VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS) DEPARTMENT OF CIVIL ENGINEERING MINUTES OF THE BOARD OF STUDIES MEETING HELD ON 29.5.2025

Lr. No. VCE/CED/A08/2025-26/379

Members Present:

| 1 | Dr.B.Sridhar | Professor, Department of Civil Engineering, VCE |
|----|---------------------|---|
| 2 | Prof.P.Rajasekhar | Professor, Department of Civil Engineering, OU College of Engg. |
| 3 | Prof.P.N.Rao | Professor, Department of Civil engineering, BITS, Hyderabad |
| 4 | Er. P. Suryaprakash | CEO, M/s. Satyavani Projects, Hyderabad |
| 5 | Dr. C. Mohanlal | Associate Professor, Department of Civil Engineering, VCE |
| 6 | Dr. S. Vijaya Kumar | Associate Professor, Department of Civil Engineering, VCE |
| 7 | Dr.M.V.S.S. Sastri | Associate Professor, Department of Civil Engineering, VCE |
| 8 | Dr.K.Jayasree | Associate Professor, Department of Civil Engineering, VCE |
| 9 | Mr.G.Raghavendra | Associate Professor, Department of Civil Engineering, VCE |
| 10 | Dr.G.Srinivas | Associate Professor, Department of Civil Engineering, VCE |
| 11 | Mrs. P.Dhatri | Assistant Professor, Department of Civil Engineering, VCE |
| 12 | Mr. S. Kesav Kumar | Assistant Professor, Department of Civil Engineering, VCE |
| 13 | Mr. B. Jagadeesh | Assistant Professor, Department of Civil Engineering, VCE |
| 14 | Dr.Swarnadeepa | Assistant Professor, Department of Civil Engineering, VCE |
| 15 | Mrs.R.Sowmya | Assistant Professor, Department of Civil Engineering, VCE |

At the outset, the Chairman of BOS& HOD welcomed the members for attending the Board of Studies Meeting. The Chairman further expressed special thanks to all the members for sparing the time from their busy schedule to attend the meeting.

After that the agenda items were taken up and the board decided/ recommended as under:

- 1. Board has reviewed previous Minutes of the Board of Studies Meeting held on 11.5.2024 and action taken report.
- 2. During the meeting, there was an examination of the overarching vision, mission, Program Educational Objectives (PEOs), and Program Specific Outcomes (PSOs) of the Civil Engineering department. It was determined that the current vision, mission, PEOs, and PSOs align effectively with the department's objectives, and hence were endorsed.
- 3. Board reviewed Department's achievements recognizing and acknowledging notable milestones and advancements.

4. Board has reviewed schemes and syllabus as follows:

| Regulation | Review of Scheme | Review of syllabus |
|------------|------------------------|------------------------|
| R25 | I to VIII Semesters | I and II Semesters |
| R24 | III and IV Semesters | III and IV Semesters |
| R23 | V and VI Semesters | V and VI Semesters |
| R22 | VII and VIII Semesters | VII and VIII Semesters |

Date: 02.06.2025

5 **Expert: Dr. P. Suryaprakash**

- a. Emphasized the critical importance of technical report writing as a foundational skill for all engineers.
- b. Highlighted the need for students to be systematically trained in these skills as part of their academic journey. Stated that effective technical documentation is essential for communicating engineering concepts, presenting analysis and results, and supporting sound decision-making.

6 Expert: Dr. P. Rajasekhar

- a. Recommended incorporating content related to dams, dam break analysis, and associated software tools into the curriculum. He emphasized the importance of offering modelling-based projects and suggested exploring collaboration with the Central Water Commission (CWC) for providing students with live project opportunities. He also proposed including relevant topics that, while not formally part of the syllabus, could be addressed through value-added sessions or extended learning opportunities.
- b. Inquired about the process of project allocation, implementation, and evaluation, emphasizing that projects play a crucial role in shaping a student's career. He stressed the need to train students in conducting literature reviews by encouraging them to read journal papers and prepare presentations summarizing their insights, starting from the second year. He also highlighted the importance of creating awareness among students about various software tools applicable across core courses. While it is not necessary to provide training in every software, students should be encouraged to explore them independently for deeper learning.
- c. Suggested exploring the inclusion of an Engineering Mechanics Laboratory in the curriculum, noting that even simple experiments can significantly enhance conceptual understanding. He recommended visiting the Osmania University laboratory to study their setup and take inspiration for implementing a similar facility.
- d. Suggested making Engineering Mechanics and Engineering Drawing courses mandatory for all engineering students, emphasizing that these foundational subjects are essential for the development of core engineering skills across all disciplines.
- e. Suggested that core civil engineering courses be strategically covered in the III, IV, and V semesters, allowing students to build a strong technical foundation early in the program. He further recommended introducing skill development and communication skills courses in the VI semester, aligning them with the students' preparation for placements and career readiness.
- f. Recommended offering the Fluid Mechanics course in the III semester instead of the IV semester, emphasizing its foundational importance. Dr.P.N.Rao said that the subject can be in IV-Semester after the basic course on stresses which will be covered in Strength of Materials-I.
- g. In the Environmental Engineering course, suggested including additional topics such as noise pollution, air pollution, and solid waste management, ensuring that these aspects are addressed from an environmental engineering perspective. He recommended reviewing the content of the Environmental Science course to identify and address any overlaps, and making appropriate modifications to maintain clarity and avoid duplication. Additionally, he proposed organizing industrial visits for students to key facilities such as the Amberpet

- Treatment Plant, Necklace Road Treatment Plant, and Asifnagar Treatment Plant to enhance their practical understanding of wastewater treatment processes.
- h. Suggested including topics on Water Power Engineering and Unsteady Flow Conditions in the Water Resources Engineering course, noting that these topics are currently covered under Groundwater Hydrology, which is an elective. Since Water Resources Engineering is a mandatory course, he emphasized that these fundamental topics should be part of the core curriculum, ensuring that all students are equipped with essential knowledge in these areas by the time they complete their engineering program.
- i. Proposed the introduction of a Master's program in the department, highlighting its potential benefits for faculty development and the academic growth of the department.
- j. Proposed updating the reference books for all courses by integrating the latest available editions, particularly where existing references are more than five years old.

7 Expert: Dr. P. N. Rao

- a. Suggested that certain topics, whether within or beyond the prescribed syllabus, could be assigned for self-reading and supported through structured assignments, which should be duly evaluated to enhance student engagement and independent learning. He further recommended extending the practice of course-based projects to all core courses, with an emphasis on integrating relevant software tools, and ensuring systematic evaluation of these projects.
- b. In the Engineering Mechanics Statics course and Basic Engineering Mechanics course, suggested revising the terminology in Unit III by replacing "Warren girder" with "Warren truss", as the latter is more appropriate and relevant for the analysis of plane trusses.
- c. Recommended revisiting the syllabus of the Environmental Science course, noting that the current scope may be difficult to cover effectively if only one hour per week is allotted. He emphasized the need to align the syllabus content with the available instructional time.
- d. In the Building Materials and Construction course, recommended including Pozzolana Portland Cement (PPC) under the Cement topic in Unit II. Additionally, proposed the introduction of nanomaterials in the Emerging Materials section of Unit III, specifically suggesting the inclusion of carbon nanotubes, fibers, and composite materials to reflect current advancements in construction materials.
- e. Suggested removing the topic on thick cylinders from the Strength of Materials I course in the III Semester, stating that it is more appropriate for advanced study. However, recommended including a brief introduction covering the definition and differences between thin and thick cylinders to provide foundational understanding.
- f. Emphasized the importance of training students in reading civil engineering drawings, particularly focusing on drawing conventions, steel detailing, and bar bending schedules, noting that many students today lack proficiency in this essential skill. He recommended incorporating these aspects into the CASE Lab to strengthen students' practical understanding of construction documentation.
- g. In the Concrete Technology course, suggested exploring the possibility of assigning a more appropriate and specific topic title to the section dealing with the analysis of fresh concrete, particularly where parameters such as gel-space ratios and C–S–H (Calcium Silicate Hydrate) formation are discussed. This would enhance clarity and accurately reflect the technical content covered.

- h. In the Structural Analysis course, recommended removing Kani's Method, as it is now considered outdated and rarely used in contemporary practice. Proposed introducing the Stiffness Method for the analysis of beams, frames, and trusses, suggesting its inclusion in Unit V to align the curriculum with modern analytical techniques. He further noted that if the Stiffness Method is already covered in the Advanced Structural Analysis elective, necessary modifications should be made to that course by removing overlapping content to avoid redundancy.
- i. In the Concrete Laboratory, pointed out a repetition of experiments related to the bulk density of fine aggregates. Recommended replacing the repeated experiment with the determination of bulk density for specific materials such as river sand and quarry dust, to provide more practical and comparative insights for the students.
- j. Observed that each unit in the syllabus repeats the term "Limit State Design". Suggested that it need not be specified in every unit heading, as it is already implied in the overall course methodology.
- k. In the CASE Laboratory, recommended modifying the phrase "Perform analysis and design of" to "Perform the analysis and design of" in both RCC Design and Steel Design experiments for clarity and correctness.
- Suggested shifting the topics on plane stress and plane strain to Unit III in FEM which
 deals with two-dimensional analysis, for better structural coherence. Also recommended
 including the textbook by Logan as a reference for the course.

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS) DEPARTMENT OF CIVIL ENGINEERING

BOARD OF STUDIES MEETING - AGENDA

- 1. To review the minutes and approve the Action Taken Report on the decisions taken in the last meeting held on 15.05.2024
- 2. Review of Department Vision & Mission, PEO's, PSO's and CO's.
- 3. Note on the department achievements
- 4. To discuss & review the following for the BE (Civil) students to be admitted during the academic year 2025-26 (R25)
 - a). Scheme of Instruction and Examinations from I to VIII semesters
 - b). Syllabi for I & II semester courses
- 5. To discuss & review the following for the BE (Civil) students to be admitted during the academic year 2024-25 (R24)
 - a). Scheme of Instruction and Examinations from III & IV semesters
 - b). Syllabi for III & IV semester courses
- 6. To discuss & review the following for the BE (Civil) students to be admitted during the academic year 2023-24 (R23)
 - a). Scheme of Instruction and Examinations from V & VI semesters
 - b). Syllabi for V & VI semester courses
- 7. To discuss & review the following for the BE (Civil) students to be admitted during the academic year 2022-23 (R22)
 - a). Scheme of Instruction and Examinations from VII & VIII semesters
 - b). Syllabi for VII & VIII semester courses
- 8 Any other item with the permission of the chair.

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS) DEPARTMENT OF CIVIL ENGINEERING

1. Action Taken Report on the items of BOS meeting held on 15.06.2024

At the outset, the Chairman of BOS & HOD welcomed the members for attending the 21th Academic council meeting of the Board of Studies. The Chairman further expressed special thanks to all the members for sparing the time from their busy schedule to attend the meeting. After that the agenda items were taken up and the board decided / recommended as under, and Action taken by the civil engineering department is as follows.

| S. | | Comments | | Action Taken |
|-----|---|--|--|--------------------------|
| 110 | | | | |
| 1. | Board of | iewed previous Minutes of the A Studies Meeting held on action taken report. | | Approved by the members. |
| 2. | over the vision Objectives (F Outcomes (Ps department. It mission, PEO | n, mission, Progree PEOs), and Proson of the Ci was felt that the last, and PSOs a partment's object | ras a discussion ram Educational ogram Specific vil Engineering e current vision, dign effectively tives, andhence | |
| | Board reviewed Department's achievements recognizing and acknowledging notable milestones and advancements. | | | |
| | Board has rev follows: | iewed schemes | and syllabus as | - |
| | Regulation | Review of Scheme | Review of syllabus | |
| | R24 | I to VIII Semesters | I and II Semesters | |
| | R23 | III and IV Semesters | III and IV Semesters | |
| | R22 | V and VI Semesters | V and VI Semesters | |
| | R21 | VII and VIII Semesters | VII and VIII Semesters | |

| S. | | |
|----|--|---|
| No | Comments | Action Taken |
| 5. | Prof. P. Rajasekar proposed an insightful addition to the curriculum by recommending the inclusion of geology as a subject, complemented by a laboratory component. This addition aims to enhance the prospects of students seeking government employment opportunities, particularly in the specialized domain of hydrogeology. Prof. B. Sridhar, Chairman of the Board of Studies, mentioned that a few geology experiments are demonstrated in the co-curricular activities of the second year. | It is included in the CCA activity in II year. |
| 6 | Prof. Kumar proposed the integration of the latest editions of references for Basic Engineering Mechanics, emphasizing the importance of keeping the curriculum abreast with current advancements and insights in the field. | All suggested modifications are incorporated by Mr. G. Raghavendra. |
| 7 | Dr. Shashidhar and Prof.M. Kumar recommended the integration of computer-based Computer-Aided Design (CAD) software into the Engineering Drawing subject. They suggested allocating one unit to introduce manual drawing with physical instruments, while dedicating the remaining units to AUTOCAD training. This adjustment aims to equip students with practical skills relevant to modern engineering practices. | Dr. B. Sridhar, Chairman of the Board of Studies, highlighted that manual drawing is incorporated to strengthen concepts by facilitating the visualization of drawings and bolster concepts by fostering the development of students' imaginative capabilities. |
| 8 | Dr. Shashidhar proposed replacing traditional workshop sessions with instruction on 3-D printing technology. This innovative suggestion aims to align the curriculum with emerging trends in engineering and foster hands-on experience with cutting-edge manufacturing techniques. | _ |
| 9 | practical applications and project work. This | following reply with reference to the |

| S. | Comments | Action Taken |
|-----|---|---|
| 110 | engaging them in hands-on experiences and real-world projects, thereby deepening their knowledge and skills in the domain. | subject of Environmental Science: a) To take up suggestions of Prof. Kumar as a part of ECO club |
| 10 | Prof. Kumar proposed reordering the sequence of topics in the Environmental Science syllabus, recommending the inclusion of the Water and Air Acts before the Environmental Protection Act and including topic on "Recycling of e-waste". Additionally, he suggested expanding the coverage of climate change within the curriculum. Dr. Shashidhar suggested revising the syllabus content by removing Population Explosion. Prof. Rajasekar emphasized the importance of Environmental Science as a foundational subject for Environmental and Water Resources Engineering. All subsequent frameworks following the Kyoto Protocol, including agreements like the Dubai and Paris Accords, should be integrated into the Environmental Science curriculum. This ensures students are well-versed in contemporary environmental agreements and their implications, fostering a comprehensive understanding of global environmental governance. | b) To consider the suggestions of Prof. Rajasekhar on Kyoto protocol/ Accords of Dubai and Paris as summary in Global Environmental Governance. c) To consider removal of topic on population explosion. d) However she replied that the inclusion of Climate change and Water and Air Acts in the curriculum was not possible with existing provision of two contact hours and that it is only possible by additional classes in the curriculum. |
| 11 | recommended the inclusion of topics on construction machinery within the Building | , and a |
| 12 | | - |

| S. | Comments | Action ' | Гаken |
|----|--|---|------------------|
| | | Subject | Semester |
| | • | Fluid Mechanics | IV |
| | | Hydraulics and Hydraulic Machinery | V |
| | | Water Resource Engineering | VII |
| | | Groundwater Hydrology | VIII |
| | | Hydraulic Structures | VIII |
| 13 | Prof. P. Rajasekar proposed incorporating syllabus topics relevant to Hydraulics and Hydraulic Machinery into the Water Resource Engineering course through more assignments and homework as the syllabus is more. This course aims to ensure comprehensive coverage of Hydrology concepts, which carry significant weightage in competitive exams like GATE and IES | Mr. B. Jagadeesh has suggestions and me by the experts. | - |
| 14 | Dr. Shashidhar proposed removing the topic of air pollution from the Environmental Engineering course if it has already been covered comprehensively in the Environmental Science curriculum. This optimization ensures that course content remains focused and avoids redundancy, allowing for a more efficient use of instructional time and resources. | the suggestions a | nd modifications |
| 15 | Prof. Kumar recommended including the Indo-HCM 2018 manual in the references for the Highway Engineering course. Additionally, he proposed simplifying the course objectives for better comprehension by students. To accommodate the extensive syllabus, he suggested allocating more class | incorporated the | suggestions and |

| S. | | |
|----|---|--|
| No | Comments | Action Taken |
| No | | |
| | sessions to the course | |
| 16 | In the Traffic Engineering course, Prof. Kumar | CO and PO's are modified by the |
| | recommended several revisions and additions | - |
| | to enhance its comprehensiveness and | 1 2 2 |
| | relevance. He proposed relocating traffic | 1 |
| | safety topics to Unit V and introducing new | |
| | topics such as the design of intersections, | |
| | rotaries, and traffic simulation, including an | |
| | introduction to VISSIM tools. Moreover, he | |
| | suggested incorporating planning and design | |
| | aspects of non-motorized transport | |
| | infrastructure like pedestrian facilities, cycle | |
| | tracks, foot-over bridges, and skywalks. To | |
| | streamline the course, Prof. Kumar advised | |
| | removing topics already covered in Highway | |
| | Engineering and focusing Unit I on basic | |
| | traffic engineering concepts. He emphasized | |
| | the inclusion of delay studies and Origin- | |
| | Destination (OD) studies in the curriculum. | |
| | Additionally, Dr. Kumar suggested | |
| | incorporating statistical distributions in Unit I | |
| | to provide students with a foundational | |
| | understanding of traffic engineering | |
| | principles. These proposed changes aim to | |
| | enrich the Traffic Engineering course with | |
| | contemporary topics and practical | |
| | applications, ensuring students are well- | |
| | equipped to address current challenges in | |
| | transportation engineering. In Unit II, Dr. | |
| | Kumar recommended integrating topics on | |
| | highway capacity and Level of Service (LOS) | |
| | determination using the Indo-HCM guidelines. | |
| | He also proposed including the IRC: SP:88 | |
| | manual on Road Safety Audit in both content | |
| | and references. | |
| 17 | Prof. P. Rajasekar and Dr. Shashidhar | One topic related to thermodynamics is |
| | recommended incorporating fundamentals of | |
| | | <u> </u> |
| | | approved by Physics department BOS. |
| | addition is crucial as it lays the groundwork for | |
| | understanding compressible fluid flow, which | |

| S. | | A .: |
|----|--|--|
| No | Comments | Action Taken |
| | is integral to these subjects. | |
| 18 | Prof. Kumar proposed the integration of entrepreneurship courses into the second and third years of the curriculum. This initiative aims to nurture students' entrepreneurial skills and mindset, empowering them to explore innovative opportunities and contribute to the entrepreneurial ecosystem. | - |
| 19 | Professor P. Rajasekar recommended correcting the term "Groundwater" to be consistently written as a single word throughout the syllabus book. | Prof. Rajasekar is incorporated by Mr. |
| 20 | | B. Jagadeesh who is handling the subjects has incorporated topics suggested by the experts. |
| 21 | Dr. Kumar and Dr. Shashidhar recommended a revision to the syllabus of the Design of Concrete Structures (DCS) lab. They proposed integrating programming language usage for concrete structure design, aiming to provide students with practical skills applicable to real-world scenarios. | Raghavendra have prepared the syllabus for the lab course. In that, studentsare able to prepare spread sheet on MS-Excel that will benefit the |
| 22 | Dr. Kumar and Dr. Shashidhar proposed the inclusion of experiments focusing on civil engineering applications across all specializations in the Artificial Intelligence and Machine Learning (AIML) lab. They suggested allocating Computer Science and | |

| S. No | Comments | Action Taken |
|----------|---|-----------------------|
| | Engineering (CSE) faculty to teach the AIML course while involving civil engineering faculty to instruct on its applications within the civil engineering domain. This collaborative approach ensures that students receive comprehensive instruction in both AIML fundamentals and their practical implementation in civil engineering contexts, fostering interdisciplinary learning and skill development. | Dr.K.V.L.Subramaniam. |

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS) DEPARTMENT OF CIVIL ENGINEERING

Members present for BOS Meeting on 29 05,2025 at 10,30AM

| S | | esent for BOS Meeting on 29 | 3.03.2020 | |
|----|------------------------|---|-----------------------|------------|
| No | Name of the member | Designation | Category | Signature |
| 1 | Dr. B.Sridhar | Professor, Department of Civil Engineering, VCE | Head | 184. |
| 2 | Prof. P. Rajasekhar | Department of Civil Enineering, Osmania University, Hyderabad | University Nominee | Sir all me |
| 3 | Dr. K.V.L. Subramaniam | Professor, Department of Civil Engg. IIT Hyderabad | Subject Expert | |
| 4 | Dr. T. Shashidhar | Professor, Department of Civil Engg., IIT Hyderabad | Subject Expert | |
| 5 | Dr. P.N.Rao, | Professor Department of Civil Engineering BITS Pilani,Hyderabad | Subject Expert | Mas. |
| 6 | Dr. V. Vinayaka Ram | Professor, Department of Civil Engg. BITS, Hyderabad | Subject Expert | V.V1.8 |
| 7 | Dr. Anasua Guharay | Assistant Professor, Department of Civil Engineering, BITS, Hyderabad | Subject Expert | |
| 8 | Er. P. Suryaprakash | CEO, M/s. Satyavani Projects, Hyderabad | Industry Expert | Pille |
| 9 | Dr. C. Mohanlal | Associate Professor, Department of Civil Engineering, VCE | Faculty Member | c.M.H. |
| 10 | Dr. S. Vijaya Kumar | Associate Professor, Department of Civil Engineering, VCE | Faculty Member | S-Oyabia |
| 11 | Dr. M.V.S.S. Sastri | Associate Professor, Department of Civil Engineering, VCE | Faculty Member | |
| 12 | Dr. K.Jayasree | Associate Professor, Department of Civil Engineering, VCE | Faculty Member | Go |
| 13 | Dr. G. Srinivas | Associate Professor, Department of Civil Engineering, VCE | Faculty Member | XV |
| 14 | Mr. G. Raghavendra | Associate Professor, Department of Civil Engineering, VCE | Faculty Member | Legs |

| No | Name of the member | Designation | Category | Signature |
|-----|--------------------|---|----------------|-----------|
| 15 | Mrs. P.Dhatri | Assistant Professor, Department of Civil Engineering, VCE | Faculty Member | Matrit |
| 16 | Mr. S. Kesav Kumar | Assistant Professor, Department of Civil Engineering, VCE | Faculty Member | |
| 17. | Mr. B. Jagadeesh | Assistant Professor, Department of Civil Engineering, VCE | Faculty Member | Ja . |
| 8 [| Or. C. Swarnadeepa | Assistant Professor, Department of Civil Engineering, VCE | Faculty Member | |
| 9 M | 1rs. R. Sowmya | Assistant Professor, Department of Civil Engineering, VCE | Faculty Member | RSY |