

## **ACADEMIC PROGRAMS**

- **B.Tech (Civil Engineering)**
- **M.Tech (SE & NDM)**
- **Ph.D.**

### **B.Tech (Civil Engineering)**

#### **Overview**

Civil Engineering course is designed with subjects like Engineering Mechanics and Dynamics, Mechanics of Solids, Building Materials and Building Construction, Building planning and drawing, Surveying, Engineering Geology, Structural Analysis, Reinforced Concrete Structures, Fluid Mechanics, Environmental Engineering, Steel Structures, Geotechnical Engineering, Water Resources Engineering, Transportation Engineering, Project planning and Management etc. Apart from that Industrial Tour, Surveying Camp, English Communication Skills, Personality Development Programs, Industrial Training are also included in the curriculum.

#### **Duration**

Duration of B.Tech. programme is of eight semesters (four years) with a maximum permitted time of six years to complete the course from the year of joining.

## Curricula

### First Semester:

<b>Course Code</b>	<b>Name of the Course</b>
EUREG 101	English Language skills
EURMT 102	Engg. Mathematics - I
EURPH 103	Engg. Physics - I
EURCH 104	Engg. Chemistry – I
EURCS 105	Programming with C
EURME 117/217	Geometrical Drawing Lab
EURME 111/211	Workshop Technology Lab
EURPH 112/212	Engg. Physics Lab
EURCS 113	Programming with C Lab

### Second Semester:

<b>Course Code</b>	<b>Name of the Course</b>
EURHS 201	English Writing Skills
EURMT 202	Engg Mathematics-II
EURMT 203	Engg Mathematics-III
EURBS 204	Engineering Physics – II
EURCH 205	Engg. Chemistry – II
EURCS 206	Object Oriented programming with C+ +
EURME 215/115	Engineering Graphics Lab
EURCH 214/114	Engg. Chemistry Lab
EURCS 213	Objected oriented programming with C++ Lab

**Third Semester:**

<b>Course Code</b>	<b>Name of the Course</b>
EURCE 301	Engineering Mechanics- Statics and Dynamics
EURCE 302	Mechanics of Solids
EURCE 303	Building Materials and Building Construction
EURCE 304	Concrete Technology
EURCE 305	Surveying-I
EURCE 306	Engineering Geology
EURCE 311	Concrete Laboratory
EURCE 312	Survey Field Work – I
EURCE 313	Engg Geology Laboratory

**Fourth Semester:**

<b>Course Code</b>	<b>Name of the Course</b>
EURCE 401	Environmental Studies
EURCE 402	Structural Analysis-I
EURCE 403	Building Planning and Drawing
EURCE 404	Fluid Mechanics – I
EURCE 405	Environmental Engineering-I
EURCE 406	Surveying – II
EURCE 411	Fluid Mechanics Laboratory-I
EURCE 412	Environmental Engineering Laboratory-I
EURCE 413	Survey Field Work– II
EURCE 414	* Industrial Tour
EURCE 415	English Communication Skills Laboratory

**Fifth Semester:**

<b>Course Code</b>	<b>Name of the Course</b>
EURCE 501	Structural Analysis-II
EURCE 502	Reinforced Concrete Structures-I
EURCE 503	Steel Structures – I
EURCE 504	Geo-technical Engineering- I
EURCE 505	Fluid Mechanics – II
EURCE 506	Environmental Engineering-II
EURCE 511	Geo-technical Engineering Laboratory-I
EURCE 512	Fluid Mechanics Laboratory-II
EURCE 513	Environmental Engineering Laboratory-II
EURCE 514	Survey Camp (to be conducted after previous Semester)

**Sixth Semester:**

<b>Course Code</b>	<b>Name of the Course</b>
EURCE 601	Reinforced Concrete Structures-II
EURCE 602	Steel Structures – II
EURCE 603	Geo-technical Engineering-II
EURCE 604	Water Resource Engineering-I
EURCE 605	Transportation Engineering-I
EURCE 606	Project Estimation and Contracts
EURCE 611	Strength of Materials Laboratory
EURCE 612	Geo-technical Engineering Laboratory-II
EURCE 613	Transportation Engineering Laboratory-I
EURCE 614	Personality Development

**Seventh Semester:**

<b>Course Code</b>	<b>Name of the Course</b>
EURCE 701	Water Resources Engineering-II
EURCE 702	Transportation Engineering-II
EURCE 703	Project Planning and Management
EURCE 711	Computer Applications in Civil Engineering
EURCE 712	Non Destructive Testing Laboratory
EURCE 713	Transportation Engineering Laboratory-II
EURCE 714	Project Work
EURCE 715	Industrial Training (to be conducted after the third year second Semester for 6weeks)
EURCE 721-727	Departmental Elective-I

**Eighth Semester:**

<b>Course Code</b>	<b>Name of the Course</b>
EURCE 811	Project
EURCE 831-836	Departmental Elective-II
EURCE 841-846	Departmental Elective-III
EURCE 851 to 8524	Inter-Departmental Elective-I
EURCE 861 to 8619	Inter-Departmental Elective-II

## **Pedagogy**

The Department of Civil Engineering imparts in-depth knowledge on its students by means of adept traditional lectures, supplemented by power point presentations with updates and industry relevance. Academic Monitoring Committee appoints counselors to observe and provide the specific academic needs of the students.

## **Evaluation**

The evaluation of student performance in each course is based on continuous internal evaluation through two mid semester examinations, two quizzes & assignments (40%) and end semester examinations (60%) with lucidity.

## **M.Tech. (Structural Engineering and Natural Disaster Management)**

### **Overview**

This program is designed to provide instruction in the international dimension of every structural engineer. It aims at equipping aspiring students to become successful structural engineering professionals in the globally competitive environment. The program provides for specific needs in Structural Engineering, Training in Natural Disaster Management, Rehabilitation and NDT Testing.

### **Duration**

Duration of M.Tech programme is of four semesters (two years) with a maximum permitted time of four years to complete the course from the year of joining the course.

## Curricula

### First Semester:

Course Code	Name of the Course
EPRSE 101	Theory of Elasticity
EPRSE 102	Advanced Reinforced Concrete Design
EPRSE 103	Finite Element Methods of Analysis
EPRSE 104	Structural Dynamics
EPRSE 111	*Computer Applications in Structural Engg.,
EPRSE 112	*Bridge Engineering

### Second Semester:

Course Code	Name of the Course
EPRSE 201	Stability of Structures
EPRSE 202	Structural Reliability
EPRSE 203	Earthquake Engineering
EPRSE 204	Disaster Management
EPRSE 211	*Repairs, Renovation and Rehabilitation of Structures
EPRSE 212	*Theory of Plates and Shells

### Third Semester:

Course Code	Name of the Course
EPRSE 301	Foundations for Dynamic Loading
EPRSE 302	Hydraulic and Marine Structures
EPRSE 321-324	Elective (Any one of the following)
EPRSE 311	**Project Phase-I

**Fourth Semester:**

<i>Course Code</i>	<i>Name of the Course</i>
<i>EPRSE 411</i>	<i>***Project Phase-II</i>

**Ph.D.**

Ph.D. degree is offered in the areas of Structures, NDE of structures, Reliability based analysis, Heat resistant concrete, GIS etc.

**Duration**

Three years for full time scholars and four years for part time scholars