

K L E F
DEPARTMENT OF MECHANICAL ENGINEERING
MINUTES OF BOARD OF STUDIES MEETING

The department Board of Studies meeting was held from 10:00 A.M. on 29/06/2018 in the HoD Chamber, with HoD in the chair.

Agenda of the Meeting:

1. To consider and approve the minutes of the Department Academic Committee (DAC) held on 8th March 2018 and recommend the same to the Academic Council to be incorporated into curriculum.
2. To consider and approve the minutes of the Department Academic Committee (DAC) held on 5th April 2018 and recommend the same to the Academic Council to be incorporated into curriculum.
3. To consider and approve the Curriculum Structure, Syllabus for the 2018 admitted B.Tech. Mechanical Engineering students framed as per the recommendations of the Department Academic Committee (DAC) and feedback from the stakeholders.
4. To consider and approve the changes in Curriculum Structure, Syllabus for the 2017 admitted B.Tech. Mechanical Engineering students made according to the recommendations of the Department Academic Committee (DAC) and feedback from the stakeholders.
5. To consider and approve the changes in Curriculum Structure, Syllabus for the 2016 admitted B.Tech. Mechanical Engineering students made according to the recommendations of the Department Academic Committee (DAC) and feedback from the stakeholders.
6. To consider and approve the Curriculum Structure, Syllabus for the 2018 admitted M.Tech. Machine Design students framed as per the recommendations of the feedback from the stakeholders.
7. To consider and approve the change in the name of M.Tech. Mechatronics program as M.Tech. Robotics and Mechatronics as approved by AICTE in 2018 approval process with Curriculum Structure, Syllabus remaining the same in line with the earlier M.Tech. Mechatronics batches.
8. Any other points with permission of the Chair.

The following Internal Members were present:

1. Dr. Pranveer Singh Satvat, Dean, Academics, KLEF-Patron
2. Dr. A. Srinath, Head of the Dept. and Professor ME - Chairman
3. Dr. S. S. Rao, Alt. HoD ME and Professor ME - Secretary
4. Dr. K. L. Narayana, Dean - R & D and Professor ME
5. Dr. K. Rama Krishna, Dean - Quality and Professor ME

6. Dr. N. B. V. Prasaad, Dean – Placements & Progression and Professor ME
7. Dr. Y. V. Hanumantha Rao, Associate Dean – Practice School and Professor ME
8. Dr. K. V. Narasimha Rao, Group Head, Energy & CFD and Professor ME
9. Dr. G. Diwakar, Group Head, Design Engineering and Professor ME
10. Dr. G. Yedukondalu, Group Head, Robotics & Mechatronics and Associate Professor ME
11. Dr. B. Nageswara Rao, Chairman RPAC ME and Professor ME
12. Dr. S. N. Padhi, HoD BES-II and Professor ME
13. Dr. P. Issac Prasad, Professor ME
14. Dr. D. Kiran Kumar, Associate Professor ME
15. Dr. Y. Kalyan Chakravarthy, Assistant Professor ME
16. Mr. P. Ratna Prasad, Assistant Professor ME

The following External Members were present:

17. Dr. A. Venu Gopal, Professor, Dept. of ME, NIT Warangal (Alumni)
18. Dr. R. Vijaya Kumar, Manager, R & D, HAL, Bangalore (Alumni)
19. Dr. Srinivasa Rao Perla, Global Training Head, Cyient Technologies, Hyderabad
20. Dr. Solaikutty Dhanabal, Academic Program Manager, National Instruments, Chennai

Dr. Gnanamurthy, Professor, Dept. of ME, IIT-Madras and Dr. K. Ravi Teja, Manager R & D, Hyundai R & D Division, Hyderabad, have sent their leave of absence owing to family emergencies. However, both external members have sent their observations on the agenda items through email, to the BoS Chairman.

The following Co-Opted Members were present:

21. Dr. K. Subramanyam, Professor, Dept. of CSE
22. Dr. A. S. C. S. Sastry, Professor, Dept. of ECE
23. Dr. V. S. Bhagavan, Professor, Dept. of Mathematics
24. Dr. K. R. S. Prasad, Professor, Dept. of Chemistry
25. Dr. G. Sunita Sundari, Associate Professor, Dept. of Physics
26. Dr. B. Loveswara Rao, Associate Professor, Dept. of EEE
27. Dr. P. V. Rama Rao, Professor ME
28. Dr. T. Babu Rao, Group Head, Manufacturing and Associate Professor ME
29. Mr. D. V. A. Rama Sastry, Associate Professor ME

The following points were discussed, deliberated:

1. Dr. A. Srinath, Chairman of BoS opened the meeting by welcoming and introducing the external members, to the internal and co-opted members and thanked them for accepting

to become the member of the Board of Studies and the Chairman then put forward the Agenda items before the Board.

2. Chairman of the BoS informed the members present about the Department Academic Committee (DAC) meeting held on 8th March 2018 (Agenda Item No: 1) and highlighted the major resolutions of discussion as brought to the notice of the DAC by the student members and the board unanimously resolved to approve the recommendations made by the DAC. **(Annexure-1: DAC minutes dt:08-03-2018)**
3. Chairman of the BoS informed the members present about the subsequent Department Academic Committee (DAC) meeting held on 5th April 2018 (Agenda Item No: 2) and highlighted the major resolutions of discussion as brought to the notice of the DAC by the student members and the board unanimously resolved to approve the recommendations made by the DAC. **(Annexure-2: DAC minutes dt:05-04-2018)**
4. A brief presentation on how the curriculum for the 2018 admitted B.Tech. Mechanical Engineering batch students was designed taking into consideration the recommendations of ABET and American Society for Mechanical Engineers (ASME) (the lead Professional Society for Mechanical Engineering as specified by ABET) was presented to the members present by the Chairman BoS. The presentation highlighted the Most Cutting Edge, Emerging and Enduring Fields, Areas identified for Additional Training, Emerging and Enduring Tools and Techniques as well as the Professional Skill Sets required for the mechanical engineering graduates to meet the global challenges in the next 10 to 20 years
5. The presentation also featured the comparison of the proposed curriculum to that of the model curriculum proposed by All India Council for Technical Education, the feedback from National Skill Development Corporation (NSDC), Andhra Pradesh State Skill Development Corporation (APSSDC) on the technical skills trainings needed for the mechanical engineering graduates.
6. The Chairman of BoS also briefed the members present about the SWEAR Analysis which is done to identify the Strengths, Weaknesses and Opportunities of the students and ensure that they choose the areas of their interest and thus also informed the members about the specialization areas offered in the department for choosing the electives based on the feedback from the interactions with NSDC and APSSDC. The SWEAR analysis was also conducted for the 2016 and 2017 admitted B.Tech. Mechanical Engineering student batches.
7. Chairman of the BoS then presented the proposed structure of the curriculum and detailed syllabus of Basic Sciences, Humanities, Engineering Sciences and Professional Core for

the 2018 admitted B.Tech. Mechanical Engineering students to the members present and proposed for comments by the members.

8. It is suggested that the syllabus for Engineering drawing be modified and an additional course for Machine drawing be offered that also covers the topics on Geometric Dimensioning and Tolerances, which was agreed to be incorporated by all members.
9. Finite Element Methods course which is offered as a professional elective under Design specialization is replaced with Theory of Elasticity and Plasticity as Finite Element Methods is already offered as a core course with title Finite Element Analysis of Solids and Fluids for 2018 admitted B.Tech. students of Mechanical Engineering.
10. It is resolved to accept and approve the proposed course structure for the batch that will be admitted in the year 2018-19 for B.Tech. in Mechanical Engineering subjected to the changes made as suggested by the members. The curriculum has the following salient features. (**Annexure-3: B.Tech 2018-19 Course Structure**)
 - a. Three Mathematics courses where the 3rd course that will be purely department specific (focused on theory and applications of Differential equations to Mechanical Engineering).
 - b. 14 Professional Core Courses.
 - c. Six Professional Electives with lab associated to each course with an L–T–P structure of 2–0–2.
 - d. There will be Six Open Electives out of which one is a Communication Course, one is a Foreign Language course (keeping in view the Alumni feedback, who requested such courses owing to potential jobs abroad, as well as out of the states of AP and TS within India, for Mechanical Engineering graduates) and one is a Management Elective.
 - e. A course on Indian Heritage and Culture based on the recommendations of Hon'ble Supreme Court of India will also be offered.
 - f. Six Technical Skills courses of which four are department specific and two are coding/ Computing based.
 - g. One course on Biology for Engineers,
 - h. Term Paper - A Literature review paper in 6th semester with 2 credits (0 – 0 – 4).
 - i. Minor Project in 7th semester with 2 credits (0 – 0 – 8).
 - j. Major Project / Practice School in 8th semester with 8 credits (0 – 0 – 32).
11. It is resolved to approve and recommend the changes in Curriculum Structure and Syllabus of the Professional Electives, Professional Core courses for the 2017 admitted

B.Tech. Mechanical Engineering students (Agenda Item No: 4) made according to the recommendations of the Department Academic Committee (DAC) and feedback from the stakeholders and the same are approved to be put up and implemented as it is for that of 2018 admitted B.Tech. Mechanical Engineering Students, as listed out in above minute points. **(Annexure-4: B.Tech 2017-18 Course Structure)**

12. It is resolved to approve and recommend the changes in Curriculum Structure and Syllabus of the Professional Electives, for the 2016 admitted B.Tech. Mechanical Engineering students (Agenda Item No: 5) made according to the recommendations of the Department Academic Committee (DAC) and feedback from the stakeholders. **(Annexure-5: B.Tech 2016-17 Course Structure)**

13. It is resolved to approve and recommend the proposed Curriculum Structure, Syllabus for the 2018 admitted M.Tech. Machine Design subjected to the following modifications as suggested by the members. **(Annexure-6: M.Tech Machine Design 2018-19 Course Structure)**

- a. Advanced Engineering Material and their selection is replaced with Design with Advanced Materials
- b. Applied Mathematics is replaced with Theory of Elasticity and Plasticity
- c. Advanced Theory of Vibrations renamed as Mechanical Vibrations
- d. Instrumentation and Control Systems Elective replaced with Product Design and Development
- e. Mechanics of Fracture elective renamed as Fracture Mechanics

14. It is resolved to approve the change in the name of M.Tech. Mechatronics program as M.Tech. Robotics and Mechatronics as approved by AICTE in 2018 approval process with Curriculum Structure, Syllabus remaining the same in line with the earlier M.Tech. Mechatronics batches.

(Dr. A. Srinath)
Chairman – BoS
Dept. of ME