



Educating Future Mechanical Engineers

Brainstorming Workshop, Sat, 10 July 2021
9:00 am to 1:00 pm, virtual platform



Demography, economy, industry, technology and other factors are creating a paradigm shift in the nature of work, workplace and workforce. There is a need to envision the role of future mechanical engineers in the society, and how to train the next generation of such engineers. The Indian Institute of Science, Bangalore in collaboration with the All India Council for Technical Education (AICTE) and Indian National Academy of Engineering (INAE) is pleased to host this brainstorming workshop to deliberate on the relevant issues.

- Mechanical engineering temper (knowledge, skillset and mindset) to be inculcated in students
- How mechanical engineering discipline ought to be taught in India in the next decade
- UG curriculum suitable for industry career-focused and academic/research-focused institutions
- Suitable ways to use technology in the pedagogy for mechanical engineering.

Invited Participants:

- Faculty from different institutes
- Government representatives
- Industry and R&D professionals
- Recent graduates (2020-2021)

09:00 – 09:15 | Welcome Notes

Prof. Anil Sahasrabudhe
Chairman, AICTE, New Delhi

Prof. Arunn Narasimhan
Convener, Mechanical Engineering Section, INAE

09:15 – 10:00 | Context Setting Chair: Prof. M. L. Munjal

Prof. B. Ravi
Institute Chair Professor, IIT Bombay
Curriculum Framework and Drivers

Prof. G. K. Ananthasuresh
Chair, Mechanical Engineering, IISc Bangalore
Mechanical Engineering Temper

Prof. P.V.M. Rao
Head, Design Department, IIT Delhi
Hands-on Experiential Learning Paradigms

Dr. Nagahnumaiah
Director, CMTI Bangalore
Mechanical Engineering SWOT and Gap Analysis

Dr. U. Chandrasekhar
Program Director, Wipro3D, Bangalore
Outcome-based education

11:00 – 12:00 | Breakout Sessions

Chairs: **Prof. Amitabha Ghosh, Prof. P.V.M. Rao**
Science and Introductory Engineering Courses

Chairs: **Prof. A.M. Kuthe, Prof. Bajirao Gawali**
Core courses for mechanical Engineers

Chairs: **Prof. Pradip Dutta, Dr. U. Chandrasekhar**
Technology Courses for Mechanical Engineers

Chairs: **Prof. G. K. Ananthasuresh, Prof. Sujatha Srinivasan**
Inter/multi/trans-disciplinary & Minor Courses

Chairs: **Dr. G. Nagahnumaiah, Dr. K.V. Gangadharan**
Practical Lab Skills, Internship and Project

Chairs: **Prof. Sangeetha Kohli, Prof. B. Ravi**
Humanities & Professional Skill Courses

10:00 – 11:00 | Distilled Thoughts Chair: Prof. Pradip Dutta

Prof. Amitabha Ghosh
Vice Chancellor, IIST Shibpur
Science as a Foundation for Mechanical Engineering

Prof. Sameer Khandekar
IIT Kanpur
Mechanical Engineering Teaching and Learning Ecosystem

Prof. Rudra Pratap
Vice Chancellor, Plaksha University
Modernizing Mechanical Engineering Education

Dr. A. Raghu Upadhy
Jain University, Bangalore
Need and Ways to 'IT'fy Mechanical Engineering

Mr. M. Lakshminarayan
Chairman, TVS Automotive Systems
Mechanical Engineering: Employability Skill Set

Ms. Mohini Kelkar
Grind Master Machines, Aurangabad
Industry's Expectations from Mechanical Engineers

Dr. Neeraj Saxena
AICTE, New Delhi, formerly, TIFAC
Maker Labs for DIY Hands-on Fabrication Skills

Prof. K.V. Gangadharan
NIT Surathkal
Remote and Virtual Mechanical Laboratory Experiments

Prof. Sangeetha Kohli
IIT Delhi
Mechanical Engineering for the Society

Prof. Ashok Shettar
KLE Hubli
Mechanical engineers - from Job-seekers to Job-creators

12:00 – 13:00 | Summary and Conclusion

Chairs: Prof. Dileep Malkhede and Prof. B. Ravi

Contact: AICTE, New Delhi

Contact: IISc Bangalore

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