



J.C. Bose University of Science and Technology, YMCA, Faridabad

(A Haryana State Government University)

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ACTIVITY REPORT

Name of Activity: External Expert Workshop on Revision of B.Tech. (Mechanical Engineering) Scheme and Syllabus

Name of Department conducting the activity	Department of Mechanical Engineering, J. C. Bose University of Science & Technology, YMCA, Faridabad
Date of conduct	15 July 2026
Days of Activity	1 day
Nature of activity	Academic activity – External Expert Workshop on curriculum/syllabus revision
Funded/ Sponsored by	University
Activity Coordinator/s	Prof. Lakhwinder Singh Prof. Sandhya Dixit Prof. Sanjeev Goyal Dr. Rajeev Saha Dr. O.P.Mishra Dr. Nisha Bhatt
Total Amount Spent	-
Target audience	Internal faculty members of the Department of Mechanical Engineering; external subject experts, industry representative and affiliating-college
No. of Expert/s during the program	4 external experts
Name of Expert/s	1. Dr. Arshad Noor Siddique, Professor, Jamia Millia Islamia (JMI), New Delhi – External Subject Expert-I 2. Dr. Praveen Pandey, Professor, Delhi Technological University (DTU), Delhi – External Subject Expert-II 3. Mr. Aditya Singh, Ex-Manager, Hero MotoCorp, Dharuhera – Industry Representative
Link of the Activity on website	-

Detailed Activity Report	<p>Overview: The Department of Mechanical Engineering conducted an External Expert Workshop on 15 July 2026 in the RAC Lab to review recommendations from the internal workshop and finalize the revised B.Tech. Mechanical Engineering scheme for all four years and the first-year syllabus for the 2026–27 academic session.</p> <p>Participation: The workshop included Dr. Arshad Noor Siddique, Professor, JMI New Delhi; Dr. Praveen Pandey, Professor, DTU Delhi; Mr. Aditya Singh, Ex-Manager, Hero MotoCorp, Dharuhera; Dr. Surinder Kumar, Associate Professor, SRCEM, Palwal; and internal faculty members of the Department of Mechanical Engineering.</p> <p>Key deliberations and recommendations: The external experts appreciated the proposed revisions and recommended aligning the curriculum with the latest GATE syllabus and other competitive examinations, while updating course contents to reflect technological developments and industry requirements.</p> <p>New courses: The workshop approved the introduction of Mechatronics; Robotics and Artificial Intelligence; Computer Aided Machine Drawing Lab; Automotive Technologies; Mechanical Vibrations; Product Design using Data Analytics; Innovation and Entrepreneurship (Audit); Presentation Skills for Engineers (Zero Credit Audit); Additive Manufacturing and CIM Lab; and NVH Testing and Industrial IoT Lab.</p> <p>Revision of existing courses: Kinematics of Machines and Dynamics of Machines were merged into Theory of Machines. Materials Engineering was renamed Materials Engineering and Smart Materials; Industrial Engineering as Industrial Engineering and Management; Manufacturing Technology as Manufacturing Technology and Metrology; CAD/CAM was replaced by Computer Aided Design and Analysis, emphasizing solid modelling and analysis; Automation in Manufacturing was replaced by Automation and Computer Integrated Manufacturing; and Operations Research was expanded and renamed Operations Research and Decision Analytics. Environmental Science was shifted from Semester IV to Semester V, and Operations Research and Decision Analytics was shifted from PCC to HSMC.</p> <p>Projects and electives: The committee recommended reducing mandatory project courses from three to two, Open Electives from three to two, and Program Electives (PEC) from five to three. Program electives were organized into four specialization baskets: Thermal Engineering; Design & Automation Engineering; Production & Manufacturing Engineering; and Industrial Engineering & Management. Students are to select one elective from each PEC slot and may preferably choose from the same basket, though this is not mandatory.</p> <p>Contemporary electives: The approved elective additions included Analysis of Machines and Mechanisms; Industrial Automation and Robotics; Reverse Engineering; Digital Manufacturing; Additive Manufacturing; Smart Manufacturing and Industry 4.0/5.0; Combustion and Emission Control; Optimization Techniques; Robot Dynamics and Control; Design for Fatigue and Fracture; Green Manufacturing; Supply</p>
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Attach geo tagged
photographs (with
captions)



