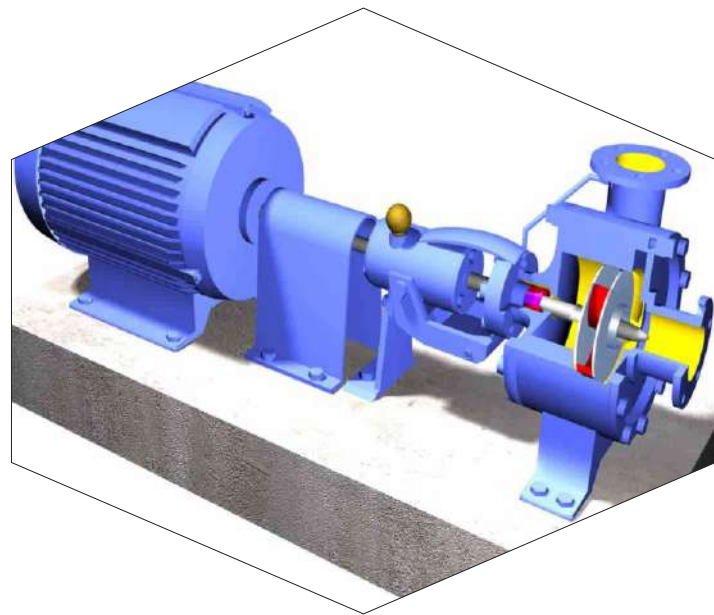


DEPARTMENT OF MECHANICAL ENGINEERING



EDITION-1
VOL.2
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**GANGA INSTITUTE OF TECHNOLOGY
AND MANAGEMENT, KABLANA**



GANGA INSTITUTE OF TECHNOLOGY AND MANAGEMENT

DEPARTMENT OF MECHANICAL ENGINEERING

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DIRECTOR'S MESSAGE



DR. AMAN AGGARWAL

GITAM, KABLANA

“

‘Mech G Connect’ (ME newsletter), vol.2 is a testament to the collaborative spirit and passion of faculty and students of Mechanical Engineering Department. We aim to foster a strong sense of belonging, connecting students, faculty, and alumni on a common platform. I extend my gratitude to the editorial team and all contributors for their dedication in making this newsletter possible. I encourage all readers to engage with the enriching content and stay connected with our ever-evolving community. Wishing you an enjoyable read and looking forward to the continued growth and success of ‘Mech G Connect’.

”

HOD'S MESSAGE



MR. VIVEK

GITAM, KABLANA

“

I am thrilled to announce the release of our Departmental Newsletter, “MECH G CONNECT.” This publication showcase our achievements and student accomplishments. I extend my gratitude to the Newsletter Committee for their hard work and contributors for enriching the content. The newsletter will be a continuous project, welcoming your future contributions. Congratulations to all for making this newsletter a reality!

”

VISION MISSION OF INSTITUTE

VISION

GITAM aims to be an outstanding Institute in India through academic excellence in the field of Technology and Management to fulfill the need of the Industry and serve the society.

MISSION

- To Provide healthy environment to our students as well as faculty members.
- To achieve excellence in technical education
- To promote holistic development of students through interaction with alumni, academia, Industry and expert lectures.
- To attract nurture and retain the best faculty and technical manpower.
- To promote research and development Initiatives.
- To contribute to the society by inculcating professional ethics in the students.

DEPARTMENT OF MECHANICAL ENGINEERING

VISION

“To become a center of excellence in the field of Mechanical Engineering, committed to address societal challenges and evolving needs of industry.”

MISSION

- To achieve excellence in mechanical engineering by providing outcome-based education in a healthy learning environment.
- To enhance the student’s technical and entrepreneurial skills by providing advanced learning facilities and co-curricular activities.
- To inculcate professional ethics, leadership qualities, and moral and social values among students through interaction with alumni and experts from industry and academia.
- To encourage students to research and innovate through project works, workshops, conferences, training sessions, etc.

PROGRAM OUTCOMES

Engineering Graduates will be able to:

- ⇒ **PO-1 Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- ⇒ **PO-2 Problem Analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- ⇒ **PO-3 Design/Development of Solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- ⇒ **PO-4 Conduct Investigations of Complex Problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- ⇒ **PO-5 Modern Tool Usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitation.
- ⇒ **PO-6 The Engineer and Society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- ⇒ **PO-7 Environment and Sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- ⇒ **PO-8 Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- ⇒ **PO-9 Individual and Teamwork:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

- ⇒ **PO-10 Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- ⇒ **PO-11 Project Management and Finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply the set to one's own work, as a member and leader in a team, to manage projects and in multi-disciplinary environments.
- ⇒ **PO-12 Life-long Learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PEO (PROGRAMME EDUCATIONAL OUTCOMES)

The students will be able to:

- ⇒ **PEO-1** To produce competent Mechanical Engineers, capable of applying the knowledge of contemporary Science and Technology, to meet the challenges in Mechanical and allied Engineering fields.
- ⇒ **PEO-2** To prepare the Mechanical Engineering graduates to work in diverse fields in different capacities involving individual and teamwork.
- ⇒ **PEO-3** To inculcate among the students a sense of ethics, morality, creativity, leadership, teamwork, and professionalism.
- ⇒ **PEO-4** To instill in the students, the ability to take up innovative research projects and to conduct investigations of complex Mechanical Engineering problems using research-based methods.

PSO (PROGRAMME SPECIFIC OUTCOMES)

The students will be able to:

- ⇒ **PSO-1** Solve the real life problems by integrating design, thermal and manufacturing areas of Mechanical Engineering.
- ⇒ **PSO-2** Adapt to rapid changes in the field of Mechanical Engineering and excel in a multidisciplinary work environment.

ABOUT MECHANICAL ENGINEERING

The Department of Mechanical Engineering was established in 2010 with the aim to provide the best knowledge and environment to ensure complete success in whatever field the students choose. This Department is one of the key strength of the Institute. It is making very sincere efforts to produce excellent Mechanical Engineering graduates to meet the present day needs of organizations and the Industry. The experienced and dedicated faculties along with its excellent facilities provide the necessary resources to keep the students updated with the latest industrial trends. The department has created state-of-the-art infrastructure in terms of Workshops, Laboratories and other facilities.

PROGRAMME	DURATION	INTAKE
B.TECH MECHANICAL ENGINEERING	4 YEARS	90
B.TECH MECHANICAL ENGINEERING (LEET)	3 YEARS	09
M.TECH MACHINE DESIGN	2 YEARS	12
M.TECH MANUFACTURING AND AUTOMATION	2 YEARS	18

ABOUT ME MANUFACTURING COMPANY



CERTIFICATE COURSE

The Department of Mechanical Engineering conducted a five days certificate course on “CNC Machining” from 01/02/2021 to 05/02/2021. Mr. Anand Tyagi was the resource person of this interactive session.

Objective : This course covers Fundamentals and concepts of CNC Machining and offers more hands on experience through which the participants will be developing CNC programs and machining complicated shapes by using the CNC machine tools.

Course Outcomes:

- Have knowledge of work and tool holding devices on CNC Machines.
- Job setting and simple programming on CNC Machines.
- Simulate tool movements programs using software.
- Perform machining operations on CNC Machines.
- Checking the quality of machined components



Contents:

DAY	CONTENTS	NO OF HRS
DAY 1	Machine basic requirements, Operator check points, Operating modes, Details on G codes & M codes, Absolute & incremental system, Point-to-point and continuous path programs.	06
DAY 2	Tools for CNC Machines, Speed and Feed selection, Tool Change. Part programming for Facing, Turning, Step Turning. Practical Training on CNC Lathe Machine.	06
DAY 3	Part programming for Chamfering, Fillet, Boring, Threading, Knurling, Drilling. Practical Training on CNC Lathe Machine.	06
DAY 4	Canned Cycles (Rectangular Pocket, Slot, Peck Drilling etc). Practical Training on CNC Milling Machine.	06
DAY 5	Canned Cycles (Circular Pocket), Mirror Command, Sub programme. Practical Training on CNC Milling Machine.	06

EXPERT LECTURE ON “CNC PROGRAMMING”

An Expert Lecture on “CNC Programming” was organized for students of the Mechanical department on 11th of May 2021. Mr. Hardial Singh (Assistant Professor, Amity) was invited as the expert.

Objective: This course covers Fundamentals and concepts of CNC Machining and offers more hands-on experience through which the participants will be developing CNC programs and machining complicated shapes by using the CNC machine tools.

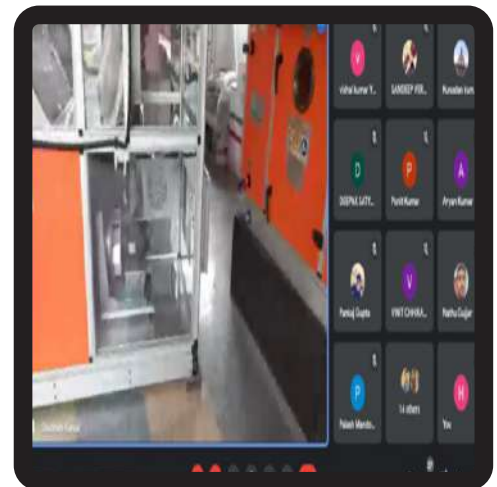


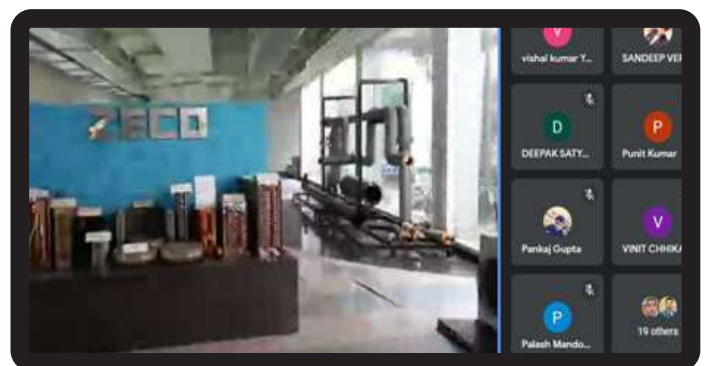
After completing this session, participants will be able to learn:

- Have knowledge of work and tool holding devices on CNC Machines.
- Job setting and simple programming on CNC Machines.
- Simulate tool movements programs using software.
- Perform machining operations on CNC Machines.
- Checking the quality of machined components

VIRTUAL INDUSTRIAL VISIT AT “ZECO AIRCON”

A Virtual industrial visit at ZECO AIRCON was organized for the Students of Mechanical Engineering on 27/05/2021 at 3:30 PM. Company is the leading HVAC and Air Purification solution provider in India. Since inception in 1989, the company has been constantly providing comfortable, clean, and infection-free air to about all the corporate and business houses of India through the range of world-class HVAC products and air purification solutions.





Objective: To make students aware about the working environment of industry.

Mr. Shubham was the speaker, he enlightened the students about the production and operation in industry with product line, competitive advantage of this firm, supply chain and plant layout etc.

Outcomes: On completion of the visit, students will get to know about the Refrigeration and Air Conditioning processes.



PROGRAMMES OFFERED

M. TECH

B. TECH

B. TECH (LEET)

DIPLOMA

DIPLOMA (LEET)

MBA

MCA

BCA

BBA



GANGA INSTITUTE OF TECHNOLOGY AND MANAGEMENT

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Approved by AICTE, New delhi and Recognized under Section 2(f) of UGC Act, 1956 &
Affiliated to Maharshi Dayanand University, Rohtak and HSBTE, Panchkula

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