VIGNAN'S
FOUNDATION FOR SCIENCE, TECHNOLOGY & RESEARCH

School of Core Engineering
Department of Civil Engineering

08.01.2026

Minutes of Board of Studies Meeting

Board of Studies (BoS) meeting for the B. Tech & M. Tech programme was conducted on 08.01.2026 in a blended mode from 10:00 A.M onwards. The physical meeting will be held at U-Block, First Floor, (AFF-16), while the online session can be accessed via the following link https://meet.google.com/aea-razs-csg

Agenda of the BoS Meeting:

1. To discuss the introduction of new M. Tech. Program in "Smart and Sustainable Construction".
2. Approval of Honor / Minor / Department Elective / Open Elective courses, if any, that were not approved earlier.
3. Discussion of results — FA, SA, grades.
4. Approval of SWAYAM–NPTEL courses / Ratification of previously approved courses.
5. Discussion on attainments — process, rubrics, and mapping of COs, POs, PSOs, and SO values. (Last semester attainment)
6. Presentation by two faculty members on Best Practices of Formative Assessment. (Pre-T1, T1, T2, T3, and T5)
7. Discussion on workshops, conferences, and other academic activities organized by the department.
8. Any other points with the permission of the Chair

The following members were present either thorough offline or online.

Sl. No	Name of the member	Position	Signature
1	Dr. M. Ramakrishna Professor Dean, School of Core Engineering	Chair-Person	
2	Dr. P. Sundara Kumar Head & Associate Professor	Internal Member	
3	Dr. T. Thyagaraj Professor IIT Madras	External member (Academia)	Attended Online
4	Mr. C. A. Prasad Director, Metey Engineering Consultancy Pvt Ltd.,	External member (Industry)	Attended Online
5	Dr. K. Srinivasa Rao Professor, Andhra University	Invited Member (Academia)	Attended Online
6	Dr. A. Siva Sankar Assistant Professor	Internal Member	

7	Dr. M. V. Raju Assistant Professor	Internal Member	- Attended by online -
8	Dr. P. Parthiban Assistant Professor	Internal Member	
9	Dr. J. Gopala Rao Assistant Professor	Internal Member (Dean R&D Nominee)	
10	Dr. A. V. A. Bharat Kumar Assistant Professor	Internal Member (School Dean Nominee)	
11	Dr. P. Rakesh Assistant Professor	Internal Member	
12	Mr. M. Anirudh Assistant Professor	Internal Member	
13	Mr. D. Ravikanth Assistant Professor	Internal Member	
14	Mr. K. Bala Gopi Krishna Assistant Professor	Member Secretary	

Chairperson Dr. M. Rama Krishna, Professor and Dean – School of Core Engineering, VFSTR initiated the meeting by welcoming and introducing the external members and invitees to the internal members. Head of the Department Dr. P. Sundara Kumar, Associate Professor, given an overall view of the meeting and handed over the session to the Secretary of Board of Studies, Mr. K. Bala Gopi Krishna, Assistant Professor.

The following points were discussed in the BoS meeting:

1. ***A proposal for the introduction of an M. Tech. programme in "Smart and Sustainable Construction".***
   - The detailed curriculum structure for the proposed M. Tech. programme was presented.
   - The Board of Studies external experts have given the following suggestions for the above M. Tech Programme.

L- Number of Lecture Hours **T**–Number of Tutorial Hours;
P-Number of Practical Hours **C**-Credits; **SL**-Self Learning

Pre - Semester

Course Code	Title of the course	L	T	P	SL	C	Course type
	Orientation Session	0	2	0	0	1	Binary graded
	IT workshop and cyber security	0	0	2	0	1	Binary graded
	Total	**0**	**2**	**2**	**0**	**2**	

I Year I Semester

Course Code	Title of the course	L	T	P	SL	C	Course type
	Advanced Construction Materials & Methods	3	2	0	2	4	Professional Core
	Sustainable Construction Practices	3	2	0	2	4	Professional Core
	Structural Health Monitoring & Sensors	2	2	2	2	4	Professional Core
	Department Elective - 1	3	2	0	3	4	Elective
	Teaching Assistantship	0	0	2	0	1	Binary graded
	Indian Knowledge System	0	2	0	0	1	Binary graded
	Work-in-lieu of a course*					2	Elective & Floating Credit
	Sub Total	**11**	**10**	**4**	**11**	**20**	
	Add on course -1					3	
	Total	**11**	**10**	**4**	**11**	**23**	

I Year II Semester

Course Code	Title of the course	L	T	P	SL	C	Course type
	Smart Infrastructure & IoT in Construction	3	2	0	3	4	Professional Core
	BIM and Digital Construction Management	2	2	2	2	4	Professional Core
	Department Elective - 2	3	2	0	3	4	Elective
	Department Elective - 3	3	2	0	3	4	Elective
	Research Methodology and IPR	1	2	0	1	2	Interdisciplinary
	Interdepartmental Project	0	0	2	0	1	Project
	Teaching Assistantship	0	0	2	0	1	Binary graded
	Sub Total	**12**	**10**	**6**	**12**	**20**	
	Add on course -2					3	
	Total	**12**	**10**	**6**	**12**	**23**	

II Year I Semester

Course Code	Title of the course	L	T	P	SL	C	Course type
	Project	0	2	24	0	13	Project
	Industry support Internship						
	Sub Total	**0**	**2**	**24**	**0**	**13**	
	Add on course -3 (MOOCs Course)					3	
	Total	**0**	**2**	**24**	**0**	**16**	

II Year II Semester

Course Code	Title of the course	L	T	P	SL	C	Course type
	Project	0	2	24	0	13	Project
	Industry support Internship						
	Sub Total	**0**	**2**	**24**	**0**	**13**	
	Add on course -4 (MOOCs Course)					3	
	Total	**0**	**2**	**24**	**0**	**16**	

DEPARTMENT ELECTIVES

Course Code	Title of the course	L	T	P	C
	Construction Robotics & Automation	3	2	0	4
	AI & Machine Learning in Construction	3	2	0	4
	Virtual Reality (VR) & Augmented Reality (AR) in Construction	3	2	0	4
	Prefabrication & 3D Printed Concrete Structures	3	2	0	4
	Construction Project Risk Management	3	2	0	4
	Smart Transportation & Mobility Infrastructure	3	2	0	4
	Seismic-Resistant and Disaster-Resilient Structures	3	2	0	4
	Green Building and energy efficient Technologies	3	2	0	4
	Industrial & Modular Construction Systems	3	2	0	4
	Advanced Low-Carbon & Eco-Friendly Construction Materials	3	2	0	4

- ✓ The curriculum should comprehensively cover emerging construction methods such as Monolithic (Mivan), Precast RCC, Prefabricated/PEB steel structures, Composite construction, Light Gauge Steel, and Perma wall systems to align with current industry practices.

- ✓ Emphasis is required on advanced concrete technologies (SCC, HSC, UHPC), mix design methodologies, batching plant operations, construction equipment management, and practical site-oriented concrete technology expertise, along with essential exposure to MEP systems.
- ✓ The program should address assessment, strengthening, and rehabilitation of existing structures while incorporating relevant interdisciplinary subjects that connect materials, structural performance, and construction management.
- ✓ The designated syllabus on seismic-resistant and disaster-resilient structures must place appropriate emphasis on structural design principles, supported by prerequisite knowledge in structural dynamics.

2. ***Introduction of industry-oriented course of "Modern Approaches in Pre-Engineered Building Systems", an elective course in R25C25.***
   - ➢ The Board of Studies reviewed the syllabus of the course "Modern Approaches in Pre-Engineered Buildings" presented by Dr. P. Rakesh. The members appreciated the UG-level structure and the course's relevance and recommended the inclusion of a laboratory component to enhance practical exposure and industry-oriented learning.
3. ***Addition of an Honour Stream on "Environmental Engineering" in R25C25.***
   - ➢ Dr. M. V. Raju has presented the stream of honour in Environmental Engineering.
   - ➢ The Board of Studies recommended the inclusion of specialized topics in waste management, such as hazardous and toxic waste management, biomedical/hospital waste, pharmaceutical waste, STP waste handling, and the waste-to-wealth concept, to strengthen environmental sustainability components in the curriculum.
   - ➢ The Board suggested incorporating infrastructure and community-level environmental considerations, including waste management practices for gated communities and integrated urban service systems.
   - ➢ The Board emphasized the need to introduce Industrial Safety Engineering aspects, covering electrical safety in engineering, safety audits, and relevant safety codes to enhance students' awareness of workplace safety and regulatory compliance.
   - ➢ The Board advised integrating Life Cycle Assessment (LCA) concepts along with exposure to relevant software tools for sustainability analysis and environmental impact evaluation.
4. ***Discussion of results on previous Semesters.***
   - ➢ Board of Examinations (BoE) Dr. A. V. A. Bharat Kumar has presented the result analysis for the academic year 2025-26, including pass percentages, average FA/SA marks before and after CO–PO mapping, and grade distributions for all subjects, Board of Studies reviewed the B. Tech II, III, and IV Year I Semester result analysis for the academic year 2025–26, including pass percentages, average FA/SA marks before and after CO–PO mapping, and grade distributions for all subjects.

- The Board reviewed the II Year I Semester result analysis for AY 2025–26 and noted an overall pass percentage of 87.55%, indicating satisfactory academic performance.

Table. 1: Result Analysis of B. Tech II-I for A.Y 2025-26

Result analysis for B.Tech 2nd year 1st Semester AY 2025-26

Subject Name	Faculty Name	No of Students		Pass %	Avg marks FA		Avg marks SA		R%	I%	O%	S%	A%	B%	C%	D%
		Nos	Pass		Before Mapping	After	Before Mapping	After								
Building Materials & Concrete Technology	Dr. P. Rakesh	45	38	84.44	30.36	28.76	21.57	19.91	11	4	0	2	29	20	18	16
Probability & Statistics	Dr. P. Kalpana	45	40	88.89	29.02	30.09	17.82	18.81	9	2	0	7	22	18	36	7
Engineering Geology	V. Jayanth Krishna	45	42	93.33	37.59	37.05	28.6	27.62	7	0	0	33	33	22	4	0
Mechanics of Structures	Mr. K. Balagopi Krishna	45	37	82.22	31.98	32.18	22.84	20.22	13	4	2	2	42	16	11	9
Fluid Mechanics & Hydraulic Machines	Dr. P. Sundara Kumar	45	40	88.89	41.31	39.49	23.68	23.02	7	4	0	27	33	27	2	0

Average Pass % = 87.55

- The Board observed moderate improvement in FA and SA average marks after CO–PO mapping, reflecting effective outcome-based teaching practices.
- The Board suggested focused remedial classes and mentoring for subjects with relatively lower pass percentages to further enhance student success rates.
- The Board examined the III Year I Semester results and recorded a high overall pass percentage of 93.75%, demonstrating strong academic attainment.

Result analysis for B.Tech 3rd year 1st Semester AY 2025-26

Subject Name	Faculty Name	No of Students		Pass %	Avg marks FA		Avg marks SA		R %	I %	O %	S %	A %	B %	C %	D %
		Nos	Pass		Before Mapping	After	Before Mapping	After								
Design of Reinforced Concrete Structures	Dr. P. Parthiban	28	26	92.86	33.75	38.01	25.01	24.73	0	7	0	11	36	18	25	4
Geotechnical Engineering	Dr. J. Gopala Rao	28	26	92.86	38.28	42.6	30.52	28.66	0	7	0	29	61	4	0	0
Transportation Engineering	Dr. A. V. A. Bharat Kumar	28	27	96.43	36.89	37.89	25.3	25.36	0	4	0	14	36	36	7	4
Repair And Rehabilitation Of Structures	Dr. P. Rakesh	28	26	92.86	36.77	36.43	22.08	21.43	4	4	0	0	46	18	25	4

Average Pass % = 93.75

Table. 2: Result Analysis of B. Tech II-I for A.Y 2025-26

- The Board appreciated the consistent performance across core subjects and the positive impact of CO–PO mapping on assessment outcomes.
- The Board reviewed the IV Year I Semester result analysis and noted a 100% pass percentage, reflecting excellent academic performance and effective instructional delivery.

- The Board appreciated the steady improvement in FA and SA averages and strong grade distribution, indicating high student competency in advanced courses.

Result analysis for B.Tech 4th year 1st Semester AY 2025-26

Subject Name	Faculty Name	No of students		Pas	Avg marks FA		Avg marks SA		R %	I %	O %	S %	A %	B %	C %	D %
		Nos	Passs%		Before Mapping	After Mapping	Before Mapping	After Mapping								
Engineering Economics, Estimation and Costing	M. Anirudh	11	11	100	39.69	40.11	28.45	30.01	0	0	0	18	64	18	0	0
Engineering Geology	V. Jayanth Krishna	11	11	100	44.87	45.45	31.35	32.73	0	0	9	55	36	0	0	0
Remote Sensing & Geographical Information System	Mr. D. Ravikanth	11	11	100	40.75	41.7	33.67	34.35	0	0	18	27	55	0	0	0
Pre-stressed Concrete	Mr. K	11	11	100	43.33	43.43	30.55	31.55	0	0	9	36	55	0	0	0
Structural Dynamics	Balagopi Krishna	11	11	100	43.98	44.3	31.39	32.39	0	0	9	27	64	0	0	0
Intelligent Transportation Systems	Dr. A. V. A. Bharat Kumar	11	11	100	42.25	45.13	33.45	34.2	0	0	9	45	45	0	0	0

Table. 3: Result Analysis of B. Tech IV-I for A.Y 2025-26

- The Board advised continued academic monitoring, remedial support for low-performing students, and strengthening of advanced learning strategies to further enhance distinctions and higher-grade percentages in future semesters.
- Members enquired about the support mechanisms for slow learners, and the existing mentoring and academic support processes were explained.

5. Approval of SWAYAM–NPTEL courses.
   - A list of relevant NPTEL courses proposed to be offered as elective subjects was presented for consideration by the BoS members.

S. No	Course ID	Course Name	No. of Weeks	No. of Credits	Mentor Name and Contact No.
1	noc26-cs86	Data Analytics with Python	12	3	Dr. A. V. A. Bharat Kumar 7989979510
2	noc26-ge38	Non-conventional Energy Resources	12	3	Dr. P. Parthiban 9944552290
3	noc26-mg11	Business Fundamentals for Entrepreneurs	12	3	Mr. K. Bala Gopi Krishna 9985385856
4	noc26-ge06	Climate Risk, Adaptation and Sustainable Development	12	3	Dr. J. Gopala Rao 8385051644
5	noc26-cs76	Machine Learning for Engineering and Science Applications	12	3	Dr. P. Sundara Kumar 9182426301

Table.4: List of NPTEL Courses Approved

6. Discussion on attainments — process, rubrics, and mapping of COs, POs, PSOs, and SO values.

- Dr. P. Rakesh, Attainment Coordinator, presented the course and PO attainment analysis for the A.Y. 2024–25 II Semester, including the process adopted, evaluation rubrics, and mapping methodology of COs, POs, PSOs, and SO values.
- The Board observed that all courses attained satisfactory to very good levels across the defined outcomes, as evidenced by the attainment data.

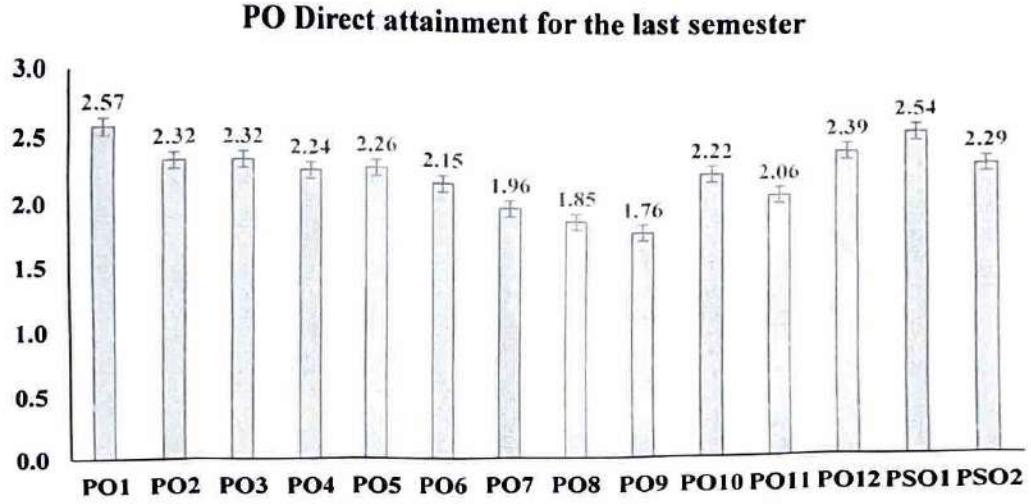


Fig.1: Program Attainment for A.Y 2025-26, I - Semester

- The Head of the Department advised sustaining and further enhancing attainment levels through continuous monitoring, strengthened teaching–learning practices, and systematic outcome-based academic planning in the forthcoming semesters.

7. Dr. J. Gopala Rao, BoR Member, presented the departmental activities conducted during the calendar year 2025 and the proposed Academic and Professional Activities Plan for 2026, covering academic initiatives, FDPs, student skill-development programs, industry interactions, and outreach activities.

Month	Week-1	Week-2	Week-3	Week-4 / Week-5
January	Workshop: Civil Project Management (Primavera & MS Project)			Field Visit: Construction Site Pre-Cast Industries
February		Industrial Visit: Stone Crusher, Perecherla		Field Visit: VFSTR Construction
March			Industrial Visit: Swaas Projects Pvt Ltd	
April				
May		STTP: Advanced Excel Applications *(11–15 May)*		
June			FDP: AI & IoT in Civil Engg	
July	Field Visit: VFSTR Construction		Guest Lecture: Civil Engg Beyond Concrete & Steel (MGNREGA)	
August		Guest Lecture: Seismic Hazard Assessment *(19 Aug)*	Guest Lecture: Steel Connections in EQ Structures	Guest Lecture: Eco-Friendly Infrastructure
September		—	Faculty Workshop: Emerging Software Tools *(25 Sep)*	
October		Guest Lecture: Innovation in Construction Recycling		
November		Guest Lecture: Cement & Concrete Innovations	Guest Lecture: Structural Framing & Reinforcement	
December	Field Visit: VFSTR Construction			

Fig.2: Research & Development Plan in 2025

Month	WK-1	WK-2	WK-3	WK-4 / WK-5
January	Workshop: Bridging Design & Construction (PEB)	Workshop: Building Drafting using AutoCAD		Guest Lecture: Writing High-Impact Q1 & Q2 Journal Papers
February	Industrial Visit: Railway Track Components	Industry Guest Lectures - Webinar	Training: Structural Computation Software	
March	PhD DCM (Cycle-II)	National Workshop: Field Applications	Guest Lecture Webinar: IoT in Civil Engg	
April	Industrial Visit		Training: Primavera Software (APSSDC)	
May	Guest Lecture: AI & ML in Civil Engineering			National Conference & Symposium
June				FDP: AI-Driven Structural Health Monitoring
July			Field Visit: Construction Site / Pre-Cast Industries	
August			Field Visit: VFSTR Construction	
September		Webinar: Environmental Impact Assessment		
October	Guest Lecture: AI & ML in Civil Engg	Workshop: Revit - AutoCAD (APSSDC)		FDP: Smart Urban Infrastructure
November		Field Visit: Capital City – Amaravathi	International Conference	
December		Workshop: Advanced Hydrology & Remote Sensing	Workshop: Structural Design using STAAD Pro (APSSDC)	

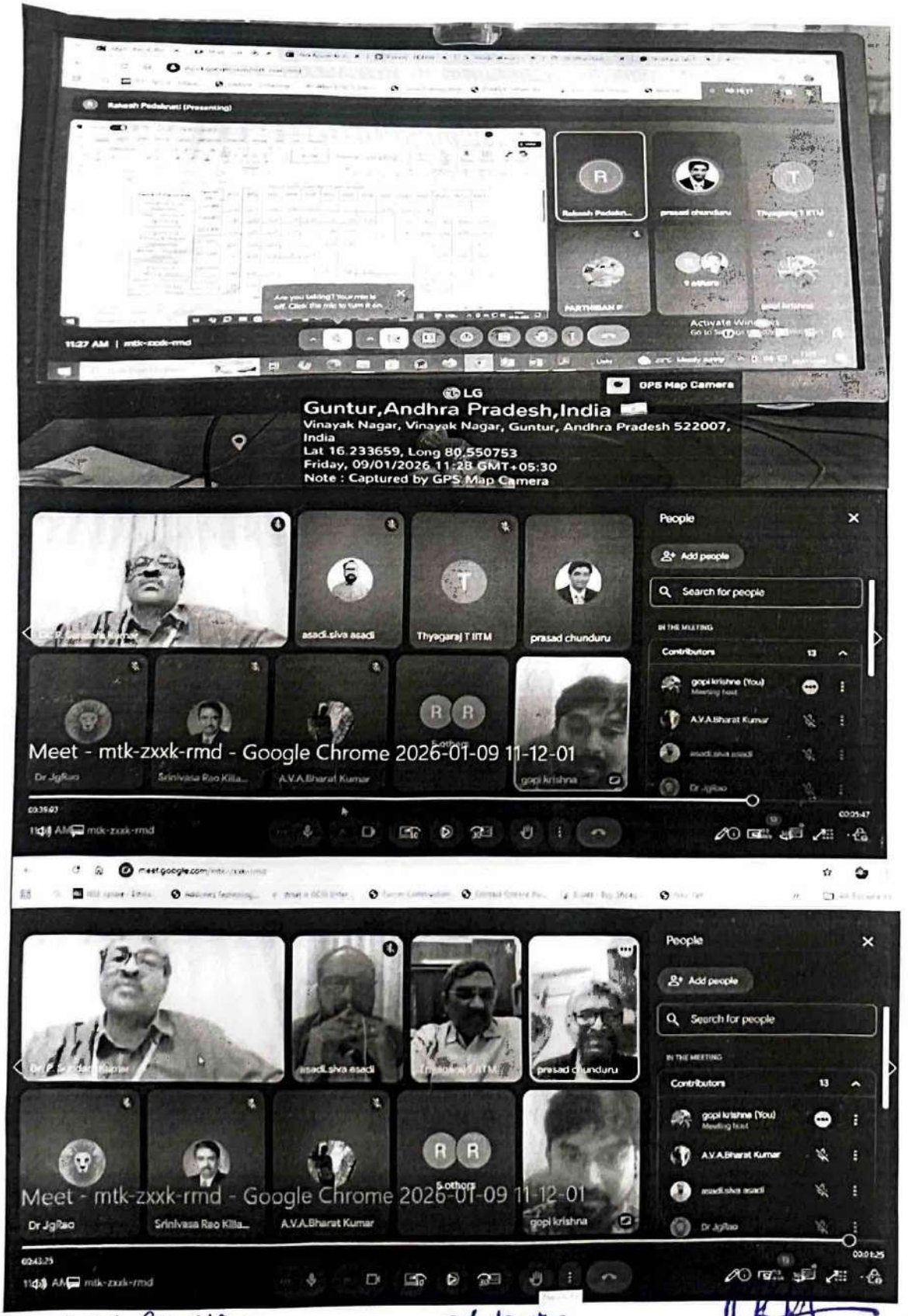
Fig.3: Civil Engineering Department Academic & Professional Activities Annual Plan (2026)

8. The Board appreciated the systematic planning and effective execution of activities and emphasized aligning future programs with Program Outcomes (POs), SDGs, and industry requirements.

The following recommendations and approvals are made after the discussion:

1. The Board of Studies approved the introduction of the new M. Tech program in Smart and Sustainable Constructios, considering its relevance to emerging industry needs and sustainable development.
2. The Board approved the elective courses and Honours Stream structure under R25C25 for B. Tech Civil Engineering, ensuring alignment with curriculum flexibility, interdisciplinary learning, and outcome-based education requirements.
3. The Board approved the proposed list of NPTEL/SWAYAM courses for credit transfer and enrichment learning to enhance students' technical competency and employability skills.
4. The Board reviewed the semester result analysis and expressed satisfaction with the overall academic performance, appreciating the existing mentoring system and academic support mechanisms for slow learners, and recommended continuing these practices for sustained improvement.
5. The Board of Studies reviewed the attainment analysis of COs, POs, PSOs, and SOs for the A.Y. 2024–25 II Semester and noted that the attainment levels were satisfactory to very good across all courses. The Board appreciated the systematic outcome-based assessment process and recommended sustaining and further enhancing attainment through continuous monitoring, effective teaching–learning practices, and targeted support for students wherever required.
6. The Board recommended strengthening industry–academia collaboration, expert lectures, hands-on workshops, and student participation in research, innovation, and competitions.

There being no further points for discussion, the Chairperson thanks all the external, internal, invited members and announced that the meeting was concluded.



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