

GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA
(An Autonomous College u/s 2 (f) and 12 (B) of UGC Act 1956)
DEPARTMENT OF MECHANICAL ENGINEERING

No. ME/ ME/36/7801

Dated: 05/10/2020

MINUTES OF MEETING

Online meeting of internal members of Board of Studies (Mechanical Engineering) was held on 30.08.2020(Sunday) at 11.00 am.

Following were the agenda Points:-

1. Discussion and approval of detailed contents of the courses of 5th and 6th semester B.Tech (Mechanical Engineering) curriculum of 2018 admission batch onwards.
2. Discussion and approval of modification in the study scheme of B.Tech. (Mechanical Engineering) of 2018 admission batch onwards.
3. Discussion and approval of detailed contents of the courses of 3rd M.Tech (Mechanical Engineering) curriculum of 2019 admission batch onwards.
4. Any other issue with the permission of the Chairman BOS.

Following members of the BOS and special invitee were present and actively participated:-


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| 1. Dr. Paramjit Singh Bilga | Chairman |
| 2. Dr. H. S. Shan | Member |
| 3. Dr. Harwinder Singh | Member |
| 4. Dr. Harmeet Singh | Member |
| 5. Dr. Jatinder Kapoor | Member |
| 6. Dr. S.P. Singh | Member |
| 7. Dr. Harmesh K. Kansal | Member |
| 8. Dr. Pardeep Rajan | Member |
| 9. Dr. Navneet Singh Bhangu | Member [Dean Academics Nominee] |
| 10. Er. Harmeet Singh | Member (Controller of Examinations) |
| 11. Er. Davinder Singh Bhogal | Special Invitee (GNDEC) |
| 12. Er. Gurmeet Kaur | Special Invitee (GNDEC) |
| 13. Er. Manmohan Singh | Special Invitee (GNDEC) |
| 14. Er. Rupinder Singh | Special Invitee (GNDEC) |

Following members of the BOS couldn't attend the meeting:-

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|------------------------|--------|
| 1. Er. Deepinder Singh | Member |
| 2. Dr. Jatinder Madan | Member |
| 3. Mr. D.S. Dogra | Member |

The following decisions were taken unanimously based upon the discussions and suggestions of various members of BOS and special invitees:-

- 1) Under agenda point no. 1 i.e., the detailed contents of courses of 5th and 6th semester B.Tech. (Mechanical Engineering) 2018 admission batch onwards has been approved by members of BOS by incorporating the following suggestions in the proposed contents of aforesaid courses:
 - i. In the subject of Finite Element Methods, the basic contents related to mathematics has been deleted in order to incorporate some advanced topics related to the course and it is suggested that the faculty can cover such basic mathematics contents through assignment. The term Gerklens Method, has been elaborated in order to clarify what has to be covered in this particular topic. Further, correction in Text book publisher of T. R Chandrupatla, Ashok D. Belegundu, "Introduction to Finite Element in Engineering" has been corrected PHI to Pearson Publications.


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- ii. In the Course of Design of Machine Elements, the Course Outcome no. 2 in subject of Design of Machine Elements has been modified according to RBT. The topics related to Design of Transmission Derives (Belts, Rope, Chains and Gears), Design of Fasteners (specially Bolted Joint) and Design of Bearings have been included by reducing the weightage of number of hours allocated to topics like Keys and Couplings etc. Use of only one Design Data Book by PSG College of Engineering and Technology, Coimbatore has been allowed in the internal and external examinations. The question paper pattern has been kept same as for previous study scheme of B.Tech. (Mechanical Engineering) of 2014 admission batch onwards.
 - iii. In course of Operation Research, the Text Book of D.S. Hira, Prem Kumar Gupta entitled "Introduction to Operations Research" and published by S. Chand Publishers has been included as recommended by board.
 - iv. In course of Heat Transfer, the Chapter no. 2 has been bifurcated into two chapters viz Chapter 2 titled - Conduction and Chapter 3 – Applications of Conduction Heat Transfer.
 - v. In course of Industrial Automation and Robotics, topics on Robotics Programming and PLC Programming have been included.
 - vi. In the course of Mechanical Measurement and Control, chapters have been shuffled accordingly so that the chapter named "Introduction to Control Systems" kept at the last of the course.
 - vii. In course of Industrial Automation and Robotics Laboratory, total number of Experiments in Industrial Automation and Robotics have been kept at 8 and an introductory experiment on PLC has been included as per suggestions of board.
 - viii. In the course of Mechanical Measurement and Control Laboratory, Experiment no. 7 has been modified as Measurement of speed of shaft by various methods.
 - ix. Prerequisites have been kept N/A for all the courses keeping in view the carry on of student policy for admission in next semester.
 - x. Contact hours in most of the courses have been reviewed and kept according to the contents of course.
 - xi. At least three Reference books in addition to five text books have been added.
 - xii. The percentage of numericals in ESE of each course has been reviewed and kept appropriately as per the nature of course.
 - xiii. Note regarding at least one project to be done in each laboratory of B. Tech. has been incorporated.
 - xiv. Discussion on Contents of 6th semester B.Tech. (Mechanical Engineering) 2018 admission batch onwards courses is deferred to next meeting.
- 2) Under agenda point no. 2 i.e., Discussion and approval of modification in the study scheme of B.Tech. (Mechanical Engineering) of 2018 admission batch onwards has been approved by members of BOS by incorporating the following corrections:
- i. Correction in subject codes of Mandatory Courses in study scheme of B.Tech. (Mechanical Engineering) of 2018 admission batch onwards has been made in 6th Semester and 7th Semester from MCI -101 to MCI – 102 in course of Constitution of India and from MCI -102 to MCME – 101 in course of Environmental Science to keep as per notice no. SS/24/2024 dated 05/02/2019. The marks distribution for internal, external and total marks of these courses has been modified to 50, -- and 50 marks respectively. Mandatory Course in 8th Semester Study Scheme has been changed from Essence of Indian Traditional Knowledge to Organizational Behaviour vide notice no. SS/24/2024 dated 05/02/2019. The marks distribution for internal, external and total marks of Organizational Behaviour (MCI-103) has been modified to 50, -- and 50 marks respectively to keep at par with study schemes of other departments.


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- ii. The marks distribution for internal and external for Mechanical Vibrations Laboratory (LPCME-111) and Refrigeration and Air conditioning Laboratory (LPCME-112) have been modified from 40 Marks and 60 Marks to 30 Marks and 20 Marks respectively.
 - iii. The marks distribution for internal and external for Open Elective-I (OEZZ-XXX) has been modified from 30 Marks and 20 Marks to 40 Marks and 60 Marks respectively.
 - iv. Due to changes in the marks distribution as in above points i, ii and iii, the total marks for 6th semester study scheme have been modified for external and total marks to 380 and 850 respectively. For 7th semester study scheme the marks distribution have been modified for internal, external and total marks to 410, 340 and 750 respectively. For 8th semester study scheme the marks distribution have been modified for internal, external and total marks to 390, 260 and 650 respectively.
 - v. The overall maximum marks of the study scheme of B. Tech. (Mechanical Engineering) of 2018 admission batch onwards has been modified from 4950 to 4750 due to changes occurred as above.
- 3) Under agenda point no. 3 i.e., the detailed contents of courses of 3rd semester M.Tech. (Mechanical Engineering) 2019 admission batch onwards have been approved by members of BOS by incorporating the following suggestions in the proposed contents of aforesaid courses:
- i. In the course of Waste to Energy, topics on mathematical modeling simulation or design of some waste energy generation systems have been included. A plant visit has been made mandatory in the course of Waste to energy as a part of course and included as note in the course.
 - ii. In the course of Combustion Engineering, topics on design of oil fired furnace boiler combustion have been included. The book by authors named F. E. Mahallawy and S. E. Din Habik titled *Fundamentals and Technology of Combustion* and published by Elsevier Sci. Ltd. Has been added as per recommendation of the board.
- 4) The BOS members suggested to introduce a course similar to Waste to Energy as an elective for M Tech (Mechanical) students by incorporating advanced topics.


Chairman 05/10/2020
BOS (ME)

Encl.:

1. Detailed contents of courses of 5th semester B.Tech. (Mechanical Engineering) 2018 admission batch onwards. (17 Pages)
2. Modified study scheme of B.Tech. (Mechanical Engineering) of 2018 admission batch onwards. (03 Pages)
3. Detailed contents of courses of 3rd semester M. Tech. (Mechanical Engineering) 2019 admission batch onwards. (04 Pages)
4. Question paper template of course of Design of Machine Elements (PCME-111). (01 Page)