

PROGRAMME OUTCOMES:

- Students acquire a sound in depth understanding of all fundamental concepts of engineering.
- Acquisition and enhancement of skills in the practical use of technology & scientific techniques.
- Employment at the entry and middle level positions in the industry.
- Building careers as supervisors, foremen, sales engineers, workshop technicians, draughtsman, service station managers, auto engineers and workshop superintendents etc.
- Lateral entry into Bachelor of Technology course after successful completion of diploma.

PROGRAMME OUTCOMES:

Diploma Civil Engineering

- The students will develop an ability to apply the basic knowledge of mathematics, science, and engineering to real life work problems.
- Ability of problem identification, formulation, and to conduct experiments for problem solving through analysis and interpretation of data.
- Ability to build, plan, manage, and operate the physical elements of the human habitat.
- Skills development to obtain employment in the areas of transportation, geotechnical, environmental, structural engineering, and construction engineering and management.
- The students will be able to recognize their professional and ethical responsibilities.
- The learners will become capable of understanding the impact of implementation of engineering solutions in global and societal context.
- The students will become effective communicators to gradually rise in the hierarchy in their career.
- They would demonstrate peer recognized together with the ability to articulate that expertise & use it for contemporary problem solving in the analysis, design, and evaluation of civil engineering projects.
- The students will be able to demonstrate sustained learning in the dynamic professional environment.

COURSE OUTCOMES:

Semester III

Paper: Applied Mechanics

Paper Code: DTME 301

The course uses the Laws of Mechanics to predict forces in and motions of machines and structures. The course is the key prerequisite course to sequences of courses dealing with mechanics of machines, stress analysis and design of mechanical systems.

Upon successful completion of this course, the student will be able to:

- Differentiate between Scalar and Vector Quantities
- Carry out simple calculations on the laws of motion

Paper: Hydraulics

Paper Code: DTCE301

After completion of this course the students will be able:

- To understand the concept of fluid and know the property of fluid.
- To find out the pressure due to fluid.
- To study and find out the energy due to different fluid flow in different channels.
- To study and find out the losses in the fluid flow.
- To study how to remove the losses due to different shapes of channel and to study the hydraulic pump.

Paper: Surveying-I

Paper Code: DTCE302

After completion of this course the students will be able:

- To give an introduction on the application of surveying for Civil Engineers.
- To give a brief on the traditional methods of taking distances.
- To introduce about the angle measuring instruments along with their uses across various fields.
- To describe about the methods to determine vertical distances i.e.; height, depth of various points.
- Students get to know about the map making.

Paper: Building Materials

Paper Code: DTCE303

Diploma holders in civil engineering have to supervise the construction of various types of civil works involving use of various materials like stone, bricks and tiles limes, timber.

After completion of this course the students will know:

- How to abstract stones from quarrying sites and uses of different types of stones.
- To know about how to manufacture bricks and tiles.
- Learn about how to use lime and timber in building construction.
- To know about different types of paint and varnishes.
- To know about other miscellaneous materials used in building construction.

Paper: Building Constructions

Paper Code: DTCE304

Civil engineering diploma are required to supervise the construction of structural building, roads, pavements, dams, embankments and other civil engineering structure. So this subject will help to understand the basic principle as well as current design practice in the construction of building.

After completion of this course:

- Student will be able to know about the component of building and details of foundation.
- Student will learn about the individual steps of construction cycle of a building from its base (foundation) to its top (roof).
- Ability to understand the construction terminology and process.
- To know about planning of building, services and building codes
- Students will get to know information regarding finishing of building.

Semester IV

Paper: Concrete Technology

Paper Code: DTCE 401

After completion of this course:

- The students will learn about the basics of concrete and its important constituents.
- They will get to know about the various tests that are performed on concrete.
- They will learn about various mechanical properties of concrete and its various standards.
- They will learn about various admixtures used in concrete.
- They will learn about various operations performed in manufacturing of concrete, defects and remedies related to the same.

Paper: Geology

Paper Code: DTCE 402

After completion of this course the student will be able:

- To understand the basic concept of minerals and their physical properties.
- To understand the basic knowledge about origin of rocks.
- To learn and identify the different secondary structures of the rocks.
- To learn about earthquake engineering and different seismic waves
- To understand the general characteristics of site for construction of different structures like dam, tunnel etc

Paper: Water Supply & Waste Water Engg.

Paper Code: DTCE403

After completion of this course the student will be aware of:

- Brief describe of water supply
- Collection and conveyance of sewage.
- Sewage treatment plant.
- Drainage system.

Paper: Strength of Materials

Paper Code: DTCE404

After completion of this course:

- The students will get to know about the various properties of engineering materials and the tests through which these properties are revealed.
- They will learn about various beams and impact of shear force and bending moment on them.
- They will learn about shear stresses in beams and their distribution and also basics of slope and deflection in beams.
- They will learn about various columns and their failure theory and also the analysis of trusses.

Paper: Surveying-II

Paper Code: DTCE 405

After completion of this course the student will be able:

- To understand the concept of contouring and how altitude is shown in maps.
- To understand the use of Theodolite in Civil Engineering.
- To have knowledge of tachometric surveying means determining distances by optical means and its use.
- To understand the various functions and types of curves in road laying.

- To introduce various modern instruments like EDM, Remote Sensing used in civil engineering.

Semester V

Paper: Reinforced Cement Concrete

Paper Code: DTCE 501

After completion of this course the student will be able to:

- Understand the basic concept of Reinforced Cement Concrete, Properties of Steel and Concrete.
- Understand the design and Analysis of Singly and Doubly Reinforced Beam through “Working Stress Method” for Moment, Shear, Bond and Development length.
- Understand the design and Analysis of Singly and Doubly Reinforced Beam through “Limit State Method” for Moment, Shear, Bond and Development length.
- Understand the design and Analysis of One Way Slab through “Limit State Method” for Moment, Shear, Bond and Development length.
- Understand the basic concept of pre-stressed concrete and its application.

Paper: Railway, Bridge & Tunnel Engg.

Paper Code: DTCE 502

After completion of this course the student will be able:

- To evaluate the quality and performance of different rails and use the suitable type of rail.
- Selecting the appropriate materials for use in different railway track.
- To know the features of railway track, its system and how it work.
- Student will able to summarize the function of different bridge component.
- Student will able to design tunnel, rock support and carry out the basic design of ventilation and drainage.

Paper: Irrigation Engineering

Paper Code: DTCE 503

After completion of this course:

- The students will get to know about the evolution of irrigation system and its necessity.
- They will learn the basics of hydrological cycle and about rain.
- They will learn about various irrigation systems in detail.
- They will learn about tube wells and their importance in irrigation systems.
- They will learn in detail about dams, canals, spillways and their use in irrigation systems.

Paper: Highway Engineering

Paper Code: DTCE 504

After completion of this course the student will be able to:

- Understand the factors influencing road vehicle performance, characteristics, and design.
- Apply basic science principles in estimating stopping and passing sight distance requirements.
- Understand basic traffic stream parameters, and models, traffic flow models, and queuing models.
- Perform level of service analysis to determine LOS for selected highway segments.

Paper: Soil Mechanics & Foundation Engineering

Paper Code: DTCE 505

After completion of this course the student will be able to:

- Calculate the initial vertical stresses in a stratum and calculate the additional stresses from loading.
- Given a problem, chose proper soil mechanical model for the design of a construction.
- Analyze and design shallow foundations with respect to settlements and stability.
- To identify the soil characteristic of soil by soil exploration.
- To know the soil properties on the basis loading.

Semester VI

Paper: Steel Structure

Paper Code: DTCE 601

After completion of this course the student will be able:

- To evaluate the quality and performance of different steel section.
- To know about the different connections used in steel structure.
- To know about the design feature of different members.
- Student will able to summarize the function of different truss component.
- Student will able to design different types of girder, beam &columnn.

Paper: Earthquake Resistant Building Construction

Paper Code: DTCE 602

After completion of this course the student will be able:

- To learn about the basic concept of earthquake and its origination.
- To learn the Seismic behaviors of traditionally built structures and make them earthquake resistant.
- To learn Special construction methods of earthquake resistant buildings and implement it in our structures.
- To learn about the different IS code guidelines uses in earthquake resistant buildings
- To learn about the Disaster management and rescue plans.

Paper: Estimating costing & Construction Management

Paper Code: DTCE 603

After completion of this course the student will be able:

- To understand the basic concept of estimating, costing of construction.
- To understand the basic knowledge regarding analysis of rates.
- The students will get to know about contract and type of contract.
- To learn about preparation of tender document.
- To have knowledge of contracting, principles of valuation.

Paper: Entrepreneurship Development & Management

Paper Code: DTHU 604

After completion of this course the student will be able:

- To impart managerial knowledge and understanding among people.
- To widen the base of entrepreneurship by development, achievement, motivation and entrepreneurial skills among the less privileged sections of the society.
- To provide information about the process, procedure, rules and regulations for setting up a new project.

Paper: Environment Engineering

Paper Code: DTCE 605

After completion of this course:

- The students will get to know about basic concepts of environmental engineering, pollutions and methods to control the same.
- They will learn about various types of pollutions, their causes and control.
- They will get to know about the various human activities which adversely affect the environment.
- They will learn about various environmental assessments and acts to control pollution.
- They will learn about various global environmental engineering issues, and conservation of energy resources.