

Department of Mechatronics Engineering

KPR Institute of Engineering and Technology



2nd Board of Studies Meeting

Venue: Jasmine Hall(Hybrid mode)

Date: 02.12.2022

Meeting ID: 857 5089 4124

Time: 10.00 am

Agenda:

To discuss and pass

- Discussion on the minutes of previous BoS meeting and action taken
- Curriculum and syllabi for V to VIII semesters of UG programme under Regulations 2021
- Professional Electives offered in different verticals under Regulations 2021
- Open electives offered to other branches under Regulations 2021
- Any other matter brought by the Chair

Members Present:

| S. No | Name of the member with designation | Category | Signature |
|-------|---|--|-----------|
| 1 | Dr. R. Kiruba Shankar Professor & Head Department of Mechatronics KPR Institute of Engineering and Technology. | Chairperson | |
| 2 | Dr. S. Ayyappan Associate Professor Department of Mechanical Engineering Government College of Technology, Coimbatore | University Nominee | |
| 3 | Dr. T. Asokan Professor Department of Engineering Design Indian Institute of Technology Madras Chennai | Subject experts from outside Anna University-1 | |

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| S. No | Name of the member with designation | Category | Signature |
|-------|--|--|-----------|
| 4 | Dr. B. Ashok Associate Professor Department of Automotive Engineering School of Mechanical Engineering Vellore Institute of Technology Vellore. | Subject experts from outside Anna University-2 | online |
| 5 | G. V. Devadas Director AAtek Robo Private Limited Coimbatore. | Industry Expert | |
| 6 | Shrihariprasath Basuvaiyan Technical Specialist ZF Technology Centre, Hyderabad. | Alumni | online |
| 7 | Dr Shahbaz Ahmed Siddiqui Professor & Head Department of Mechatronics Engineering Manipal University, Jaipur. | Special Invitee- 1 | online |
| 8 | Dr. Raguraman Munusamy Assistant Professor Department of Mechanical Engineering IIITDM Kancheepuram, Chennai. | Special Invitee- 2 | |

Minutes of the 2nd Meeting of The Board of Studies:

The meeting started with the Chairman, Dr.R.Kiruba Shankar, HOD, Department of Mechatronics Engineering welcoming the members of the Board of Studies and presented the Vision, Mission, POs, PEOs, PSOs, Curriculum and Syllabi for all semesters of UG programme under regulations 2021.

Following points were discussed at the Board of Studies.

RESOLUTIONS:

1. Action taken on the minutes of the 1st BOS meeting:

The minutes of the 1st BoS meeting and the action taken thereon are approved

2. The Curriculum and syllabi for I and II Semesters of UG Programme under Regulations 2021

Resolved to approve the following recommendation may be passed to the standing committee of the Academic Council. The curriculum and syllabi for all Semesters of UG Programme under Regulations 2021 be passed with the following suggestions.

(i) Vision and Mission

- Need "s" is missing
- Academic excellence and research - check and resolve
- 'Trans-disciplinary' - check and resolve
- Industry ready students or graduates - check and resolve
- Academics can be included with Industry and R&D.
- New entrepreneurs with "emerging technology" can be

included.

(ii) I Semester is approved with ratification of Engineering Graphics (U21MEG01) instead of Engineering Drawing (U21MT101).

(iii) II Semester:

- Check and address 'Elements of Mechatronics' subject with following recommendations:
 - Introducing the basics of electronics was recommended.

- Overview of Mechatronics can be multi-disciplinary.
 - Check the content of Unit II-Sensors and Transducers. Also, integrated circuits can be added.
- (iv) III Semester:
- Suggestion to include applications of mechatronics systems in Kinematics of Machinery was made. It should be oriented as per the core syllabus concentration. Hence it can be “Kinematics of robotics” or “Kinematics of automated machines”.
- (v) Incorporating more coding languages in the curriculum was suggested.
- (vi) Swapping of courses between III, IV and V semester was recommended.
- Drone and UAV Technology courses could be moved from III to V semester.
 - Electrical Drives and actuators could be introduced in the III semester instead of IV semester.
 - Microcontrollers and embedded systems could move to IV semester from V semester.
- (vii) IV Semester:
- Introduction to Power Electronics prior to ‘Electronic Devices and Digital Circuits’ was recommended.
 - Non-Linear Controls can be included in ‘Control Systems Engineering’.
 - PLC-SCADA and other tools can be included in ‘Electrical Devices and Actuators’.
- (viii) V Semester:
- In ‘Robotics and Automation’ give more information about the robot’s kinematics suggesting focus on movement of the robot.
- (ix) VI Semester:
- ‘Engineering Metrology and Measurements’ can be incorporated as a unit into ‘Manufacturing Processes’ in the III Semester.

- MATLAB, CAD, CAM, CNC and AutoCAD can be a part of 'Design of Mechatronics System'.
- Simulation study can be added in 'Smart Home and Building Automation'.

(x) VII Semester:

- The title 'Total Quality Management' can be changed to Entrepreneurship Management / Engineering Management / Industrial Management with emphasis on Quality, Safety and Management in Engineering.

(xi) VIII Semester:

- Project Work Phase-II should be of 10 credits.

3. Open Elective Courses offered to other departments

Following are the suggestions given by BoS members regarding Open Electives offered by the department of Mechatronics Engineering which shall be presented to the standing committee of the Academic Council for discussions

- (i) Currently offered open elective courses can be converted into professional elective. Thereby, a new set of open electives needs to be drafted.

4. Industry inputs on Curriculum Design

Following are the suggestions given by industry members:

- (i) 'Signal' as a topic could be included.
- (ii) Adding other coding languages alongside CAD/CAM softwares was recommended.

5. Any other matter brought by the Chair

It is resolved that the following recommendations may be passed to the standing committee of the Academic Council.

- (i) For Honorary Degree, 18 additional credits should be earned (165+18=183 credits).

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- (ii) Vertical-2 may contain Advanced Driver Assistance System (ADAS) and Electric Vehicle Storage System.
- (iii) 'Instrumentation' can be deleted as it is very conventional.

Handwritten signature in blue ink
2/12/22

Chairman – BoS/MI

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