

## Annexure – IV



# VIGNAN'S

Foundation for Science, Technology & Research

(Deemed to be University)

ESTABLISHED BY USC ACT 1956



## DEPARTMENT OF AGRICULTURAL ENGINEERING

### CIRCULAR

Date: 24.02.2025

Department of Agricultural Engineering is going to conduct 7<sup>th</sup> Board of Studies (BoS) meeting for the B. Tech. Agricultural Engineering and M. Tech (Farm Machinery) Programme on **08.03.2025** from 09.30 AM to 02:00 PM. The meeting will be held in blended mode, physically at AGF06, U-Block, Vignan University, and virtually *via* MS Team. All the members are requested to make it convenient to attend the meeting.

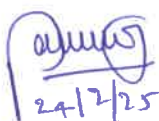
#### The members are


Sl. No	Name of the member	Designation and Address	Role
1	Dr. Hadole Mahesh Vinayak	Coordinator & Assistant Professor, Agricultural Engineering Dept. Mob: +91-9765268662, Mail: hmv_ae@vignan.ac.in	Chair person
2	Prof. T. Ramesh Babu	Director, Department of Agriculture and Horticultural Sciences, and Dean School of Agriculture and Food Technology, VFSTR Mob: +01- 048312629, mail: doar saft@vignan.ac.in	Internal member (Academia)
3	Dr. T V Satyanarayana	Former Dean of Agricultural Engineering and Registrar, ANGRAU; Presently Registrar, MNR Educational Institutions, Sangareddy, Hyderabad. Mob: +91-9440264684 mail: info@mnrniversity.com	Invited member (Academia) <del>ONLINE</del>
4	Dr. K.P. Vidhu	Joint Director NIPHM, Hyderabad Mob: +91-8500719141 Mail: kp.vidhud@gov.in	External Member from Central Research Institution (Invited member)
5		Department of Agricultural and Food Engineering, IIT Kharagpur	External Member from

	Prof. P.S. Rao	Mob: +91-3222-263164 Mail: parao@jagte.tgp.ac.in	Academics
6	Mr. A.S. Subbarao	DGM-Agronomy, SBU-South NETAFIM, India Mob: +918142244704 mail: as.subbarao@netafim.com	Invited member (Industry) ONLINE
7	Dr. P. L. N. Varma	Professor & Head, Department of Mathematics and Statistics, Mob: +91-9490606025, Mail: hod_maths@vignan.ac.in	Internal member (School nominee)
8	Dr. Ayyanna DS	Assistant Professor & BOR, AE Mob: +91-8105130846, Mail: drads_ae@vignan.ac.in	Internal member (Dean R&D nominee)
9	Dr. M.Anusha	Assistant Professor & BOE, AE Mob: +91-7725996057, Mail: drma_ae@vignan.ac.in	Internal member
10	Dr. T Prabhakara Rao,	Assistant Professor & BOA, AE Mob: +91- 79897 33870, Mail: drtpr_ahs@vignan.ac.in	Member (Secretary)

#### Agenda of the BoS Meeting:

1. Approval for Curriculum (C24) as per R22 and Sixth Deans' Committee Recommendations.
2. Introduction of New Regulation 2025 (R25) and Approval of Curriculum (C25) of B. Tech. (Agricultural Engineering) Programme according to Regulation (R25) and Sixth Deans' Committee Recommendations.
3. Suggestions for M. Tech (Farm Machinery) Curriculum (C25) Revision for R25.
4. Any other points with the permission of Chairperson.

  
24/2/25  
Member Secretary

  
24/2/25  
Chairperson  
Assistant  
Department  
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Wingek  
ordinator  
engineering  
University)  
21313.

Annexure – V



**VIGNAN'S**

Foundation for Science, Technology & Education

(Deemed to be University)

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**DEPARTMENT OF AGRICULTURAL ENGINEERING**

Date: 08.03.2025

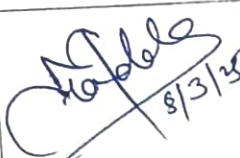

**Minutes of Board of Studies Meeting**






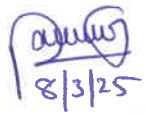
Board of Studies (BoS) meeting of B. Tech., Agricultural Engineering programme and M. Tech (Farm Machinery) was held on March-8, 2025, from 9:30 AM. to 2:00 PM. The meeting was conducted in a blended format: some participants attended in person at the AGF06, U-Block, Vignan University, and virtually *via* MS Team. The event was presided over by Dr. Hadole Mahesh Vinayak, Department Coordinator and Chairperson of the Board of Studies, Department of Agricultural Engineering, School of Agriculture and Food Technology, VFSTR.

**Agenda of the BoS Meeting:**

1. Approval for Curriculum (C24) as per R22 and Sixth Deans' Committee Recommendations.
2. Introduction of New Regulation 2025 (R25) and Approval of Curriculum (C25) of B. Tech. (Agricultural Engineering) Programme according to Regulation (R25) and Sixth Deans' Committee Recommendations.
3. Suggestions for M. Tech (Farm Machinery) Curriculum (C25) Revision for R25
4. Any other points with the permission of Chairperson

The following members were present either thorough offline or online (Annexure-1 also).

Sl. No	Name of the member	Designation and Address	Role	Signature
1	Dr. Hadole Mahesh Vinayak	Coordinator & Assistant Professor, Agricultural Engineering Dept. Mob: +91-9765268662, Mail: hodaev@vignan.ac.in	Chair person	 8/3/25
2	Prof. T. Ramesh Babu	Director, Department of Agriculture and Horticultural Sciences, and Dean School of Agriculture and Food Technology, VFSTR Mob: +01-048312629. mail: dean_saft@vignan.ac.in	Internal member (Academia)	
3	Dr. T. V. Satyanarayana	Former Dean of Agricultural Engineering and Registrar, ANGRAU; Presently Registrar,	Invited member (Academia) <b>ONLINE</b>	online

		MNR Educational Institutions, Sangareddy, Hyderabad. Mob: +91-9440264684 mail: info@mnrniversity.com		
4	Dr. K.P. Vidhu,	Joint Director NIPHM, Hyderabad Mob: +91-8500719141 Mail: kp.vidhud@gov.in	External Member from Central Research Institution	
5	Prof. P.S. Rao,	Department of Agricultural and Food Engineering, IIT Kharagpur Mob: +91-3222-263164 Mail: parao@jagte.tgp.ac.in	External Member from Academics	
6	Mr. A.S. Subbarao	DGM-Agronomy, SBU-South NETAFIM, India Mob: +918142244704 mail: as.subbarao@netafim.com	Invited member (Industry) <b>ONLINE</b>	online
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9	Dr. M. Anusha,	Assistant Professor & BOE, AE Mob: +91-7725996057, Mail: drma_ae@vignan.ac.in	Internal member	
10	Dr. T Prabhakara Rao,	Assistant Professor & BOA, AE Mob: +91- 79897 33870, Mail: drtpr_ahs@vignan.ac.in	Member (Secretary)	 8/3/25

Dr. T. Prabhakar Rao, a member of the Board of Academics (BoA), extended a warm welcome to both external and internal Board of Studies (BoS) members from the Department of Agricultural Engineering, as well as to special invitees who were distinguished experts from the industry and academia. Dr. Hadole Mahesh, as Chairperson, welcomed all attendees and special invitees, expressing sincere appreciation for their commendable efforts in ensuring a robust turnout. He highlighted the significant value of their collective presence in contributing to the success of the meeting.

Dr. Hadole then provided an overview of the meeting's agenda and initiated the presentation.

The following points were discussed in the BoS meeting:

**Agenda 1:** Approval for Curriculum (C24) as per R22 and Sixth Deans' Committee Recommendations.

Dr. Hadole began by revising the key features and entry and exit options for the B. Tech. Agricultural Engineering programme, as per the ICAR's 6th Deans' Committee report. with a particular emphasis on credit distribution. The salient components include the Deeksharambh Foundation Course (2 weeks, non-gradual), core courses (major, minor, and elective credits), Multi-Disciplinary Courses (10 credits), Value

presented the updates in Renewable/Electrical and Electronics Engineering subjects. Dr. Saurabh covered the Computer Science and Engineering-related subjects. Dr. T Prabhakar and Mr. Amitabh Soni presented the modifications in Farm Machinery and Power Engineering (FMP) subjects. Finally, Mr. G. Aditya discussed the syllabus changes for Processing and Food Engineering (PFE) subjects.

All members actively observed the changes and provided their inputs respective to their areas of specialization. The semester wise course structure is attached in **Annexure-1**.

**Discussion:**

All the members have discussed and accepted the New regulation R25 and for making the change in the semester wise (I to VIII) course structure considering both R25 and 6<sup>th</sup> Deans' Committee report. Dr. Satyanarayan sir suggested to follow ICAR and maintain evaluation pattern (50:50) and passing criteria (50 %) as per ICAR and maximum 25 credit load to each semester. He also suggested to shuffle few subjects (eg. Watershed hydrology and SWCE) within a year if required.

**The following are the specific comments made by members:**

**Dr. T. V. Satya Narayana** suggested incorporating experiments on all three types of notches/weirs into the practical section of the Fluid Mechanics and Open Channel course. For the Soil and Water Conservation Engineering course, he proposed adding an extra credit if it does not exceed the maximum limit. He also recommended detailing all physical characteristics/parameters of watersheds, such as form factor and shape factor, in the Watershed Hydrology subject, and changing the heading of Module 2 Unit 2 to "Watershed Characterization, Prioritization and Modelling." In the Irrigation and Drainage Engineering course, he advised retaining practices like land grading methods, drainage coefficient estimation, and the Glover-Dumm Equation for designing subsurface drainage systems. Additionally, he suggested adding a design component for border irrigation (emphasizing Israelsons equation), check basin, and furrow irrigation, and conducting actual experiments on these topics. He also proposed adding extra practice in Module 1 of Engineering Mechanics, such as determining the centroid of irregular areas like watersheds, and ensuring all syntax and grammatical errors are corrected.

**Mr. A. Subbarao** recommended adding practice sessions on IoT-based irrigation scheduling, land grading, and precision irrigation, including automated smart irrigation systems, in the Irrigation Engineering and Sprinkler and Micro Irrigation Engineering subjects. He also suggested site visits to modern hi-tech polyhouse to demonstrate advanced IoT-based irrigation systems. Furthermore, he proposed considering the design of ripening chambers in the Agricultural Structures and Environmental Control

Added Courses (6 credits), Ability Enhancement Courses (10 credits), Skill Enhancement Course (SEC) (8 credits), the Internship/ Project/Student READY program (15 credits), Remedial Courses in Mathematics (1 credit), Non-gradual a 2-week study tour (2 credits), and 6 credits of online courses. Concise details of elective and skill enhancement courses were also presented. Dr. Hadole mentioned that as per 6<sup>th</sup> Dean committee C24 has been modified considering R22 and in last BoS meeting first year curriculum (C24) has been approved. In this meeting remaining second to final year curriculum (C24) will be presented along with C25. He also emphasized that structurally C24 and C25 are same, because both follow 6th Deans' Committee report. However, there is little change in Regulation only.

Further discussion covered the uniform examination and evaluation system with a standardized grading process, followed by an overview of semester-wise course for all four years and credit allocation and department-wise credit distribution.

**Discussion:**

All the members have accepted the curriculum (C24) as per R22 and for making the change in the semester wise (I to VIII) course structure considering both R22 and 6<sup>th</sup> Deans' Committee report.

**Resolutions:** Curriculum (C24) for all 4 years is approved by all the members.

**Agenda 2:** Introduction of New Regulation 2025 (R25) and Approval of Curriculum (C25) of B. Tech. (Agricultural Engineering) Programme according to Regulation (R25) and Sixth Deans' Committee Recommendations.

Dr. Hadole delivered a detailed presentation on the New Regulation 2025 (R25), emphasizing the division of the syllabus into two modules, first module with 2 units and second module with 3 units, and discussing their duration and assessment patterns. He also presented the credit distribution as per R25 and shown comparison with the 6th Deans' Committee recommendations. Dr. Hadole also highlighted the structures, teaching methodologies, and evaluation methods of the R22 programme, comparing them with those of the R25 programme.

Dr. Hadole began the presentation by discussing the curriculum revisions (C24 and C25 both) for Soil and Water Conservation Engineering (SWCE) and Irrigation and Drainage Engineering (IDE) subjects. This was followed by Mr. Amitabh Soni, Mr. Ravikant, Mr. Anirudh, Dr. Gopal Rao, and Dr. Kartikeyan, who presented subjects from Agricultural Structures and Civil and Environmental Engineering (ASCEE). Dr. Rajanand and Dr. Swarnlata then presented modifications in Basic Agriculture and Basic Sciences subjects. Dr. Pradeep, Dr. Farookh, and Dr. Durgarao discussed the changes in Mechanical Engineering-related subjects. Dr. M Anusha and Mrs. Ramya

course and including interactions with farmers regarding the socio-economic aspects of farming-based livelihood systems.

**Prof. P.S. Rao** suggested to specifically mention evaluating static or dynamic friction problems in the practice sessions of the Engineering Mechanics course. In the Theory of Structures course, he advised using grain interaction with steel or RCC structures, such as silos, as examples. He also recommended visits to local storage structures for the Agricultural Structures and Environmental Control course. He suggested to include Algae Biomass topic in M2 practices of Bio-energy Systems - Design and Applications course. He commented that add UV Spectroscopy uses for food in practice session in Engineering Chemistry. For Food Processing Engineering-related subjects, he emphasized arranging topics from simple to complex and aligning practices accordingly. Further, he suggested to separate Thermal Processing and Non-Thermal Processing title in theory and discuss all types of mixer separately in practice section of Food and Dairy Engineering. He stressed the importance of preparing lab manuals for newly added subjects and correlating all basic engineering subjects' topics with agriculture. Additionally, he suggested discussing the syllabus with a food safety officer or industrial person and inviting them to teach those topics or share the facilities.

**Dr. K. P. Vidhu** recommended specifically mentioning commonly used statistical software/packages in the Agricultural Statistics and Data Analytics course practices. Regarding the Basics of Electronic Gadgets and Instruments subject, he emphasized including agricultural-based measuring instruments in the syllabus. For the Agricultural Informatics and Artificial Intelligence course, he noted that the syllabus is extensive and could be considered a basic course. However, he suggested making it as practical as possible so that students can understand the agricultural applications of smartphones, sensors, robots, and drones. Farm Machinery and Equipment – I & II subject, he advised to specifically mention each unit titles and suggested that plant protection equipment and their codes are not feasible for practical sessions and should be discussed separately in theory.

**Resolutions:** As per the stakeholders' feedback, there is more than 25 % change in the syllabus. Therefore, Curriculum (C25) of B. Tech (Agril. Engg.) as per R25 and 6<sup>th</sup> Deans' Committee report is approved by all the Members.

**Agenda 3:** Suggestions for M. Tech (Farm Machinery) Curriculum (C25) Revision for R25

Dr. Anusha announced that the M. Tech (Farm Machinery) curriculum, approved during previous Board of Studies (BoS) meetings, is to be revised for R25 Regulation. She also mentioned that students have the option to select advanced NPTEL and MOOCs courses for an Add-on degree. She invited suggestions for the same.

**Discussion:**

**Dr. K. P. Vidhu** suggested preparing a specific list of NPTEL or MOOCs courses that students can follow for the Add-on degree. **Dr. Hadole** agreed and stated that they would communicate this list along with the proposed syllabus for suggestions by all members.

The proposed add-on courses list is attached in **Annexure-2**:

**Resolutions:** All members accepted revision for M. Tech (Farm Machinery) curriculum.

**Agenda 4:** Any other points with permission of chairperson

**ICAR Accreditation**

- **Dr. K. P. Vidhu** suggested pursuing ICAR accreditation, noting that the department has been operational since 2012-13. **Dr. P. S. Rao** supported this suggestion and emphasized the importance of preparing an action plan and a Self-Study Report. He also recommended leveraging the facilities and support from other departments and management to achieve ICAR accreditation. **Dr. Hadole** acknowledged their efforts and assured that they would soon present a plan to obtain ICAR accreditation.


**The following resolutions made after the discussion:**

1. BoS Members approved the revised regulations (R25), curriculum structure (C24 and C25), syllabus of B. Tech., Agricultural Engineering programmes and it follows based on the NEP 2020 and ICAR 6<sup>th</sup> Dean Committee Guidelines. Curriculum structure is provided in **Appendix - I**.
2. Major restructuring has taken place in the curriculum which is oriented towards continuous learning and assessment based on Module structure.
3. Major reformation has taken place in the curriculum by offering Skill Enhancement courses.
4. The curriculum is encompassing the courses that enable employability or entrepreneurship or skill development, provided in **Appendix - II**.
5. Total average percentage of syllabus revised was 30 % compared to previous curriculum provided in **Appendix - III**.
6. The significant changes are made in the content of all courses and hence the courses are considered as new courses provided in **Appendix - IV**.

Based on the feedback from various stakeholders and suggestions given by the members, the Chairperson of BoS told that, those fruitful suggestions would be incorporated appropriately in the curriculum and syllabi of the regulation R25 and this will be recommended to the Academic Council of VFSTR for the approval.

The following action points were pronounced during the BoS minutes. (**Appendix - V**)

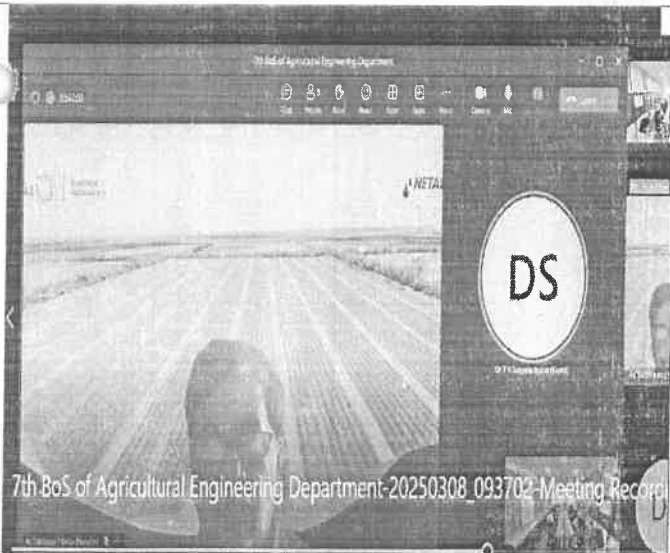
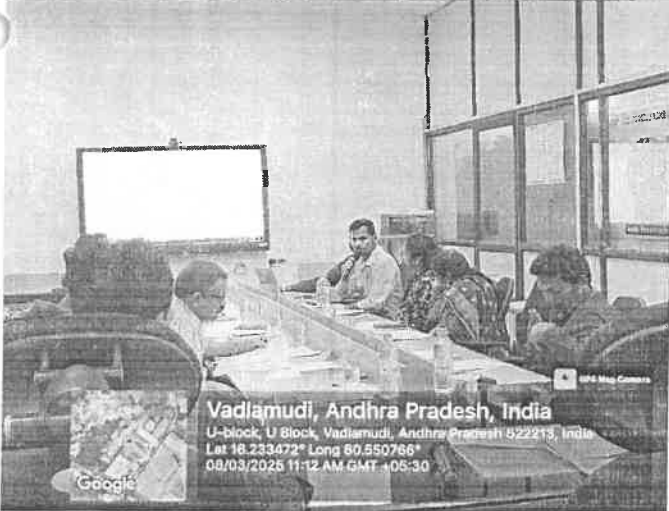
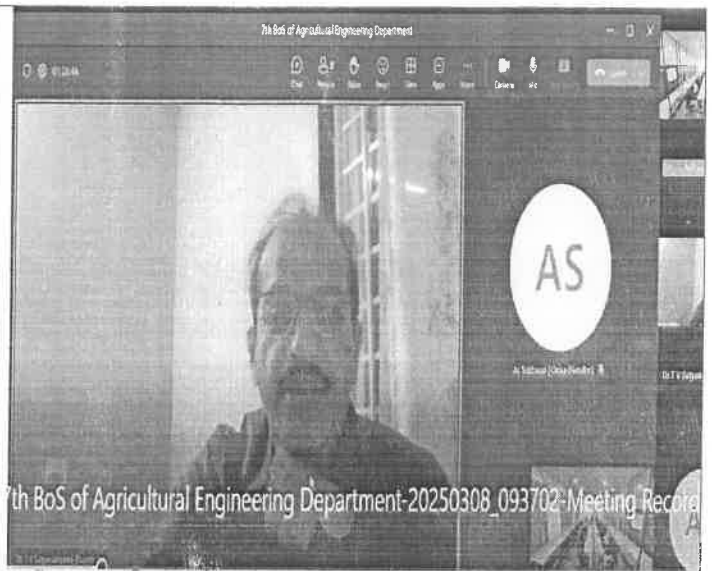
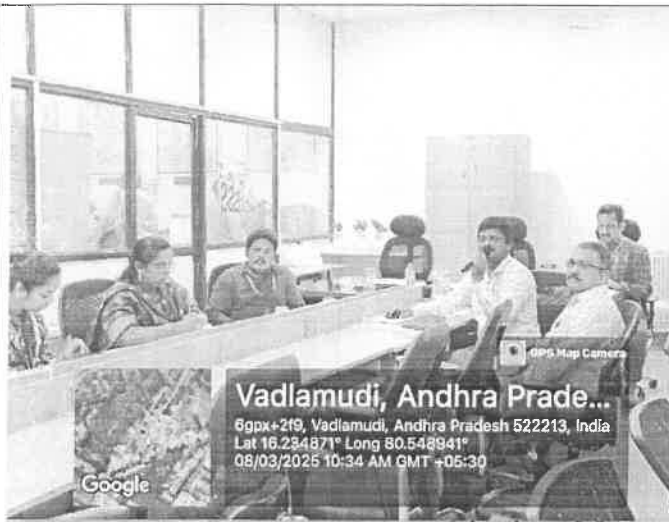
There being no further points for discussion, the Chairperson thanks all the external, internal, invited members and announced that the meeting was adjourned.



Member Secretary



**Dr. Hadole Mahesh Vinayak**  
Assistant Professor & Coordinator  
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