

<b>B. E. CIVIL ENGINEERING</b> <b>Choice Based Credit System (CBCS) and Outcome Based Education (OBE)</b> <b>SEMESTER - VI</b> <b>EXTENSIVE SURVEY PROJECT</b>			
Course Code	18CVEP68	CIE Marks	40
Teaching Hours/Week(L:T:P)	(0:2:2)	SEE Marks	60
Total Number of Practice Hours	02	Exam Hours	03
<b>Course Learning Objectives:</b> This course will enable students to <ol style="list-style-type: none"> <li>1. Understand the practical applications of Surveying.</li> <li>2. Use Total station and other Measurement Equipments.</li> <li>3. Work in teams and learn time management, communication and presentation skills</li> </ol>			
<b>Note:</b> <ul style="list-style-type: none"> <li>• To be conducted between 5th &amp; 6th Semester for a period of 2 weeks including training on total station.</li> <li>• Viva voce conducted along with 6th semester exams</li> <li>• An extensive project preparation training involving investigation, collection of data is to be conducted. <b>Use of Total Station is compulsory for minimum of TWO projects.</b></li> <li>• The student shall submit a project report consisting of designs and drawings.</li> <li>• Drawings should be done using CAD and survey work using total station</li> <li>• Students should learn data download from total station, generation of contours, block leveling, longitudinal and cross sectional diagrams, and capacity volume calculation by using relevant softwares</li> <li>• The course coordinators should give exposure and simulate activities to achieve the course outcomes</li> </ul>			
1. <b>NEW TANK PROJECTS:</b> The work shall consist of; <ol style="list-style-type: none"> <li>a. Reconnaissance survey for selection of site and conceptualization of project.</li> <li>b. Alignment of center line of the proposed bund, Longitudinal and cross sections of the center line.</li> <li>c. Detailed survey required for project execution like Capacity surveys, Details at Waste weir and sluice points, Canal alignment etc. as per requirement</li> <li>d. Design and preparation of drawing with report.</li> </ol>			
2. <b>WATER SUPPLY AND SANITARY PROJECT:</b> The work shall consist of; <ol style="list-style-type: none"> <li>a. Reconnaissance survey for selection of site and conceptualization of project.</li> <li>b. Examination of sources of water supply, Calculation of quantity of water required based on existing and projected population.</li> <li>c. Preparation of village map by using total station.</li> <li>d. Survey work required for laying of water supply and UGD</li> <li>e. Location of sites for water tank. Selection of type of water tank to be provided. (ground level, overhead and underground)</li> <li>f. Design of all elements and preparation of drawing with report.</li> </ol>			
3. <b>HIGHWAY PROJECT:</b> The work shall consist of; <ol style="list-style-type: none"> <li>a. Reconnaissance survey for selection of site and conceptualization of project.</li> <li>b. Preliminary and detailed investigations to align a new road (min. 1 to 1.5 km stretch) between two obligatory points. The investigations shall consist of topographic surveying of strip of land for considering alternate routes and for final alignment. Surveying by using total station.</li> <li>c. Report should justify the selected alignment with details of all geometric designs for traffic and design speed assumed.</li> <li>d. Drawing shall include key plan initial alignment, final alignment, longitudinal section along final alignment, typical cross sections of road.</li> </ol>			
4. <b>RESTORATION OF AN EXISTING TANK:</b> The work shall consist of; <ol style="list-style-type: none"> <li>a. Reconnaissance survey for selection of site and conceptualization of project.</li> <li>b. Alignment of center line of the existing bund, Longitudinal and cross sections of the center line.</li> <li>c. Detailed survey required for project execution like Capacity surveys, Details at Waste weir and sluice points, Canal alignment etc. as per requirement</li> <li>d. Design of all elements and preparation of drawing with report.</li> </ol>			

  
 H.O.D.  
 Dept. of Civil Engineering  
 Aiva's Institute of Engg. & Technology  
 Mijar, Moodbidri - 574 225

5. **TOWN/HOUSING / LAYOUT PLANNING:** The work shall consist of;
- Reconnaissance survey for selection of site and conceptualization of project.
  - Detailed survey required for project execution like contour surveys
  - Preparation of layout plans as per regulations
  - Centerline marking-transfer of centre lines from plan to ground
  - Design of all elements and preparation of drawing with report as per regulations


**Course outcomes:** After studying this course, students will be able to:

- Apply Surveying knowledge and tools effectively for the projects
- Understanding Task environment, Goals, responsibilities, Task focus, working in Teams towards common goals, Organizational performance expectations, technical and behavioral competencies.
- Application of individual effectiveness skills in team and organizational context, goal setting, time management, communication and presentation skills.
- Professional etiquettes at workplace, meeting and general
- Establishing trust based relationships in teams & organizational environment
- Orientation towards conflicts in team and organizational environment, Understanding sources of conflicts, Conflict resolution styles and techniques

**Reference Books:**

Training manuals and User manuals

Relevant course reference books

  
H.O.D.  
Dept. of Civil Engineering  
Alva's Institute of Engg. & Technology  
Majur, Moodbidri - 574 225