

|| Jai Sri Gurudev||  
**Sri Adichunchanagiri Shikshana Trust (R)**  
**ADICHUNCHANAGIRI UNIVERSITY**  
**BGS Institute of Technology**

**B. E. CIVIL ENGINEERING**  
**Choice Based Credit System (CBCS) and Outcome Based Education (OBE)**

<b>18CVL56</b>	<b>Course Code</b>	<b>COMPUTER AIDED DRAWING-III</b>	<b>Course Title</b>	<b>V</b>	<b>Semester</b>
<b>2</b>	<b>Credits</b>	<b>1- 0 - 2 -3</b>	<b>L - T - P -TL*</b>	<b>40 Hours</b>	<b>Teaching Period</b>
<b>100 Marks</b>	<b>Total</b>	<b>60 Marks</b>	<b>SEE*</b>	<b>40 Marks</b>	<b>CIE*</b>
<p><b>*NOTE: L – Lecture; T – Tutorial; P – Practical; TL – Total;</b>  <b>CIE – Continuous Internal Evaluation; SEE – Semester End Examination</b></p>					

<p><b>Course Learning Objectives:</b>  This course will enable students</p> <ol style="list-style-type: none"> <li>1. Achieve skill sets to prepare computer aided engineering drawings</li> <li>2. Understand the details of construction of different building elements.</li> <li>3. Visualize the completed form of the building and the intricacies of construction based on the engineering drawings.</li> </ol>	<p><b>Number of Lecture Hours/Week</b></p>
<p><b>Module 1:</b>  <b>Drawings Related to Different Building Elements:</b> Following drawings are to be prepared for the data given using CAD Software</p> <ol style="list-style-type: none"> <li>a) Different types of staircases – Dog legged, Open well.</li> <li>b) Lintel and chajja.</li> <li>c) RCC slabs</li> <li>d) Beams.</li> <li>e) Cross section of a pavement.</li> <li>f) Septic Tank and sedimentation Tank.</li> <li>g) Cross sectional details of a road for a Residential area with provision for all services.,</li> </ol> <p><b>Note: Students should sketch to dimension the above in a sketch book before doing the computer drawing.</b></p>	<p><b>03 Hours (1 Hour Instruction + 2 Hours Laboratory)</b></p>
<p><b>Module 2:</b>  Use of EXCEL spread sheets:</p> <ol style="list-style-type: none"> <li>a). Design of singly reinforced and doubly reinforced rectangular beams,</li> <li>b). Design of one way and two way slabs</li> </ol>	
<p><b>Course outcomes:</b>  After a successful completion of the course, the student will be able to:</p> <ol style="list-style-type: none"> <li>1. Gain a broad understanding of planning and designing of buildings</li> <li>2. Prepare, read and interpret the drawings in a professional set up.</li> <li>3. Know the procedures of submission of drawings and Develop working and submission drawings for building</li> <li>4. Prepare detailed working drawings</li> </ol>	

**Question paper pattern:**

1. Two questions shall be asked from each Module.
2. One full question should be answered from each Module.
3. Each question carries 40 marks.

**Text Books:**

1. N Krishna Raju, "Structural Design and Drawing of Reinforced Concrete and Steel", University Press
2. Krishna Murthy, "Structural Design and Drawing – Concrete Structures", CBS Publishers, New Delhi.

**Reference Books:**

1. SP 34: Handbook on Concrete Reinforcement and Detailing, Bureau of Indian Standards
2. IS 13920:2016, Ductile Design And Detailing Of Reinforced Concrete Structures Subjected To Seismic Forces - Code Of Practice, Bureau of Indian Standard.