



Vidya Vikas Education Trust's  
Universal College of Engineering, Kaman Road, Vasai-401208

DEPARTMENT OF CIVIL ENGINEERING

**COURSE OUTCOMES**

Year/Class/ Semester: T.E./CE/ VI

Subject Code	Subject Name	CO's
CE-C601	Geotechnical Engg.– II	At the end of the course students will be able to: <b>CO1-</b> Evaluate consolidation and shear strength parameter for soil. <b>CO2-</b> Calculate lateral earth pressure and analyze the stability of retaining wall. <b>CO3-</b> Estimate bearing capacity of shallow foundation and load carrying capacity of pile foundation. <b>CO4-</b> Analyze stability of slope.
CE-C602	Design & Drawing Of Steel Structures	At the end of <b>CO1-</b> Explain the Limit State Design philosophy as applied to steel structures. <b>CO2-</b> Predict the behavior and design members subjected to axial compression, tension and their connection. <b>CO3-</b> Predict the behavior and design members subjected to bending, shear and their connection. <b>CO4-</b> Calculate loading for a truss and design the complete truss. <b>CO5-</b> Demonstrate ability to follow IS codes, design tables and aids in analysis and design steel structures. <b>CO6-</b> Analyze and design the commercial steel structures and prepare drawing with complete detailing.
CE-C603	Transportation Engg. – II	At the end of the course students will be able to: <b>CO1-</b> Understand the various systems of railway, airport, water transportation and the components of p-way and its construction, yards, modernization of railway track. <b>CO2-</b> Apply the concept of geometric design of railway track and railway traffic control. <b>CO3-</b> Understand airport planning, obstructions and orientation of runway. <b>CO4-</b> Apply the concept of geometric design of runway, taxiway, etc. and the knowledge of various signaling system for air traffic control. <b>CO5-</b> Understand the system of water transportation, types of breakwater, harbours and port facilities equipment <b>CO6-</b> Understand the basic idea about the bridge engineering.
CE-C604	Environmental Engineering – II	At the end of the course students will be able to: <b>CO1-</b> Understand and explain the role of sanitation and its relation to public health and environment.



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		<p>CO2- Provide knowledge of wastewater collection system, characteristics of wastewater.</p> <p>CO3- Provide students the necessary knowledge and concepts of advancements/emerging techniques of treatment in physical, chemical and biological treatment processes.</p> <p>CO4- Study the appropriate treatment, reclamation and resource recovery and re-use at both centralized and decentralized levels. Also, to study self-purification in nature.</p> <p>CO5- Develop rational approaches towards sustainable wastewater management via sludge recovery and treatments.</p> <p>CO6- Provide necessary skill for understanding and operation of solid waste management facilities.</p>
CE-C605	Water Resources Engineering-I	<p>At the end of the course students will be able to:</p> <p>CO1- Classify various types of irrigation projects.</p> <p>CO2- Explain different irrigation methods and effective use of water resources.</p> <p>CO3- Calculate the crop water requirements and irrigation requirement.</p> <p>CO4- Derive hydrographs and calculate runoff of a catchment area.</p> <p>CO5- Explain the steady state and unsteady state conditions of any aquifer and design water wells.</p> <p>CO6- Estimate the capacity of a reservoir for different purposes.</p>
CE-DLO 6061	Department Level Optional Course-II-Advanced Construction Equipment	<p>At the end of the course students will be able to:</p> <p>CO1- Understand the use of various equipments and select the best out of them for a particular site requirement.</p> <p>CO2- Know modern methods/equipment used for inderground as well as underwater tunneling.</p> <p>CO3- Compare conventional and modern methods of formwork on basis of productivity, reuse value, ease of assembly, flexibility offered and overall cost.</p> <p>CO4- Understand the techniques involved and the equipment required thereof for the construction of various transporting facilities.</p> <p>CO5- Gain Knowledge about the setting up of different kinds of power generating structures.</p>
CE-DLO 6062	Department Level Optional Course-II-Traffic Engineering and Management	<p>At the end of the course students will be able to:</p> <p>CO1- Understand different characteristics of the road users and vehicles from their consideration and view point in the traffic engineering and transportation planning.</p> <p>CO2- Conduct different traffic surveys, analyzing the data collected as a part of such studies and interpreting it with the help of the different statistical models.</p>



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		<p>CO3- Explain the concepts of PCU and LoS, their implication in determination of the capacity using Speed-Flow-Density relationships.</p> <p>CO4- Discuss the aspects associated with highway safety and different TSM measures.</p> <p>CO5- Discuss transportation planning and ascertain the financial viability of any transportation network in the inception stage itself.</p> <p>CO6- Plan the various features of highway geometrics and transportation infrastructure constituents to ensure safe, rapid, economical and efficient of the traffic.</p>
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