); and thesis (30 credits).

3-Year M.Tech.in Civil Engineering (Environmental &Water Resources Engineering)

Semester I	Credits
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CE 6520 Air Pollution Control	3
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CE 6530 Groundwater Modeling	3
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<u>CE 6006 Seminar</u>	<u>2</u>
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Semester II	Credits
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CE6500 Engineering Hydrology and Hydrologic	
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Systems	3
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Elective I	3
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<u>CE 6011 Computer Methods in Civil Engineering</u>	<u>2</u>
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8

Semester III	Credits
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Elective II	3
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Elective III	3
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CE 6511 Soft computing Lab	2
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<u>Thesis</u>	<u>5</u>
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13

Semester IV

CE6510 Wastewater Engineering	3
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Elective IV	3
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<u>Thesis</u>	<u>5</u>
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11

Semester V	Credits
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<u>CE 6025 Thesis</u>	<u>10</u>
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10

Semester IV

<u>CE 6025 Master's Thesis</u>	<u>10</u>
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10

Total Credits

60

List of Elective Courses

ME 5010 Mathematical Methods for Engineers*	3
CE 6540 Contaminant Hydrology and Remediation	3
CE 6550 Environmental Chemistry & Microbiology #	3
CE 6560 Physico-chemical Process	3
CE 6570 Environmental Impact Assessment	3
CE 6580 Solid & Hazardous Waste Management	3
CE 6590 Industrial Waste Management	3
CE 6610 Remote Sensing & GIS applications to Civil Engineering	3
CE 6620 Water Resources Systems Planning and Management	3
CE 6630 Open Channel Hydraulics	3
CE 6640 Irrigation and Watershed Management	3
CE 6650 Hydrogeology	3
CH5020 Advanced Transport Phenomena	3
CH 5050 Computational Methods for Engineers	3

Note:

4. 1 lecture or tutorial contact hour is worth one credit and 3 lab contact hours are worth two credits.
5. The curriculum requires minimum 60-credits with the following breakdown: 8 courses which provide coverage of theory and design, 2 courses with lab content (both experimental and computational), seminar and thesis.
6. The minimum credit requirement is assigned as follows: theory and design (24 credits); laboratory (4credits); seminar (2 credits); and thesis (30credits).