

Seshadri Rao Gudlavalleru Engineering College
(An Autonomous Institute with Permanent Affiliation to JNTUK, Kakinada)
Seshadri Rao Knowledge Village, Gudlavalleru – 521 356.

Department of Mechanical Engineering

Minutes of 1st Board of Studies Meeting

Dt: 12-07-2023

Agenda: Suggestions are invited from the Board of Studies members:

- i. To finalize the course structure of B.Tech Mechanical Engineering-R23 regulations.
- ii. To finalize the syllabus of subjects in the I B.Tech – I & II Semesters.

Prof. & Head, Dr. A. Jawahar Babu, introduced the Board of Studies Members to the members in the meeting.

Dr. Ch. Viswanath, Professor of ME IIT Hyderabad, Dr. Krishnaiah, Professor of ME, Osmania University Hyderabad, Sri K. Chandra Kaladhar, Executive Engineer APGENCO, attended the meeting offline, and Dr. G. Bala Krishna, Professor of ME JNTUK, Kakinada and Sri P. Sameer Kumar, Engineer SAIL attended the meeting online.

The course structure of B.Tech Mechanical Engineering for R23 and the syllabus of various subjects and labs in the curriculum are presented. Also, Dr. A. Jawahar Babu reported that the curriculum is prepared following the guidelines of AICTE, APSCHE, and JNTUK.

1. In the course structure, the sequence of arranging the subjects should be – theory, professional electives, labs and open elective subjects.
2. In the I Semester of study, an orientation program on “Basics of Mechanical Engineering” should be organized, covering the applications and some fundamental concepts.
3. The following subjects are suggested to offer by the Department of Mechanical Engineering as Open Elective or Professional Electives:
 - i. Electric Vehicle Technologies
 - ii. Smart Mobility
 - iii. Biomechanics
 - iv. Internet of Things
4. In I B.Tech, the Basic computer skills Lab can be offered in the I Semester, and Computer Aided Engineering Drawing Lab can be offered in the II Semester of study.
5. In the computer skills lab,
 - a. Add the experiments on referencing, bookmarking, citations, writing footnotes, etc., in MS Word.
 - b. Use Power BI instead of MS Paint.
 - c. Introduce the plotting of a variety of graphs using Open-Source software.
 - d. Use Grammarly, Turnitin, etc., to check for plagiarism, grammar mistakes, etc.
6. Instead of repeating the concepts of Environmental Sciences, offer Environmental Science and Sustainable Development in I Semester and Engineering Materials with lab in the II semester.
7. The syllabus of the subject Chemistry can be modified by introducing the concepts of Safety principles in Industries.

8. Course title "Design Thinking" is suggested to change to "Design Thinking and Innovation" by adding content related to Entrepreneurship. Also, concepts of Testing and Certification of Prototypes can be included.
9. Mini Project should be carried out following the principles of "Design Thinking and Innovation." Also, suggested funding the students encourages them to produce better products.
10. Suggested to include AC Machines in the subject Basics of Electrical and Electronics Engineering subject.
11. Introduce the experiments based on the Aurdino Board in the Basics of Electrical and Electronics Engineering Lab.
12. Before introducing Artificial Intelligence and Machine Learning subject, A course covering the Concepts of Industry 4.0 and IoT sensors can be offered.
13. The lab name of Analysis using ANSYS is suggested to change to "FEM and CFD Lab."

Based on the deliberations in the external board of studies meeting convened, and guidelines issued by the affiliating university, the course structure was finalized and received the approval mails from the members.


Head of the Department
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SESHADRI RAO GUDLAVALLERU ENGINEERING COLLEGE

(An Autonomous Institute with Permanent Affiliation to JNTUK, Kakinada)

Seshadri Rao Knowledge Village

Gudlavalleru - 521356

Department of Mechanical Engineering

Minutes of Board of Studies Meeting held on 03-07-2024

1. Dr. K. Ch. Kishore Kumar, Professor & HoD of ME introduced the external BoS members in the meeting to all the members.
 - [1] Dr. Ch. Viswanadh, Professor, IIT, Hyderabad
 - [2] Dr. A. Krishnaiah, Professor, OU, Hyderabad
 - [3] Dr. K. Meera Saheb, Professor, JNTUK, Kakinada
 - [4] Sri. Chandra Kaladhar, DE, Dr.NTTTPS, Vijayawada
 - [5] Sri P. Sameer Kumar, Senior Manager, SAIL, Jamshutpur.
2. Dr. B. Karuna Kumar, Professor of ME & Principal, introduced himself and requested the BoS members to give their valuable suggestions to improve the course structures of II, III and IV B.Tech and the syllabi of various subjects included in the regulations R23 for I & II semesters of II B.Tech.
3. Dr. K. Ch. Kishore Kumar started presenting the course structures of II, III and IV B.Tech and the syllabi of various subjects included in the regulations R23 for I & II semesters of II B.Tech.
4. Dr. K. Meera Saheb suggested to
 - i. the course structure should be in line with APSCHE and JNTUK, Kakinada. The modification in the syllabi may be allowed based on the inputs from external BoS members.
 - ii. include additional experiments / virtual lab in the laboratories.
5. Dr. Ch. Viswanath suggested to
 - i. include statically indeterminate beams in Unit-IV of the subject Mechanics of Solids.
 - ii. include scipy, numpy and data manipulation for solving the specific problems of subjects like Fluid Mechanics etc.
 - iii. quoted that the syllabus in the subject Numerical Methods and Probability is heavy. It can be offered as two different subjects.
 - iv. suggested to include Industry 4.0 or Advanced Manufacturing processes instead of Additive Manufacturing.

6. Dr. A. Krishnaiah

- a) suggested to include the concepts of manufacturing methods of Plastics like injection moulding, blow moulding and 3D printing in Manufacturing Processes of II B.Tech II Sem.
- b) suggested to include the Unit-V as "Thermodynamic cycles" in place of "introduction to R&AC", since it is offered as one of the electives in IV B.Tech I Sem.

7. Internal BoS Members suggestions

- a) Dr. P.Ravindra Babu suggested to incorporate the following topics to Design of machine members of III B.Tech I sem, since the subject "mechanics of solids" is only introductory course.
 - Complex Stresses
 - Stresses on an inclined plane under different uniaxial and biaxial stress conditions
 - Principal planes and principal stresses - Mohr's circle
- b) Dr. A. Jawahar Babu suggested to remove the topics "Plastic deformation in metals and alloys-recovery, recrystallization and grain growth. Hot working and Cold working-Strain hardening and Annealing" from Manufacturing Processes of II B.Tech II Sem, since the topics are already covered in the subject "Material Science and Metallurgy" of II B.Tech I Sem.
- c) Sri D.K. Pavan Kumar suggested to remove some repeated topics and incorporated the changes in the syllabus of "Numerical Methods and Transforms" of II B.Tech I Sem.
- d) Dr M.R.Ch. Sastry suggested to incorporate the topic "Dimensional Analysis" in the Heat transfer subject of III B.Tech II sem instead of offering in Fluid Mechanics and Hydraulic Machines of II B.Tech II Sem.

8. Dr. K. Ch. Kishore Kumar informed that

- i. the subjects Design Thinking & Innovation and Universal Human Values are adjusted between semesters across all the branches, to balance the workload.
- ii. experiments using on-destructive testing are included in the curriculum (Liquid penetration test, magnetic particle test, ultrasonic test) – as content beyond curriculum.
- iii. 4 periods each will be allotted to the PYTHON lab and embedded Systems and IoT lab to cover theory along with the experiments given in the syllabus.
- iv. 4 periods will be allotted to the subject Design Thinking and Innovation – 2 periods for content discussion and 2 periods for conducting the activity in the class.
- v. The subjects Design of Machine Members and Theory of Machines are swapped to have the continuity of concepts.

9. Dr. K. Ch. Kishore Kumar, Professor of ME & HoD concluded the meeting with vote of thanks to the members in the BoS meeting and informed that the minutes of the meeting will be shared to all the members.



Dr. K.Ch.Kishor Kumar

BoS Chairman

Dept. of Mechanical Engineering

Seshadri Rao Gudlavalleru Engineering College

Gudlavalleru

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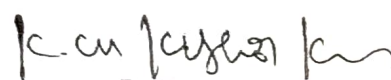
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Seshadri Rao Knowledge Village, GUDLAVALLERU

Department of Mechanical Engineering

Minutes of BoS Meeting held on 24-06-2025

1. Professor & Principal, Dr. B. Karuna Kumar, greeted all the Board of Studies members and requested HoD to initiate the proceedings.
2. Professor & HoD, Dr. K. Ch. Kishor Kumar, introduced the external BoS members to the members in the meeting.
 - Dr. D. Venkaiah, Professor, Department of ME, IIT, Tirupathi.
 - Dr. G. Ravi Kiran Sastry, Professor, Department of ME, NITAP, Tadepalligudem.
 - Dr. K. Meera Saheb, Professor of ME, University College of Engineering, JNTUK Kakinada.
 - Mr. M. Madhusudhana Rao, Assistant General Manager, APSRTC, Vijayawada.
 - Mr. Sk. Mahaboob Bhasha, Asst. Executive Engineer, Hydro Electric Systems, Upper Sileru.
3. BoS Chairman presented the department Vision, Mission, POs and PSOs.
4. BoS Chairman presented the course structure of III B.Tech and IV B.Tech, and highlighted the significance of including the integrated courses, project based courses, MOOC courses in Professional Electives, Virtual labs, Mini Project and Seminar.
5. BoS members suggested encouraging the students by completing few courses through NPTEL / MOOCs.
6. BoS Chairman proposed that it is mandatory to complete atleast one of the courses completed through NPTEL.
7. BoS members suggested to increase the number of credits given to the professional core subjects in IV B.Tech I Sem from 2 credits to 3 credits.
8. Suggestions given by BoS Members in the syllabi of III B.Tech I Sem courses:
 - Change the order of topics in Metrology course and include the concepts of Geometric Dimensioning and Tolerances.
 - Include the list of experiments to be performed in the course Design of Machine Elements.
 - Include the topics on Missile Technologies in Thermal Engineering course.
 - Include the concepts of miniature size sensors in the MEMS course and transfer the macro-size sensors to the course on Mechatronics.
 - Include the concepts on Hydrogen energy and merge the concepts of Ocean Thermal Energy Conversion and Tidal Energy in the course Renewable Energy Technologies.
 - Rearrange the contents in the course Entrepreneurship.
 - Combine all the individual alignment tests to Machine Tool Alignment Test in Machine Tools and Metrology lab.
9. Suggestions given by BoS Members in the syllabi of III B.Tech II Sem courses:
 - Conventional and Futuristic Vehicle Technologies course can be offered as a professional core course.
 - Add the topics on Carbon Capturing Systems in the Power Plant Engineering course.
 - Additive Manufacturing course can be offered as a professional core course.
10. BoS members suggested to give '1' tutorial period for the numerical oriented courses.



BoS Chairman
Dept. of ME, SRGEC

Seshadri Rao Gudlavalleru Engineering College

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Department of Mechanical Engineering

Dt: 18.04.2026

Agenda:

1. Review of Vision, Mission, PEOs, POs and PSOs of the department.
2. Finalization of Course Structure and Syllabus for IV- B.Tech. Mechanical Engineering

Minutes of Meeting held on 18.04.2026

- Dr. K. Ch. Kishor Kumar, BoS Chairman, welcomed all the members and introduced the invited experts to the faculty members of the department of Mechanical Engineering.
 - The Vision, Mission, PEOs, and PSOs of the department were presented.
 - The BoS members opined that no changes are required in the Vision, Mission, and PEOs of the department.
 - Minor modifications were suggested in the Program Specific Outcomes (PSOs) (Annexure - I).
 - The members also suggested that, as per the latest NBA guidelines, 11 Program Outcomes (POs) may be adopted for outcome assessment (Annexure - II).
- The BoS chairman presented the course structures of I, II, III B.Tech along with Minors and Honors programs in Mechanical Engineering.
- The course structure and syllabi of IV B.Tech Mechanical Engineering were also presented for discussion and approval.

The screenshot shows a Zoom meeting in progress. At the top, there's a toolbar with various icons. Below it, a row of participant avatars is visible, including DB, PS, MM, and BV. The main window displays a presentation slide titled "IV B.Tech I Semester". The slide contains a table with course details.

Sl. No.	Category	Name of Course	Laboratory	No. of Periods per week			No. of Credits
				L	T	P	
1	Professional Core	Computer Aided Design (CAD/CAM)		2			2
2	Professional Core	Operational Research		2			2
3	Professional Core	Manufacturing Management		2			2
4	Professional Elective-I	Automotive Engineering		2			2
5	Professional Elective-I	Robotics and Automation		2			2
6	Professional Elective-I	MOOC		2			2
7	Professional Elective-II	Hydrogen and Fuel Cell Technology		2			2
8	Professional Elective-II	Agri-mechanics Systems		2			2
9	Professional Elective-II	Drone and Autonomous Robotics		2			2
10	Professional Elective-II	Power Plant Engineering		2			2
11	Professional Elective-II	Automotive Maintenance		2			2
12	Professional Elective-II	MOOC		2			2

Key Suggestions and Discussions:

- Dr. K. Meera Saheb highlighted
 - The curriculum shall incorporate subjects relevant to both research requirements and industry needs.
 - Faculty members should emphasize the practical applicability of concepts through real-world examples.
 - Students should preferably carry out their final year projects in industries.
- Dr. G R K Sastry recommended the inclusion of case studies in the curriculum to enhance students' problem-solving and analytical skills.
- Sri Mahaboob Bhasha Shaik and Sri M Madhusudhana Rao suggested
 - Undertaking a few final year projects aligned with industry requirements.
 - Encouraging internships in industries to provide real-time work exposure.
- The BoS Chairman informed that several industry-relevant courses have already been included in the curriculum, such as:
 - Autonomous systems
 - Automation in Manufacturing.
 - Hydrogen and Fuel cell technology
 - Condition Monitoring
- Dr. G. R. K. Sastry suggested offering a few open elective courses through MOOCs. The Chairman clarified that this practice is already being implemented in the institute.
- It was also informed that a few experiments have been added to the CAD/CAM laboratory to facilitate virtual experimentation.



Dr. K Ch Kishor Kumar
BoS Chairman
Dept. Mechanical Engineering,
Seshadri Rao Gudlavalleru Engineering College
Gudlavalleru

Annexure - I

Modified Program Specific Outcomes:

PSO1: Design and analyze thermal systems related to power generation and human comfort for a sustainable environment.

PSO2: Develop eco-friendly products by adopting best manufacturing practices.

PSO3: Effectively use various software tools for design, analysis and optimization.

Ken Raju

Annexure – II

PO1: Engineering Knowledge: Apply knowledge of mathematics, natural sciences, computing, engineering fundamentals, and specialization to solve complex engineering problems.

PO2: Problem Analysis: Identify, formulate, review research literature, and analyze complex engineering problems to reach substantiated conclusions with sustainability considerations.

PO3: Design/Development of Solutions: Design solutions for complex engineering problems considering public health, safety, societal, environmental, and sustainability aspects.

PO4: Conduct Investigations of Complex Problems: Use research-based knowledge, design experiments, analyze and interpret data to derive valid conclusions.

PO5: Engineering Tool Usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools with awareness of limitations.

PO6: The Engineer and The World: Analyze societal, environmental, economic, health, and safety impacts of engineering solutions with sustainability focus.

PO7: Ethics: Apply ethical principles, professional ethics, and adhere to legal and societal norms in engineering practice.

PO8: Individual and Collaborative Team Work: Function effectively as an individual and as a member/leader in diverse and multidisciplinary teams.

PO9: Communication: Communicate effectively with engineering community and society through reports, presentations, and documentation.

PO10: Project Management and Finance: Apply engineering and management principles to manage projects and understand financial aspects in multidisciplinary environments.

PO11: Life-long Learning: Recognize the need for and engage in independent and lifelong learning in the context of technological advancements.

