



**ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ**  
 ವಿಟಿಯು 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  
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REF: VTU/BGM/BCV703 /819/2025-26/2973

DATE: 15 SEP 2025

**CIRCULAR**

**Subject:** Retaining the existing Syllabus for BCV703 - Prestressed Concrete (7th Semester Civil Engineering) - regarding

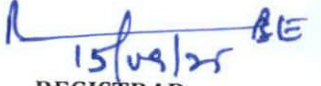
Sir/Madam,

As per the direction of the Registrar, an email dated 25.08.2025 was circulated along with two syllabi (the existing syllabus and a revised syllabus of BCV703 - Prestressed Concrete, proposed by the previous Chairperson, BoS, Civil Engineering). Opinions were invited from the faculty members handling this course on or before 27.08.2025, with the intention to implement the revised syllabus if a majority supported the same.

Since the commencement of the 7th semester classes (on 04.08.2025), nearly three weeks had already elapsed at the time of circulation. However, only two responses were received within the due date, and by 15.09.2025, only five responses were received in total. Considering that this course is common to all colleges offering Civil Engineering, implementing a new syllabus in the middle of the semester would create difficulties and inconsistencies during teaching and examinations.

In view of the above, it has been decided to **retain the existing syllabus for the course BCV703 - Prestressed Concrete** for the current 7th Semester.

All Principals of affiliated colleges are hereby requested to bring this to the notice of the concerned faculty and students to avoid any confusion.

  
 15/09/25 BE  
 REGISTRAR

To,

The Principals of all affiliated/Constituent/Autonomous Engineering Colleges under the ambit of the university, Belagavi  
 The Chairpersons /Program Coordinators of the university Departments at Kalburgi, Mysuru, Bengaluru, and Belagavi

Copy to

1. The Dean, Faculty of Engineering VTU Belagavi, for information
2. The Hon'ble Vice-Chancellor, through the Secretary to the VC, for information
3. The Chairperson, BoS in Civil Engineering for UG-PG programme VTU Belagavi for information
4. The Registrar Evaluation for information
5. The Special Officer QPDS Examination Section for information
6. The Director, ITI SMU, VTU, Belagavi, for information and to make arrangements for uploading the circular on the VTU web portal.
7. Office Copy.

## Updated Syllabus (dated 22.08.2025) – BCV703 Prestressed Concrete (7th Semester Civil Engineering)

2 messages

Farooq Patel <cv.farooq@bldeacet.ac.in>  
To: sbhvtuso2022@gmail.com

Sat, Sep 13, 2025 at 12:55 PM

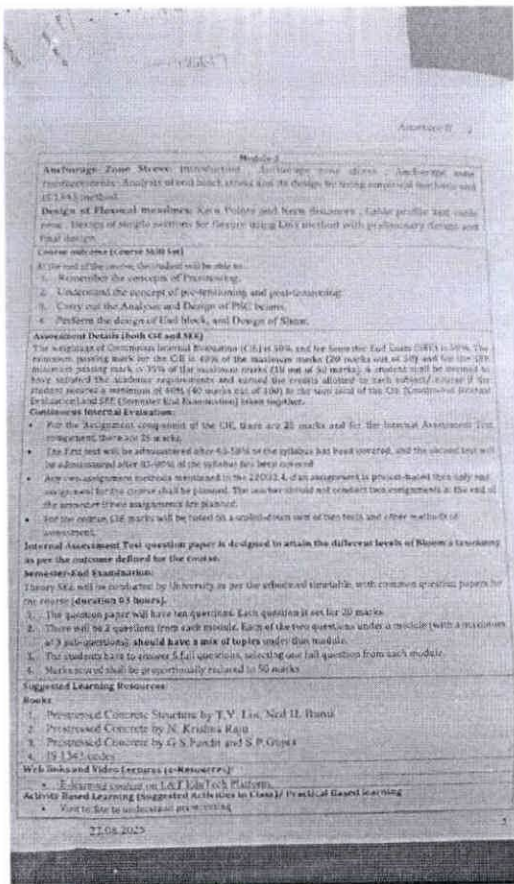
Dear Sir,

As per mail dated 25.08.2025 from Mr. Sadashiv Halbhavi (sbhvtuso2022@gmail.com) regarding the syllabus of BCV703 – Prestressed Concrete (7th Semester, Civil Engineering), we the faculty members of the Civil Engineering Department, BLDEA's V. P. Dr. P. G. Halakatti College of Engineering and Technology, have reviewed both the old and revised versions.

We unanimously recommend and request the adoption of the Updated Syllabus (dated 22.08.2025) for the current semester, as it incorporates the required modifications and improvements.

Kindly consider this as our feedback.

| Prestressed Concrete                                                                                                                                                                                                                                                                                                                                                                                                                      |        | Semester - 7 |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------|-----|
| Course Code                                                                                                                                                                                                                                                                                                                                                                                                                               | BCV703 | CR Marks     | 20  |
| Yes/No (Yes/No)                                                                                                                                                                                                                                                                                                                                                                                                                           | Yes/No | PR Marks     | 20  |
| Total hours of Package                                                                                                                                                                                                                                                                                                                                                                                                                    | 40     | Total Marks  | 100 |
| Exams                                                                                                                                                                                                                                                                                                                                                                                                                                     | 94     | Exam Marks   | 2   |
| Examination type (S/N)                                                                                                                                                                                                                                                                                                                                                                                                                    | Theory |              |     |
| Course objectives                                                                                                                                                                                                                                                                                                                                                                                                                         |        |              |     |
| <ul style="list-style-type: none"> <li>To explain the necessity of prestressed concrete.</li> <li>To understand the principles and methods of design according to IS 1343.</li> <li>To estimate losses due to prestressing.</li> <li>To design pre-stressed concrete beams.</li> <li>To design the end blocks and shear reinforcement.</li> </ul>                                                                                         |        |              |     |
| Teaching-Learning Process (General Instructions)                                                                                                                                                                                                                                                                                                                                                                                          |        |              |     |
| These are sample strategies, which teachers can use to accelerate the attainment of the various course outcomes.                                                                                                                                                                                                                                                                                                                          |        |              |     |
| <ol style="list-style-type: none"> <li>Blackboard teaching.</li> <li>Power point Presentation.</li> <li>Video, NPT EL materials.</li> <li>Quiz/Assignments/Open book test to develop skills.</li> <li>Adopt problem-based learning (PBL) to develop analytical and thinking skills.</li> </ol>                                                                                                                                            |        |              |     |
| Module-1                                                                                                                                                                                                                                                                                                                                                                                                                                  |        |              |     |
| Introduction to pre-stressed concrete structures: Concepts of Prestressing: Historical development of prestressing, Advantages and disadvantages of prestressed concrete, Materials used in Prestressed concrete, Classification and types of prestressing, Pretensioning and post-tensioning operations, Mechanical prestressing, Chemical prestressing, Electrical prestressing, Difference between RCC and PSC, Loading stages in PSC. |        |              |     |
| Module-2                                                                                                                                                                                                                                                                                                                                                                                                                                  |        |              |     |
| Stress Analysis in PSC Members: Stress concept, Strength concept and Load balancing concept and related problems.                                                                                                                                                                                                                                                                                                                         |        |              |     |
| Analysis of Section for Flexure: Computation of top fibre stress and bottom fibre stress in bending members and related problems. Pressure line (only concept).                                                                                                                                                                                                                                                                           |        |              |     |
| Module-3                                                                                                                                                                                                                                                                                                                                                                                                                                  |        |              |     |
| Loss of Prestress: Introduction, Loss of prestress due to elastic deformation of concrete, Loss due to shrinkage of concrete, Loss due to creep of concrete, Loss due to relaxation of stress in steel, Loss due to friction, Loss due to anchorage slip and problems related to different losses.                                                                                                                                        |        |              |     |
| Deflection in PSC members: Introduction, Short term deflection, Long term deflection and related problems.                                                                                                                                                                                                                                                                                                                                |        |              |     |
| Module-4                                                                                                                                                                                                                                                                                                                                                                                                                                  |        |              |     |
| Shear in PSC beams and its design: Introduction, Mechanism of shear failure, Analysis and design problems on shear, Ultimate shear resistance.                                                                                                                                                                                                                                                                                            |        |              |     |
| Applications of Prestressing: Circular prestressing, Prestressing of one way slabs, Two way slabs, Flat slabs, Poles and Piles (only concept no problems)                                                                                                                                                                                                                                                                                 |        |              |     |



Thanks and Regards

Mohammed Umar Farooque Patel

Assistant Professor

Dept of Civil Engineering

B.L.D.E. Association's

V.P. Dr. P.G. HALAKATTI COLLEGE OF ENGINEERING AND TECHNOLOGY,

Vijayapur - 586103.

Mob.No: +919538755732

Sadashiv Halbhavi <sbhvtuso2022@gmail.com>

To: Farooq Patel <cv.farooq@bldeacet.ac.in>

Sun, Sep 14, 2025 at 5:48 AM

Dear Professor,

The opinion was requested before 27.08.2025. However, only three members from various colleges have responded. Therefore, to avoid any issues during the examinations, it has been decided to continue with the old syllabus.

Regards,

[Quoted text hidden]

Thanks and Regards

Prof. S. B. HALBHAVI

Special Officer,

Visvesvaraya Technological University,

Jnana Sangama' Belagavi 590 018.

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