DEPARTMENT OF ROBOTICS ENGINEERING

Minutes of Board of Studies (BoS) meeting

Department	Robotics Engineering
Title	Board of Studies (BoS) Meeting
Academic Year	2020-2021
Venue:	Online Google Meet
Date & Time:	1st September 2020, 03.30PM

Members Present:

S. No	Name of the Faculty	Internal/ External	Designation
1	Dr. R. Sivarama Krishnan	External Expert – Academics	Professor and Head Department of Production Technology Madras Institute of Technology, Anna University, Chennai
2	Dr. B. Vinod	External Expert – Academics	Professor and Head Department of Robotics and Automation Engineering, P.S.G. College of Technology, Peelamedu, Coimbatore
3	Dr. A. Atif Shah	External Expert – Industry	Founder & Chairman, Abe Semiconductor Designs 16/B-3 Sundarbans Complex, First Avenue Ashok Nagar, Chennai
4	Mr. Ezhilmaran Arumugam	External Expert – Industry	Director-Axis Global Automation, Corporate Office: 33,Kathir Avenue, Aandal Street, Hope College, Coimbatore
5	Mr. K. Winnefred Paul Luke	External Expert – Alumni	Group Leader - Engine Systems Electronic Platform Continental Automotive Components India Pvt Ltd. Bommasandra, Bangalore
6	Dr. P. Rajalakshmy	Chairman	Assistant Professor & Head Robotics Engineering
7	Mr. Gerard Joe Nigel	Internal Expert	Assistant Professor, Robotics Engineering
8	Dr. P. AnanthaChristu Raj	Internal Expert	Assistant Professor, Robotics Engineering
9	Dr. L. D. Vijay Anand	Internal Expert	Assistant Professor, Robotics Engineering
10	Dr. Anitha Mary X	Internal Expert	Assistant Professor, Robotics Engineering

Dr. P. Rajalakshmy, HoD i/c, Robotics Engineering welcomed the External Experts and the Internal BoS members for the Online BoS Meeting and gave the introductory remarks based on the discussions held during the Departmental CDC.

- The new programme M. Tech Robotics and Automation that is offered by the Department of Robotics Engineering from the Academic Year 2020-21 onwards was introduced to the members.
- The HoD informed the members that the following details will be presented in the BoS
  a. The curriculum and syllabus revision for the existing courses of B. Tech Robotics and Automation that has been carried out based on AICTE Model Curriculum and the feedback from stakeholders
  b. The curriculum and syllabus for the new programme - M. Tech (Robotics and Automation).
  c. The Programme Educational Objective and Programme Specific Outcome for B.Tech (Robotics and Automation) for approval by the BoS members.
- The curriculum and syllabus for B.Tech (Robotics and Automation) -Full Time Programme of 2020 batch was presented by Dr. P. Anantha Christu Raj, Academic Co-ordinator.-UG
- The recommendations by the members of the BoS is summarized below.

Category	Suggestions	Action Taken
Engineering Sciences and Technical Arts	Dr. Atif Shah suggested that the topics in the course titled "Basic Course in Embedded C" needs to be rearranged with a hardware perspective throughout the syllabus	The topics have been rearranged
	Dr. Atif Shah mentioned that Case Studies and Programs of Machine Vision Applications relevant to Robotics can be included in the course titled "Fundamentals of Python Programming for Robotics"	Relevant Topics have been included
	Mr. Ezhilmaran suggested that the Industrial applications of Robot in the Course "Introduction to Robotics and Automation" must include Painting and machining applications also. Dr. Sivaramakrishnan mentioned that Underwater Robots can also be added under Robot Applications in the same course.	The topics have been included
Professional Core	The new Laboratory course on AI and ML has been included based on feedback from stakeholders. Dr. Atif Shah recommended that the experiments in the AI and ML Laboratory should be modified by including programs related to robotic applications and machine vision.	The list of experiments has been modified accordingly

	Mr, Winnefred cited that the topics included in the last module of the course "Sensors and Protocols for Instrumentation and Control" needs to be upgraded with the protocols currently in use in the industy like Flexray, LIN etc.	The topics mentioned have been included
Professional Electives	Dr. Sivaramakrishnan advised that a course on Design of Machine Element will be useful in Robot Design.	A course on Design of Machine Elements has been included in the Professional Electives.
	He also suggested that the course Robot Kinematics and Dynamics should be offered after the Course Kinematics and Dynamics of Machinery in the Curriculum.	The courses have been rearranged accordingly.
	It was also advised to follow a uniform number of Text Books and Reference Books.	It has been ensured that there are 2 Text Books and 5 Reference Books for UG Courses and 7 Reference Books for PG Courses.

- The curriculum and syllabus for M.Tech (Robotics and Automation) -2020 batch was presented by Dr. X. Anitha Mary, Academic Coordinator-PG
- The recommendations by the BoS Members is summarized below.

Category	Suggestions	Action Taken
Professional Core	Dr. Atif Shah recommended that the experiments in the AI and ML Laboratory should be modified by including programs related to robotic applications and machine vision.	The List of Experiments has been updated accordingly
Professional Electives	Dr. B. Vinod recommended that a course on Mechatronics System Design is required for research purpose	The Mechatronics course has been modified accordingly.
	Dr. B. Vinod also suggested that a course on Augmented Reality/Haptics can be included. He also suggested that the course titled "Robotics Based Industrial Automation" does not include topics related to Robotics and hence can be renamed as Industrial Automation	It has been included as an Elective Course The course title has been changed accordingly.
	Mr. Winneferd mentioned that topics related to Safety and reliability issues of hardware and software should be included in relevant courses.	It has been included in the course titled "Product Design and Development"

	Dr. Sivaramakrishnan recommended that topics on Flexible Manufacturing System should be included in some form in any of the courses.	It has been included as module in the course titled "Industrial Automation"

The Board of Studies Members approved the PEOs and PSOs for the UG course.

All the new courses and their syllabi were passed after incorporating the suggestions given by the members of BOS and approved by the board.

HoD i/c-RE

Encl:
1. Programme Educational Objectives and Programme Specific Outcomes for B. Tech Robotics and Automation
2. Curriculum and Syllabi - B.Tech(RA) - 2020 batch
3. Curriculum and Syllabi - M.Tech (RA) - 2020 batch