



ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

ವಿಜಯ ಅಧಿನಿಯಮ ೧೯೯೪ರ ಅಡಿಯಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರದಿಂದ ಸ್ಥಾಪಿತವಾದ ರಾಜ್ಯವಿಶ್ವವಿದ್ಯಾಲಯ



VISVESVARAYA TECHNOLOGICAL UNIVERSITY

State University of Government of Karnataka Established as per the VTU Act, 1994 "JnanaSangama" Belagavi-590018, Karnataka, India

Prof. B. E. Rangaswamy, Ph.D
REGISTRAR

Phone: (0831) 2498100
Fax: (0831) 2405467

REF: VTU/BGM/BOS/GoK/2024-25/ 6575

DATE: 28 FEB 2024

CIRCULAR

Subject: 21CVL66 Computer-Aided Detailing of Structure syllabus
regarding
Reference: Email from Chairperson BoS dated 27.02.2024

This relates to the reference mentioned above; the 2021 scheme syllabus that was posted on the VTU website does not include the **21CVL66 Computer Aided Detailing of Structure** course/subject. For teachers' and students' reference, the chairperson of the Board of Studies in Civil Engineering has presented the curriculum. Enclosed with this circular is a copy of the curriculum for easy reference.

It hereby notifies the chairpersons and program coordinators of the university department, as well as the principals of the autonomous, non-autonomous, and constituent engineering colleges under the ambit of the university, to ensure that everyone involved is aware of the contents of the circular and syllabus.

R. 28/02/24 B.E
REGISTRAR
28/2/24

To,

- The Principals of Autonomous, Non-autonomous, Constituent Engineering College under the ambit of the university
- The Chairpersons/Program Coordinator, University Departments at Belagavi, Bengaluru, Kalaburagi and Mysuru

Copy to

- The Hon'ble Vice-Chancellor through the secretary to VC for information
- The Registrar (Evaluation) VTU Belagavi for information
- The Special Officer QPDS section, VTU Belagavi for needful
- The Director ITI SMU VTU Belagavi with request to upload the circular on VTU web Portal
- Office copy

28.02.2024

COMPUTER AIDED DETAILING OF STRUCTURES			
Course Code	21CVL66	CIE Marks	50
Teaching Hours/Week(L:T:P)	(0:0:2)	SEE Marks	50
Credits	01	Exam Hours	03
<p>Course Learning Objectives: This course will enable students to</p> <ol style="list-style-type: none"> 1. Be aware of the Scale Factors, Sections of drawings, 2. Draft the detailing of RC and Steel Structural member. 			
Module -1 Detailing of RCC Structures			
<ul style="list-style-type: none"> • Beams – Simply supported, Cantilever and Continuous. • Slab – One way, Two way and One-way continuous. • Staircase – Doglegged and Open Well • Footing – Isolated and Combined Footing • Cantilever Retaining Wall 			
Module -2 Detailing of Steel Structures			
<ul style="list-style-type: none"> • Connections – Beam to beam by Bolted and Welded Connections. • Connections - Beam to Column by Bolted and Welded Connections. • Built-up Columns with lacings and battens • Column bases and Gusseted bases with bolted and welded connections. • Roof Truss – Welded and Bolted 			
<p>Course outcomes: After studying this course, students will be able to:</p> <ul style="list-style-type: none"> • Prepare the detailed working drawings of RC Structural Elements • Prepare the detailed working drawings of Steel Structural Elements 			
<p>Assessment Details (both CIE and SEE)</p> <p>The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks). A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each course. The student has to secure not less than 35% (18 Marks out of 50) in the semester-end examination (SEE).</p> <p>Continuous Internal Evaluation (CIE):</p> <p>CIE marks for the practical course is 50 Marks.</p> <p>The split-up of CIE marks for record/ journal and test are in the ratio 60:40.</p> <ul style="list-style-type: none"> • Each experiment to be evaluated for conduction with observation sheet and record write up. Rubrics for the evaluation of the journal/write-up for hardware/software experiments designed by the faculty who is handling the laboratory session and is made known to students at the beginning of the practical session. • Record should contain all the specified experiments in the syllabus 			

28.02.2024

and each experiment write-up will be evaluated for 10 marks.

- Total marks scored by the students are scaled down to 30 marks (60% of maximum marks).
- Weightage to be given for neatness and submission of record/write-up on time.
- Department shall conduct 02 tests for 100 marks, the first test shall be conducted after the 8th week of the semester and the second test shall be conducted after the 14th week of the semester.
- In each test, test write-up, conduction of experiment, acceptable result, and
- Procedural knowledge will carry a weightage of 60% and the rest 40% for viva-voce.
- The suitable rubrics can be designed to evaluate each student's performance and learning ability. Rubrics suggested in Annexure-II of Regulation book
- The average of 02 tests is scaled down to 20 marks (40% of the maximum marks). The Sum of scaled-down marks scored in the report write-up/journal and average marks of two tests is the total CIE marks scored by the student.

Semester End Evaluation (SEE):

- SEE marks for the practical course is 50 Marks.
- SEE shall be conducted jointly by the two examiners of the same institute, examiners are appointed by the University
- All laboratory experiments are to be included for practical examination.
- (Rubrics) Breakup of marks and the instructions printed on the cover page of the answer script to be strictly adhered to by the examiners. OR based on the course requirement evaluation rubrics shall be decided jointly by examiners
- Students can pick one question (experiment) from the questions lot prepared by the internal /external examiners jointly.
- Evaluation of test write-up/ conduction procedure and result/viva will be conducted jointly by examiners.
- General rubrics suggested for SEE are mentioned here, writeup-20%, Conduction procedure and result in -60%, Viva-voce 20% of maximum marks. SEE for practical shall be evaluated for 100 marks and scored marks shall be scaled down to 50 marks (however, based on course type, rubrics shall be decided by the examiners)
- Change of experiment is allowed ^{28.02.2024} only once and 15% Marks allotted to

the procedure part to be made zero.

- The duration of SEE is 03 hours
- Rubrics suggested in Annexure-II of Regulation book

Question paper pattern:

- Two questions shall be asked from each Module.
- One full question should be answered from each Module.
- Each question Carries 50 marks.
- The Examiner should evaluate the drawing sheet.
- Examination should be Conducted Batch wise in Computer Lab
- Question paper should be given in batches

Textbooks:

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, Ductile Design And Detailing Of Reinforced Concrete Structures Subjected To Seismic Forces -Code Of Practice, Bureau of Indian Standard