

## Department of Civil Engineering

### 1. Post Graduate programme(s) in the Department:

- i. **M. Tech:** Structural Engineering.  
Hydraulic Engineering.  
Soil Mechanics and Foundation Engineering.
- ii. **Ph.D:** Ph.D. in Civil Engineering.

### 2. Programme of study for Masters:

#### i. M. Tech Degree (Structural Engineering)

Sl. No.	Course No.	Name of the Course	Credits Hrs
<b>Core courses</b>			
1.	TCE-602	Theory of Elasticity	3(3-1-0)
2.	TCE-606	Experimental Stress Analysis	3(2-0-1)
3.	TCE-609	Theory of Plates & Cells	4(4-1-0)
4.	TCE-621	Limit State Design of Concrete Structures	3(2-1-0)
5.	TCE-630	Matrix Methods In Structural Analysis	3(3-1-0)
6.	TCE-600	Seminar	1
<b>Basic Supporting Courses</b>			
1.	BPM602	Special Functions & Integral Equation	2(2-1-0)
2.	BPM-607	Transformations & Calculus of Variations	2(2-1-0)
<b>Credits for Optional/Minor Courses</b>			09
<b>M. Tech Thesis</b>			
1.	TCE-690		20
<b>Total</b>			<b>50</b>

#### ii. M. Tech Degree (Hydraulic Engineering)

Sl. No.	Course No.	Name of the Course	Credits Hrs
<b>Core courses</b>			
1.	TCE-541	Hydraulic Engg. Laboratory	1(0-0-1)
2.	TCE-542	Open Channel Hydraulics	4(3-0-1)
3.	TCE-543	Hydromechanics	4(3-0-1)
4.	TCE-544	Advanced Fluid Mechanics	4(3-0-1)
5.	TCE-550	Hydrologic Analysis And Design	4(3-0-1)
6.	TCE-600	Seminar	1
<b>Basic Supporting Courses</b>			
1.	BPM602	Special Functions & Integral Equation	2(2-1-0)
2.	BPM-607	Transformations & Calculus of Variations	2(2-1-0)
<b>Credits for Optional/Minor Courses</b>			08
<b>M. Tech Thesis</b>			
1.	TCE-690		20

<b>Total</b>	50
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iii. **M. Tech Degree (Soil Mechanics and Foundation Engineering)**

Sl. No.	Course No.	Name of the Course	Credits Hrs
<b>Core courses</b>			
1.	TCE-570	Strength Behaviour of Soils	3(2-0-0)
2.	TCE-571	Foundation Engineering	3(3-0-0)
3.	TCE-572	Soil Dynamics and Machine Foundations	3(3-0-0)
4.	TCE-574	Earth Retaining Structures	3(3-0-0)
5.	TCE-575	Soil Engg. Laboratory	3(1-0-2)
6.	TCE-600	Seminar	1
<b>Basic Supporting Courses</b>			
1.	BPM602	Special Functions & Integral Equation	2(2-1-0)
2.	BPM-607	Transformations & Calculus of Variations	2(2-1-0)
<b>Credits for Optional/Minor Courses</b>			10
<b>M. Tech Thesis</b>			
1.	TCE-690		20
<b>Total</b>			50

**3. Programme of study for Ph.D:**

**Ph.D. Programme in Civil Engineering**

**Core courses:**

Sl. No	Course No.	Course Title	Credit Hours
1.	TCE-701	Finite Element Methods in structural Mechanics	2(2-1-0)
2.	TCE-738	Optimization Methods	3(2-0-1x3)
3.	TCE-739	Engineering Mechanics	3(2-0-1x3)
4.	TCE-788	Doctoral Seminar I	1(0-0-1x3)
5.	TCE-789	Doctoral Seminar II	1(0-0-1x3)
6.	TCE-737	Ground Improvement Techniques	2(2-0-0)
<b>Total</b>			<b>12 Credits</b>

**Basic supporting courses:**

Sl. No	Course No.	Course Title	Credit Hours
1.	BPM-621	Numerical Techniques for Computers	3(3-2-0)
<b>Total</b>			<b>3 Credits</b>

**Optional Courses:****05 credits**

05 credits of relevant courses from the P.G. courses of any department.

<b>Sl. No.</b>	<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hours</b>
1	BHS-652	Research Methodology-I	1(1-0-0)
2	BPS-653	Research Methodology-II	3(2-0-1x3)
TCE-301		Special Problem	1

**Minor Package:****10 credits****TCE-790 Ph.D Thesis/Research****45 credits****Total Course Credits : 75****credits**