

About the Institute

Mahatma Gandhi Institute of Technology (MGIT) was established by the Chaitanya Bharathi Educational Society (CBES) in 1997 and since inception it maintained good academic track record and stood among the top engineering colleges in Telangana. The primary objective of CBES is to create temples of knowledge so as to impart value-based education to the present and future generations of our country. MGIT is affiliated to JNTU, Hyderabad and accredited thrice by National Board of Accreditation (NBA), New Delhi. The Institute is also accredited by NAAC with 'A' grade and recognized by UGC under 2(f) and 12(b). The institute offers eight UG Programs in Engineering with a total intake of 900 (CSE, ECE, EEE, IT, MCT, MEC, Civil and MMT) and five PG Programs.

MGIT has 242 well qualified faculty members with 69 Ph.D. holders, many faculty members registered for Ph.D. with reputed institutions and sufficient number of qualified nonteaching staff. The institute was ranked among the best Engineering colleges in the band of 201-250 by MHRDs NIRF in the year 2020. CSR-GHRDC rated MGIT as one of the top emerging engineering colleges of excellence from Telangana at all India level. The Week Magazine has rated MGIT among top 100 engineering colleges in India. Many Multinational companies regularly visit MGIT for campus placements.

About the Department

Department of Mechanical Engineering (Mechatronics) offers two courses in B. Tech. Mechatronics and Mechanical Engineering. Mechatronics is a very unique and emergent discipline was started with the inception of Mahatma Gandhi Institute of Technology (MGIT) in the year 1997, MGIT is the only institute in the state and in the country to have started for the first time such an innovative discipline of engineering. Mechatronics is an integrated technology involving synergetic consideration and fusion of concepts of Mechanical Engineering, Electronics, Electrical, Computer Science and Control Engineering with the key element being the integration of these areas through design process. Department also offers M. Tech. course in Mechatronics.

The department has forty two well qualified faculty with good number of supporting staff and the department is endowed with adequate infrastructure facilities, beyond the prescribed norms with spacious and well-ventilated classrooms, drawing halls, tutorial halls and administrative space besides twelve well established independent laboratories including SCADA based Computer Aided Instrumentation and Control Systems lab, Advanced CAD/CAM lab, CNC Machines & Robotics lab, Kinematics and Dynamics lab, Machine Tools lab, Production Technology lab, Motion Control Design lab, all of them equipped with the state of art equipment. The department is also having advanced measurement equipment like FARO gage portable CMM and 3D printing Lab, the AICTE sanctioned a MODROBS project to the department for modernization of CNC & Robotics lab and also sanctioned grant in aid for organizing two week FDPs and one week STTP programs. UGC, TEQIP III by JNTUH and DRDO also sanctioned research projects to the department.

Students work with various clubs/ professional chapters like ASME, SAE, Robotics, ISTE, and Innovation Club. They showcase their potential knowledge in the form of development of product and organize various workshops/seminars/conferences. Indian National Academy of Engineers (INAE), New Delhi has awarded Best Innovative Undergraduate Projects at National Level in the area of Agricultural Robots during the Academic Years 2016-17 & 2018-19.

The UG program in Mechatronics was accredited thrice by National Board for Accreditation (NBA), New Delhi.

About the STTP

The present-day industrial requirements demand volume, accuracy and precision. These demands can be met by adopting Mechatronics systems. The STTP is aimed at creating an opportunity to learn the latest advances in the area of MEMS, hydraulic, pneumatic and electrical/electronic control systems being used in industrial control systems. The programme includes elaborated in-depth lectures with experts from industry, R&D and reputed academic institutions apart from practice and demo sessions using modern equipment with simulation software.

Department of Mechanical Engineering (Mechatronics) is having well equipped laboratories and infrastructural facilities for conducting a Short Term Training Programme (STTP) on "RECENT ADVANCES IN MICRO ELECTRO MECHANICAL SYSTEMS (MEMS), MECHATRONICS AND THEIR APPLICATIONS FOR FUTURE CHALLENGES" during 02 - 07 November 2020. This STTP will provide an opportunity to the participants to share their experience and knowledge.

Course Content

- Introduction to MEMS and Mechatronics Systems
- Sensors and Actuators
- Electro-Pneumatic and Electro-Hydraulic System Design
- Micro-robotics
- Design of Mechatronics Systems
- IoT enabled Mechatronics
- Silicon Micromachining
- IR Detector
- Bio-MEMS & Lab on chips
- Signal processing and analysis of MEMS device
- PLCs, SCADA and LabVIEW
- Opto-Mechatronics
- Micro fluidic-system devices
- Micro/Nano fabrication
- MEMS-based Bio/Chemical Sensors
- Inertial sensors
- Reliability analysis of MEMS and Mechatronics devices
- Data acquisition and processing
- Thin films for MEMS
- MEMS applications and challenges

Online Practice / Demo Sessions

- Electro-Pneumatic and Electro- Hydraulic Simulators
- PLC Programming & SCADA
- MATLAB
- MEMS simulation



**MAHATMA GANDHI
INSTITUTE OF TECHNOLOGY**

Kokapet(Village), Gandipet, Hyderabad, Telangana - 500075. www.mgit.ac.in



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One Week

**ONLINE SHORT TERM TRAINING PROGRAMME
(STTP)**

**ON
RECENT ADVANCES IN MICRO ELECTRO MECHANICAL
SYSTEMS (MEMS), MECHATRONICS AND
THEIR APPLICATIONS FOR FUTURE CHALLENGES**

SLOT-3 : 02 - 07 November 2020

Coordinator

Prof. K. Sudhakar Reddy



Organised by

**Department of Mechanical Engineering (Mechatronics)
Mahatma Gandhi Institute of Technology
(ESTD in 1997)**

(Chaitanya Bharathi Educational Society)
Affiliated to JNTUH and Accredited by NBA and NAAC
Recognized under UGC 2(f) & 12 (b)
Gandipet, Hyderabad - 500 075

Email: sttpmech@mgit.ac.in
Phone: 08466997011, 09866686434
www.mgit.ac.in



Resource persons

The STTP lectures will be delivered by the faculty members, scientists and industry experts from the following reputed institutions/ organizations

IISc Bangalore, IIT Hyderabad, IIT Tirupati, Research Center Imarat (RCI), DRDO, DMRL, SIEMENS, FANUC, BITS Hyderabad, FESTO Controls, Central Institute of Tool Design (CITD), Advanced Training Institute, Hyderabad, and also from other reputed institutions.

Course material

Resource Material and lecture notes will be shared to participants.

e-Certificates will be issued to all the Participants who attend all the sessions, submit all feedbacks and scores at least 60% in the quiz.

Declaration

I agree to abide by the guidelines governing the STTP. If selected, I shall attend the STTP for entire duration. I also undertake the responsibility to inform the coordinator sufficiently in advance, in case I am unable to attend the STTP.

Place:
Date:

Signature of applicant

Address for correspondence

Dr. K. Sudhakar Reddy
Coordinator, STTP
Professor & Head
Department of Mechanical Engg. (Mechatronics)
Mahatma Gandhi Institute of Technology
Chaitanya Bharathi (post)
Gandipet, Hyderabad, Telangana- 500 075
Email: sttpmech@mgit.ac.in
Phone: 08466997011, 09866686434

Eligibility

The STTP is open to faculty members of Polytechnic and Engineering colleges approved by AICTE with specialization in Mechanical/ Mechatronics / Production / Automobile / Aeronautical / Electrical / Electronic / Instrumentation Engineering streams having interest in Automation related systems are eligible to apply. Research scholars and Participants from industries are also eligible to attend the STTP.

Important dates

The number of participants aimed for the program is limited. Selection of candidates is based on qualification and experience.
Last date for submission of Registration form : 31st Oct, 2020
Intimation of Provisional Selection (By Email) : 1st Nov, 2020.

ADVISORS

'Kavikireeti' Dr. V. Malakonda Reddy
President, CBIT

Sri. J. Syamsunder Reddy
Chairman, CBES

Sri N. Subash
Secretary & Correspondent, CBES

Smt. D. Sandhya Sree
Member and Chairperson, D&P, CBES

ORGANISING COMMITTEE

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Prof. K. Jaya Sankar
Principal, MGIT

Coordinator
Dr. K. Sudhakar Reddy
Professor & Head
Department of Mechanical Engg. (Mechatronics)

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SLOT-3

02 - 07 November 2020

[Click Here](#)

or

<http://bit.ly/MGIT-MECH-STTP3-REGISTRATION>

*Note 1: As per the AICTE guidelines the Online STTP program will be organized in batches with limited number of participants in FOUR SLOTS.

*Note 2: Participants who have received the participation certificate in the SLOT 1 / SLOT 2 STTP are not eligible to apply.