

## Course Outcomes

### FIRST SEMESTER B. E.

#### Basic Civil Engineering

**After studying this subject, the students will be able to**

C101.1	Know the scope of civil engineering in various fields and understand and describe the basic terms related to survey, planning, and construction of infrastructure.
C101.2	Understand and define the terms related to water and waste water generation and treatment
C101.3	Understand and explain the basic terms related to water resources and its management
C101.4	Understand the concept of green building and define the terms related to its rating and certification.

### SECOND SEMESTER B. E.

#### Engineering Mechanics

**After studying this subject, the students will be able to**

C202.1	Acquire the basic knowledge of resolution of various forces acting on the rigid bodies.
C202.2	Understand and analyze the effect of forces on the rigid bodies with the help of various laws and theories.
C202.3	Explain and draw the effect of forces on rigid bodies.
C202.4	Apply the basic knowledge obtained in engineering mechanics in solving the engineering problems.

#### Engineering Mechanics (Practical)

**After the conduction of practical's will be able to perform the test to:**

C202.1	Perform the test to ascertain the equilibrium of a body under various systems of forces.
C202.2	Perform the tests to understand the terminology related to simple lifting machine, friction, mass moment of inertia.
C202.3	Calculate and draw a graphical solution to problems of equilibrium.

### THIRD & FOURTH SEMESTER B. E. CIVIL

#### BECVE303T Environmental Engineering – I

**After studying this subject, the students will be able to**

C303.1	Understand the function of various units of water supply scheme and apply the knowledge in planning and design of water supply system.
C303.2	Calculate the capacity of water supply scheme.
C303.3	Have the basic knowledge related to the water conveyance systems and the appurtenances used.
C303.4	Have knowledge of characteristics of water, drinking water standards and necessity of treatment.
C303.5	Design various units of conventional water treatment plant.
C303.6	Have the basic knowledge related to generation, collection, treatment disposal of solid waste.

#### BECVE 303 P Environmental Engineering – I (Practical)

**After the conduction of practical's will be able to perform the test to:**

C303.1	Perform different tests to ascertain physical, chemical and biological characteristic of given water sample.
C303.2	Understand the importance of levels of BOD & COD in a waste water treatment and know various methods to determine the same.
C303.3	Understand and visualize the working of various units of Water Treatment Plant during the visit and can write a report.

**BECVE403T/5CE04T Transportation Engineering – I****After studying the subject, the students will be able to**

C403.1	Exhibit the knowledge of planning, design and construction practices in highway & bridge engineering.
C403.2	Acquire the knowledge of geometric design and the fundamental properties of highway materials and draw appropriate conclusion.
C403.3	Understand and use the concept of different methods in design, construction, inspection and maintenance of the pavement.
C403.4	Undertake various Traffic studies and apply the knowledge in planning and design of pavement and geometrics
C403.5	Understand and describe the terms related to bridge and hydrological parameters of importance in bridge design.
C403.6	Understand the explain different sub-structures and super-structures of a bridge and its construction, inspection and maintenance.

**BECVE403P/5CE04P Transportation Engineering – I (Practical)****After studying the subject, the students will be able to**

C403.1	Understand the classification and strength parameters of sub-grade soil through various tests.
C403.2	Acquire the knowledge about different physical and engineering properties of aggregates by performing different test on road aggregates.
C403.3	Understand the various properties of bitumen material by performing various tests on it.

**FIFTH & SIXTH SEMESTER B. E.****BECVE502T Reinforced Cement Concrete Structures (RCC)****After studying this subject, the students will be able to**

C502.1	Understand the basic concepts of structural design Methods of RCC to the practical problem
C502.2	Understand the composite action of reinforced steel and concrete in reinforced concrete structural members
C502.3	Use the knowledge of the structural properties of materials i.e. steel and concrete in assessing the strength.
C502.4	Use the knowledge in structural planning and design of various components of buildings.
C502.5	Apply the concepts and applications of prestressed concrete in real problems

**BECVE502P Reinforced Cement Concrete Structures (RCC) (Practical)****After the conduction of practicals will be able to perform the test to:**

C502.1	Apply the knowledge in actual structural design for various buildings.
C502.2	Make use of structural design knowledge in reading and understanding the professional RCC drawing and draw an appropriate conclusion.
C502.3	Understand the implementation of working drawing and write a report during the visit to any construction site.

**BECVE601T Steel Structures****After studying this subject, the students will be able to**

C601.1	Apply the knowledge of structural properties in assessing its strength for the construction purpose.
C601.2	Analyze the steel structural components by using various techniques.
C601.3	Make use of understanding and knowledge of analysis in structural planning and design of various buildings components.
C601.4	Use computer techniques to analyze the steel components of a building

<b>BECVE601P Steel Structures (Practical)</b>	
<b>After the conduction of practicals will be able to perform the test to:</b>	
C601.1	Able to calculate axially loaded member by tensions and compression members.
C601.2	Design of connection: Beam to beam, beam to column.
C601.3	Design of column & its components.
<b>SEVENTH &amp; EIGHTH SEMESTER B. E. CIVIL</b>	
<b>BECVE701T Advanced Concrete Structures</b>	
<b>After studying this subject, the students will be able to</b>	
C701.1	Understand the behavior and failure modes different concrete members
C701.2	Analyze and apply the results in designing various concrete member of structure.
C701.3	Apply the knowledge & skills in practical problems
C701.4	Understand the relevant software and use the same in analysis & design of concrete members.
<b>BECVE701P Advanced Concrete Structures (Practical)</b>	
<b>After the conduction of practicals will be able to perform the test to:</b>	
C701.1	Analyze and design various concrete member of structure.
C701.2	Understand the relevant software and use the same in analysis & design of concrete members.
C701.3	Can write a report of visit to a site of concrete construction
<b>BECVE803T Water And Waste Water Treatment (Elective - III)</b>	
<b>After studying this subject, the students will be able to</b>	
C803.1	Understand the composition of typical municipal solid wastes, their sources, collection, treatment and disposal.
C803.2	Attain the ability to use the techniques, skills, and modern engineering tools necessary for environmental engineering practices.
C803.3	Understand the stages and process of waste water treatment
C803.4	Understand the use and working of various units of water treatment plant.
C803.5	Make use of the knowledge related to WTP in the design of different units of water & waste water treatment plant.
C803.6	Acquire the knowledge of recent development in water & waste water treatment .
<b>BECVE803P Water And Waste Water Treatment (Elective - III) (Practical)</b>	
<b>After the conduction of practicals will be able to perform the test to:</b>	
C803.1	Know various water and waste water parameter.
C803.2	Perform various tests on different samples of water and waste water to ascertain the presence of impurities so as to evaluate the quality of water.
C803.3	Make use of the knowledge to Design individual units of a WTP.