

Savitribai Phule Pune University, Pune

Second Year Civil Engineering (2015 Course)

Coarse Objectives TE - 2015 Pattern.

301001- Hydrology and Water Resources Engineering

Outcomes

1. Able to describe the hydrologic cycle and analyze the precipitation data
2. Able understand methods and concept of the stream gauging.
3. Able to interpret the methods of irrigation and assess the canal revenue
4. Outline the ground water hydrology.
5. Able to analyze the flood frequency and runoff hydrograph.
6. Able to characterize the various terms related to reservoir planning. And understand water logging

301002- Infrastructure Engineering and Construction Techniques

Course Outcomes:

On completion of the course, learner will be able to

1. Explain rail components, Cant, curves, crossing and Turnout.
2. Elucidate different dewatering Techniques.
3. Explain different types of tunnel construction methods and their suitability.
4. To Understand the different types of Earth moving equipment's and their capacities as well as suitability.

301003- Structural Design-I

Course Outcomes-

1. Identify the different failure modes of steel tension and compression members and beams, and compute their design strengths.
2. Select the most suitable section shape and size for tension and compression members and beams according to specific design criteria.
3. Identify the different failure modes of bolted and welded connections, and determine their design strengths.
4. Design bolted and welded connections for tension and compression members and beams.

301004-Structural Analysis-II

Coarse Outcomes

1. Able to identify types of structure.
2. Able to analyze the structure using different methods.
3. Able to identify the deflection of structure.
4. Able to identify whether structure is safe or not
5. Able to identify structural bearing capacity.

301005-Fluid Mechanics II

Course Outcomes: Student will be able to understand :

1. Fluid Flow around Submerged Objects.
2. Depth-Energy Relationships in Open Channel Flow
3. Find energy dissipated in a hydraulic jump
4. Uniform flow in open channel.
5. Understand and apply knowledge of pumps.
6. Understand and apply knowledge of turbines.

301006-Employability Skill Development

1. Students will be able to understand Employability and skills required for it alongwith career planning.
2. Students will be able to enhance Interpersonal Skills.
3. Students will be able to enhance Presentation Skills.
4. Students will be able to enhance Communication Skills.
5. Students will be able to understand Commercial Awareness.
6. Students will be able to enhance Personal Skills.

301007- Advanced Surveying

Coarse Outcomes

1. Able to carry out field geodetic survey and apply triangulation adjustment with modern equipment's.
2. Able to do geodetic trigonometric leveling survey and apply corrections.
3. Able to perform hydrographic survey and get solution for problems related to it.
4. Able to study aerial photography and applications in civil engineering.
5. Learn Remote sensing and GIS and its application in civil engineering fields.

301008- Project Management and Engineering Economics.

Course outcomes The student will be able to understand;

1. Objective, functions and principles of Management.
2. Project planning and objectives.
3. Project monitoring and control, Resource allocations.
4. Introduction to project economics.
5. Objective of material management.
6. Project appraisal ,

301009-FOUNDATION ENGINEERING

Course Outcomes:

1. Be able to comprehend and utilize the geotechnical literature to establish the framework for foundation design.
2. Be able to plan and implement a site investigation program including subsurface exploration to evaluate soil/structure behavior and to obtain the necessary design parameters.
3. Be able to carry out laboratory and field compaction tests for preparation of foundation surfaces and placement of engineered fill.
4. Be able to determine allowable bearing pressures and load carrying capabilities of different foundation systems.
5. Be able to understand and recognize the behavior of soils in slopes and behind retaining structures.
6. Be able to analyze the stability of unsupported slopes and evaluate the construction requirements for stabilizing slopes.
7. Be able to estimate lateral loads on retaining structures and foundation walls.
8. Provide the students with the knowledge to determine hydraulic head and estimate flow through porous media.
9. Provide students with the knowledge to estimate loads on buried conduits.
10. Understand the relationship between the design load and construction practice.

301010 - Structural Design-II

Course Outcomes-

1. Identify and compute the main mechanical properties of concrete and steel.
2. Identify and calculate the design loads and distribution.
3. Apply the strength method to design R.C. structural members.
4. Analyze and design short and slender R.C. columns.
5. Analyze and design R.C. slabs, Beams, Footing etc.

301011- Environment Engineering-I

Course Outcomes:

1. Understand water quality concepts and their effect on treatment process selection.
2. Appreciate the importance and methods of operation and maintenance of water supply systems.
3. Communicate effectively in oral and written presentations to technical and non-technical audiences.
4. After successful completion of the course, the students should be capable of understanding the modern water treatment principles and philosophy.
5. Students should be able to cope with the basic design and operation of unit processes for conventional and advanced water treatment.
6. Graduate exhibit the knowledge to calculate the demand needs for water supply to households, industry and public services.

301012 Seminar

Course Outcomes:

1. Able to understand objective, functions and principles of research topic selection for seminar.
2. Able to understand how to collect research topic related information.
3. Able to understand which methodology is suitable for your research topic?
4. Able to understand how to analysis of data.
5. Able to understand how to prepare seminar report
6. Able to understand how to present seminar.