

Faculty Development Programme
On
Mechatronics & Robotics In Manufacturing Industries

27th February—12th March, 2015

Sponsored by
All India Council for Technical Education
(AICTE)



Coordinator
Prof. Mohd Suhaib

Co- Coordinator
Mr. S. M. Muzakkir



Organized by
DEPARTMENT OF MECHANICAL ENGINEERING

Faculty of Engineering & Technology (FET)
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Jamia Millia Islamia

Jamia Millia Islamia was founded at Aligarh in United Province, India in 1920 during the Khilafat and non-cooperation Movement in response to Gandhiji's call to boycott government supported educational institutions. Jamia moved from Aligarh to Delhi in 1925. The Jamia was made a Central University by an act of Parliament in 1988. Today, Jamia Millia Islamia is one of the most prominent and promising Central Universities of the country. The academic programme of the University leading to higher education degrees, diplomas and certificates are offered through nine faculties (Education, Humanities & Languages, Natural Science, Social Science, Fine Arts, Engineering & Technology, Architecture, Dental and Law). Besides its nine faculties, the Jamia has a number of centres of learning and research.

Faculty of Engineering & Technology

This Faculty was established in 1985 with the department of Civil, Mechanical and Electrical Engineering department. It has added the department of Electronic & Communication Engineering, Computer Engineering and Department of Applied Sciences.

Its undergraduate programme includes B.Tech and B.E. (Evening) in Civil Engineering, Electrical Engineering, Mechanical Engineering, Electronics and Communication Engineering, and Computer Engineering. It also offers postgraduate programmes, M.Tech (Electrical Power System Management), M.Tech. (Mechanical Engineering- Ind.Prod/Thermo fluid/Machine Design), M.Tech. (Civil Engineering), M.Tech. (Environmental Science & Engineering), M.Sc (Electronics) and MBA. The Polytechnic offers day and evening course for diploma in Civil Engineering, Electrical Engineering, Mechanical Engineering, Computer Engineering and Electronics & Communication Engineering.

Department of Mechanical Engineering

Since its Inception in 1985, the Department of Mechanical Engineering has registered tremendous growth in teaching and research. The department offers a regular four-year B.Tech. Programme in "Mechanical Engineering" and regular M.Tech. Programme in "Mechanical Engineering -- Ind. Prod/Thermo fluid/Machine Design". The Department also runs a four-year B.E. (evening) programme in "Mechanical Engineering" for working professional with diploma Engineering. The Department is also actively engaged in research leading to Ph.D. degree.

Most of the Faculty members have received prestigious award and have published paper in refereed International/National journals and conferences. The Department has received generous grants from funding agencies like AICTE, MHRD, UGC, DST, MNRE and has successfully completed them. Presently the department is doing research on number of sponsored projects worth rupees few crores. The Department has well established facilities for research work in the areas of robotics and automation, Instrumentation & control, Gas Dynamics & CFD, Renewable Energy, IC Engine, Tribology, Mechanisms & Design, Concurrent Engineering, Reverse Engineering & RPT, Supply chain Management, Ergonomics, Metrology & Measurement, Material Testing & Characterization, Friction stir welding and many allied areas. The Department has conceived, designed and executed a unique state of the art Land Filling Gas Plant (LFG). A large number of leading organizations are regularly visiting the faculty for campus placements.

Aim and Scope of the Course

The Proposed faculty development programme aims to bring together teachers, researchers, scientists, engineers and scholars to exchange and share their experience, new ideas and research results about different aspects of recent advances in the field of Mechatronics and robotics in Industries and discuss the practical challenges encountered and the solutions adopted.

The course is intended for teachers from Mechanical, Electrical, Electronics and Instrumentation departments and industry oriented researchers for up-gradation of knowledge and skill in the areas of Mechatronics & Robotics. These are important technologies in the present scenario of India. Now a days, with the drastic changes in the industrial scenario and industrial competitiveness, the excellence in manufacturing industries is being recognized as a major force and it has made Mechatronics and robotics an emerging field for students, teachers and researchers. In the present era of globalization it has also become an important tool for standardization and quality improvement in every sphere of manufacturing activities in industries. The present AICTE Faculty development programme is being organized to present the state-of-the-art in the areas of mechatronics and robotics and its major application in manufacturing industries. There are new challenges for researchers and engineers to implement these technologies in the different manufacturing sectors. All these issues will be covered in the proposed course. This course will benefit participants from academics, R&D institutions, utility engineers and policy makers.

Topics to be covered

- Introduction to Robotics
- Mobile Robotics
- Humanoid Robots
- Micro & Nano Robotics
- Robotic Grasping & Manipulation
- Introduction to Mechatronics
- Pneumatics and Electro Pneumatics Systems
- Hydraulic and Electro Hydraulic System
- Mathematical modeling/ representation of physical systems
- Image Processing
- Sensors & Actuators
- Digital control systems
- SCADA & Fuzzy Logic
- Micro controllers& Its Programming
- Industrial control systems, PLC programming using ladder logic
- CNC Machines & Its Programming
- MATLAB,CNC Motion and Robo Simulation

Resource Persons

Eminent professors and senior faculty members of the IIT Delhi, IIT Kanpur, IIT Roorkee and JMI University, as well as experts from industries and research centres will handle the various sessions of the programme.

Venue

The Faculty Development Programme will be conducted in the campus of Faculty of Engineering & Technology, Jamia Millia Islamia, New Delhi-110025.

Participation from Academic Institutions

Faculty Development Programme is open to full time regular/permanent faculty of (Mechanical, Electrical, Electronics and Instrumentation departments) AICTE recognize degree level engineering collage and technical universities/deemed universities. The interested candidates are required to send the duly filled registration form forwarded by the competent authority along with a draft of Rs 500/- (refundable on participation) in favour of "Jamia Millia Islamia" payable at New Delhi to the course Coordinator at the earliest but not later than 20th February 2015. The list selected candidates will be displayed on university

website www.jmi.ac.in on 21st February 2015. The selections are on first come first serve basis depending upon the availability of the seats.

The selected candidates will be paid maximum AC-3 tier rail fare subject to production of railway ticket by the shortest route as per AICTE/JMI norms. Free boarding and lodging (twin sharing basis) will be provided to selected candidates. The accommodation will be made available either at JMI hostel or nearby on prior request, but candidates are required to bring their beddings and lock.

Participation from Industries & other Organization

Participants from Industries and other organization will have to bear their travel expenses. A course fee of Rs. 5000/- will be charged for the entire course towards tuitions and course material. Boarding and Lodging facilities can be arranged on request at nominal rates. The interested candidates are required to send the duly filled registration form along with a D.D of Rs 5000/- in favour of "Jamia Millia Islamia" payable at New Delhi to the course Coordinator at the earliest but not later than 20th February 2015.

Important Dates

Last date for receiving Application	: 20 - 02- 2015
Notification about Selection (Phase-I)	: 15 - 02- 2015(Distant states)
Notification about Selection (Phase-II)	: 21 - 02- 2015(For Delhi/NCR)
Confirmation from Participants	: 23 - 02- 2015

Address for Correspondence

To, Prof. Mohd Suhaib
Coordinator, FDP 2015
Department of Mechanical Engineering
Faculty of Engineering & Technology (FET)
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www.jmi.ac.in/bulletinboard/eventmodule/latest/detail

REGISTRATION FORM

Mechatronics & Robotics in Manufacturing Industries (27th February - 12th March, 2015)

(Filled Application should reach on or before 20th Feb, 2015. For Additional copies, Please photocopy this form.)

Name: Designation:.....

Organization:

.....

Qualification:

Teaching Experience: Area of Specialization:.....

Address for Correspondence:

.....

.....

Telephone/ Mobile No:

E-mail:

Accommodation Required: Yes/No.....

Payment Details:

Draft No. Issuing Bank.....

Amount..... Drawn on..... Date.....

Applicant's Signature

SPONSORSHIP CERTIFICATE

Certified that Dr./Shri/Smt

.....

is being sponsored hereby for attending the Faculty Development Programme on "Mechatronics & Robotics in Manufacturing Industries" to be conducted at Jamia Millia Islamia, New Delhi from 27 February-12 March 2015.

Signature of sponsoring authority with date and seal

Please send registration form by post and email the scanned- softcopy at
fdpjmi@gmail.com

ORGANIZING COMMITTEE

Patron

Prof. Talat Ahmed, Vice-Chancellor

General Chair

Prof. Mohammed Shakeel, Dean, FET, JMI.

Chairman

Prof. Mohd Islam, Head, MED

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Prof. M.T Beg, Deptt Electronics & Communication Engg.

Prof. A.Q. Ansari, Department of Electrical Engg.

Prof. Majid Jamil, Department of Electrical Engg

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Mr. Lokesh Kumar

Dr. Sabah Khan

Dr. Islam Nawaz

DR. Ali Hasan

Dr. Mohammad Asjad

Dr. Ahmad Faizan Sherwani

Mr. Mohamamd Javaid

Contact Person for any clarification regarding travel, lodging and boarding:

To, Mr. S. M. Muzakkir

Co-Coordinator, FDP 2015

Department of Mechanical Engineering

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