

SavitribaiPhule University of Pune
Final Year Civil Engineering (2012 Course)

SEMESTER - I

401 001

Environmental Engineering II

Course Outcomes:

Student shall be able to

1. Define objectives, explain collection and conveyance and to estimate quantity of wastewater.
2. Describe wastewater characteristics; explain preliminary and primary treatment processes and its design along with effluent standards.
3. Explain the processes of biological treatment units for wastewater
4. Describe low cost treatments, disposal methods and self purification capacity of the stream
5. Explain air pollution sources, effects and control measures.
6. Define Environmental Impact Assessment, explain its methods and understand latest trend

401 002

Transportation Engineering

Course Outcomes:

Student shall be able to

1. Measure and calculate different traffic parameters like speed, flow, travel time and delay.
2. Apply appropriate statistical methods while dealing with different types of traffic data collected during traffic studies and must have an understanding of measures for traffic safety.
3. Plan the urban transportation System for Indian Cities and must have an understanding of rules of Motor Vehicle Act.
4. Carry out the geometrical design of the airport infrastructure
5. Implement different visual aids required at airport.

6. Carryout design of tunnels for various rock types

401 003

Structural Design and Drawing III

Course Outcomes:

Student shall be able to

1. Apply the fundamental concepts of working stress method as per IS 456-2000.and Prestressed concrete method.
2. Apply the fundamental concepts of limit state method on limit state of Serviceability
3. Design Rectangular and Trapezoidal combined footing.
4. Design cantilever and counter-fort retaining walls.

401 004 Elective I

Advanced Concrete Technology

Course Outcomes:

Student shall be able to

1. Identify Quality Control tests on concretemaking materials
2. Understand the behavior of fresh andhardened concrete
3. Understand Mechanical properties of concrete
4. Use various additives & admixtures ofconcrete
5. Design concrete mixes as per IS and ACIcodes
6. Understand the durability requirements ofconcrete

401 005 Elective II

Earthquake Engineering

Course Outcomes:

Student shall be able to

1. Understand earth geology, movements ofthe plates, earthquakes
2. Calculate the magnitude & intensity of theearthquake
3. Understand the concept of Earthquakeresistant design of structures

4. Perform the seismic analysis of multistoried building
5. Understand the impact of special aspects of building on seismic response
6. Understand the requirement of ductile detailing in frame members

SEMESTER - II

401 007

Dams and Hydraulic Structures

Course Outcomes:

Student shall be able to

1. Apply a sound knowledge of hydrology, meteorology, geology, conservation and resource management in day to day life.
2. Apply knowledge of reservoir planning and dams during execution of hydraulic structure
3. Determine various forces acting on rigid as well as non rigid dams.
4. Use skills for design of spillways & diversion head works etc.
5. Demonstrate components of canals.
6. Design, analyze and prepare model of canal structures from very small to very large extent.

401 008

Quantity Surveying, Contracts and Tenders

Course Outcomes:

Student shall be able to

1. Write specification related to building, irrigation & road work
2. Use knowledge of purposes & methods of estimates.
3. Calculate quantity estimates of various materials.
4. Calculate quantity of estimates for road irrigation & other items.
5. Effectively value the properties of civil engineering aspects.
6. Perform site administration for organization as construction industry.

401 009 Elective III

Air Pollution and control

Course Outcomes:

Student shall be able to

1. To explain air pollution sources, effects and control measures.
2. To define Environmental Impact Assessment, explain its methods and understand latest trend
3. Develop environmental awareness and various policies.
4. Suggest and implement various air pollution control techniques.

401 010 Elective IV

Green Building Technology

Course Outcomes:

Student shall be able to

1. Gain a broad understanding & explain the basic concepts of Green Building
2. Identify, formulate & explore use various green construction materials, processes and systems
3. Apply knowledge of local, national and international rating systems while designing green buildings
4. Apply modern green engineering tools, techniques & skills necessary for engineering practice in energy efficiency concept during execution.
5. Use various methods of energy and water conservation for development of sustainable building.
6. Explain the contemporary issues and development associated with green building