

Department of Mechanical Engineering

The Department of Mechanical Engineering has been upgraded keeping in mind the growing demand for specialized knowledge in the field of mechanical engineering up to the Doctoral level. The Department aims to produce quality graduates in the field of mechanical engineering by imparting strong theoretical and practical skills. The major strength of the department is its strong research and development activities. The department is well equipped with state-of-the-art facilities and staff for laboratory work. The major strength of the department is its strong research and development activities. The department is well equipped with state-of-the-art facilities and staff for laboratory work.

Programme Offered	Intake	Duration
B.Tech. Mechanical Engineering	60	04 Years
M.Tech. Mechanical Engineering	35	02 Years

Research Areas

- Corrosion Science & Engineering
- Heat Transfer
- Modeling & Simulation
- Welding
- Alternative Energy Resources
- Conventional & Non-Conventional Machining

Infrastructure Facilities

The Department of Mechanical Engineering was established in the year 2016. It is well equipped with modern infrastructure facilities. The department is well equipped with state-of-the-art facilities and staff for laboratory work. The major strength of the department is its strong research and development activities. The department is well equipped with state-of-the-art facilities and staff for laboratory work.

Project	Funding Agency	Principal Investigator
Study of Plasma Sprayed coatings with functional materials	None/AICTE, New Delhi/under NCScheme	Dr. Vikas Chawla
Micro-fabrication of MEMS devices	AICTE, New Delhi	Dr. Neel Kanth Grover
Micro-fabrication of MEMS devices	Department of Science and Technology	Dr. Jyoti Singh
Development of MEMS devices	Department of Science and Technology	Dr. Deepak K. Goyal

Faculty Members

Name	Designation	Specialization	Exp.
Dr. Vikas Chawla	Professor & Head	Protective Coatings & Surface Engineering, Friction-Welding	19
Dr. Neel Kanth Grover	Associate Professor	Heat Transfer, Modeling & Simulation	22
Dr. Deepak Kumar Goyal	Assistant Professor	Surface Engineering, Wear of Materials, Erosion-Corrosion of Materials	16
Dr. Jyoti Singh	Assistant Professor	Conventional and non-conventional machining processes	06
Dr. Anjali Singh Gill	Assistant Professor	Materials and Manufacturing	22
Dr. Manoj Mittal	Assistant Professor	Surface modification and bio-ceramics coating	22
Dr. Vivek Aggarwal	Assistant Professor	Conventional and Non-Conventional Machining	06
Dr. Anil Kumar	Assistant Professor	Microwave processing of Materials	06

- Engineers Day for Tribute to the greatest Indian Engineer Bharat Ratna Mokshgundam Visvesvaraya and Role of Engineers in a developing India (Sept. 15, 2017)
- Teachers' Day for Appreciation and honour of university teachers in a particular field area (Sept. 5, 2017)
- Techno-cultural programme to create innovative experiences that connect, educate and inspire the students (Apr. 12, 2018)

Faculty Participation/Paper Presentation in International Conferences

- Vikas Chawla (2017), "Post plasma spraying gas nitriding of some metallic coatings on a Fe based superalloy and their high temperature oxidation behaviour" presented at 2017 International Thermal Spray Conference & Exposition (ITSC 2017), Dusseldorf, Germany.

Faculty Publications

- Kang, Anand Singh, Singh, Gaurinder and Chawla, Vikas (2019), "Characterization and Mechanical Behavior of Reinforced Hydroxyapatite Coatings Deposited by Vacuum Plasma Spray on SS-316L Alloy" *Journal of the Mechanical Behavior of Biomedical Materials*.
- Mehra, Manish, Singh, Anand Singh, Gaurinder and Chawla, Vikas (2019), "Numerical Analysis of Reliability and Availability of a Complex Replicable System" *International Journal of Engineering Research and Applications*, Volume 9(4), 94-107.
- Chawla, Vikas, Singh, Anand Singh, Gaurinder and Chawla, Vikas (2019), "Surface roughness and microhardness evaluation for EDM with Cu-Mn powder metalizing tool" *Materials and Manufacturing Processes*, Volume 33(1), 114-121.
- Aggarwal, Vivek, Chawla, Vikas, Singh, Anand Singh, Gaurinder and Chawla, Vikas (2019), "Parametric modelling and optimization for wire electrical discharge machining of Inconel 718 using response surface methodology" *The International Journal of Advanced Manufacturing Technology*, Volume 104(1), 11-17.
- Rana, Anil, Chawla, Vikas, Singh, Anand Singh, Gaurinder and Chawla, Vikas (2019), "Structure-property correlations in microwave joining of Inconel 718" *The Journal of Materials: Manufacturing Processes*, Volume 1(1), 2017-2019.
- Kumar, Anand Singh (2019), "Wear Properties of Cryogenic Treated Electrodes on Machining of In-11" *Materials Today*, (10), 141-147.
- Mittal, Manoj, Mittal, Manoj, Mittal, Manoj (2019), "Improvement in mechanical properties of plasma sprayed hydroxyapatite coating by ATO reinforcement" *Materials Science and Engineering*, 2019, 2019.
- Chawla, Vikas, Singh, Anand Singh, Gaurinder and Chawla, Vikas (2018), "Micro-fabrication of MEMS devices" *Micro-fabrication of MEMS devices*, Volume 10(1), 11-17.

Academic Achievements and Awards Won by Faculty

- Dr. Vikas Chawla (2019) Best Engineering College Teacher Award for the year 2019 by Indian Society for Technical Education (ISTE), New Delhi.
- Dr. Vikas Chawla (2018) Young Scientist Award (Engineering Sector) 2018 by the Indian Society of Sciences, Patna.



EVENT ORGANISED

Guest Lecture by Mr. Sahil Gupta, Director of PMU at Quirk.com

Workshop on "Data Science using Python"

Workshop on Machine Learning with focus on Tensor Flow

To encourage the talent and skills of the students, Department organized events like Model Exhibition, College Making, Film Night, Quiz, The Game, IT Quiz.

DEPARTMENT OF MECHANICAL ENGINEERING

The Department of Mechanical Engineering was established in the year 2016. It is well equipped with modern infrastructure facilities. The department is well equipped with state-of-the-art facilities and staff for laboratory work. The major strength of the department is its strong research and development activities. The department is well equipped with state-of-the-art facilities and staff for laboratory work.

PROGRAMME/COURSES OFFERED

Sl. No.	Programme(s)	Intake	Duration
1.	B.Tech. Mechanical Engineering	60	04 Years
2.	M.Tech. Mechanical Engineering	35	02 Years
3.	Ph.D.	As per University Norms	As per University Norms

RESEARCH AREAS

- Thermal Engineering
- Computational Fluid Dynamics
- Reliability
- Laser Cladding
- Surface Engineering
- Thermal Spray Coatings
- Conventional Machining
- Non-conventional Machining
- Wear Corrosion
- Microwave Processing of Materials
- Advanced Manufacturing
- Bioceramics
- Advanced Materials
- Surface Coatings
- Welding

FACULTY MEMBERS

Name	Designation	Experience	Specialization
Dr. Neel Kanth Grover	Associate Professor & Head of Department	23 Years	Thermal Engineering
Dr. Jyoti Singh	Assistant Professor	17 Years	Non-conventional Machining
Dr. Deepak Kumar Goyal	Assistant Professor	16 Years	Surface Engineering, Wear
Dr. Anjali Singh Gill	Assistant Professor	22 Years	Advanced Manufacturing
Dr. Manoj Mittal	Assistant Professor	22 Years	Surface Coatings, Welding
Dr. Vivek Aggarwal	Assistant Professor	06 Years	Advanced Materials
Dr. Anil Kumar	Assistant Professor	07 Years	Microwave Processing of Materials

RESEARCH PUBLICATIONS/PATENTS/PROJECTS/RESEARCH GUIDANCE

- Paper Presentations in National Conferences: 53
- Paper Presentations in Int. Conf.: 24
- Books/Book Chapters Published: 17
- Projects Undertaken by Faculty: 9
- Research Scholarships Guided (Ph.D.): 36
- Research Publications in National Journals: 11
- Research Publications in Int. Journals: 127
- Research Scholarships Guided (M.Tech): 68
- Research Scholarships Guided (Ph.D.): 4



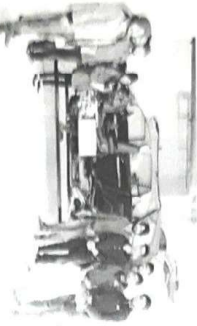
DEPARTMENT LABORATORIES



Students discussing their Project with faculty

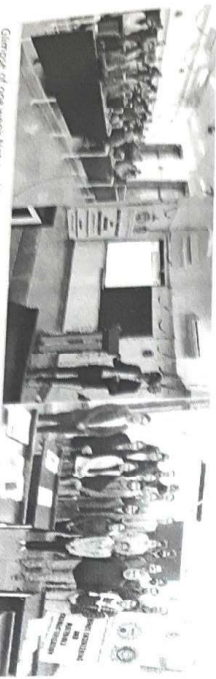


Students working on Lathe Machine in Machine Shop



Students with Car Section of a Car @ in Campus Top Training Centre

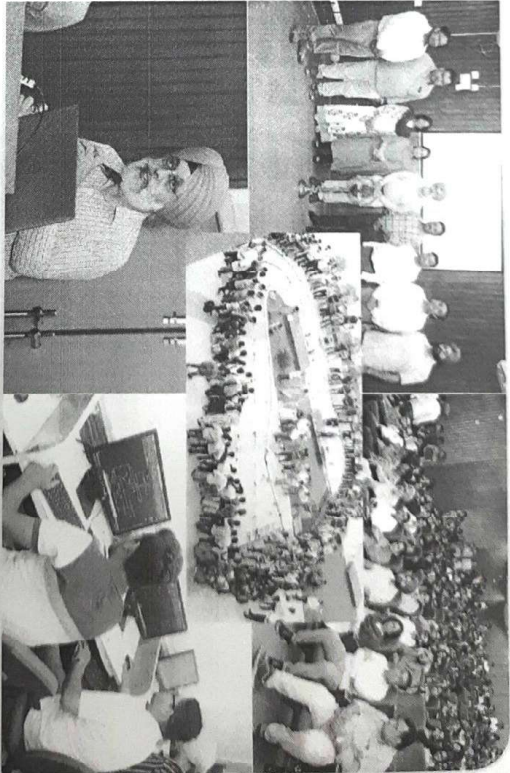
EVENTS ORGANISED/STUDENT ACTIVITIES



Group of one week National level ISRO UARTE sponsored F&P organised by Department during Dec. 09-13, 2019

Department of Mechanical Engineering
 I.K.G. P.T.U. Civil Campus
 Kapurthala

EVENTS ORGANISED/STUDENT ACTIVITIES



Engineers' Day Celebration by Faculty of Engineering



Department Faculty and Staff

43 Information Brochure 2020-21

Duration	04 Years	As per University Norms
	02 Years	
Intake	60	As per University Norms
	18	
M. Tech. - Mechanical Engineering		
PHD		

- Information Brochure 2020-21
- Department Faculty and Staff
- Engineers' Day Celebration by Faculty of Engineering
- Department Laboratories
- Events Organised/Student Activities



- RESEARCH AREAS**
- Thermal Engineering
 - Computational Fluid Dynamics
 - Reliability
 - Biomaterials, Super alloys
 - Laser Cladding, Welding
 - Surface Engineering
 - Thermal Spray Coatings
 - Advanced Materials
 - Conventional Machining
 - Non-conventional Machining
 - Wear, Erosion, Surface Coatings
 - Microwave Processing of Materials

FACULTY MEMBERS

Name	Designation	Experience	Specialisation
Dr. Vyas Chawla	Associate Professor & Head of Department (Including College Development)	21 years Engineering	Surface Engineering, Friction Welding, Corrosion
Dr. Nilesh Kumar Grewal	Associate Professor & Head of Department (Including College Development)	24 years	Fluid and Thermal Engineering
Dr. Rajpreet Singh	Assistant Professor	18 years	Conventional and Non-Conventional Machining, Composites
Dr. Deepak Kumar Goyal	Assistant Professor	16 years	Mechanics and Machine Design
Dr. Anmol Singh Gera	Assistant Professor	07 years	Engineering Graphics and Solid Mechanics
Dr. Manoj Mittal	Assistant Professor	23 years	Fluid, Thermal and Manufacturing
Dr. Vineet Aggarwal	Assistant Professor	24 years	Conventional and Non-Conventional Machining, Superalloys
Dr. Amit Bansal	Assistant Professor	08 years	Production and Materials Engineering
Dr. Amit Handa	Assistant Professor	15 years	Welding Engg., Design Engg.

RESEARCH PUBLICATIONS/PATENTS/PROJECTS/RESEARCH GUIDANCE

- Paper Presentations in National Conferences: 17
- Paper Presentations in International Conferences: 71
- Books/Book Chapters Published: 13/08
- Projects Undertaken by Faculty: 02
- Research Scholars Guided (PhD): 21
- Research Publications in National Journals: 39
- Research Publications in International Journals: 166
- Patents: 01
- Research Scholars Guided (M. Tech): 56
- Research Scholars Guided (PhD): 08

PROJECTS UNDERTAKEN BY FACULTY

Project Title/Details	Sanctioned Amount	Funding Agency	Principal Investigator
Fabrication of bio-compatible graded porous metallic implants for load-bearing drug delivery	38,30,000/-	Science & Engineering Research Board (SERB)	Dr. Anmol Singh Gill, Principal Investigator
Development and mechanical characterization of the ultrastrong oxidized hierarchical composite on stainless steel	29,75,500/-	Science & Engineering Research Board (SERB)	Dr. Amit Bansal, Principal Investigator

Information Brochure 2020-21

STUDENT PLACEMENTS INFORMATION

Student Name	Company	Package Offered
Prashant Veer	CHC Consulting, Asia Pacific, LLP	3.10 LPA
Himanshu Bhaskar	Indian Air Force	3.50 LPA
Shreyansh Kaushtik	Infosys Limited	2.16LPA
Vivesh Dadwal	Hero Steels Ltd, Ludhiana	

AWARDS/ACHIEVEMENTS OF STUDENTS

Student Name	Award/Achievement	Event	Month-Year
Siddharath Sharma	1st position	Inter-college Volleyball Tournament	2019
Siddharath Sharma	2nd position	PLC design on eve of Engineer's Day	2019
Meemansa Mishra	Silver Medal	Inter-zonal Youth Festival	2019
Yuvraj Kumar	1st position	PPT on eve of Engineer's Day	2019
Dheeraj Kumar	3rd position	SBI YONO QUIZ	2019
Kapil Kumar Kapoor	3rd position	SBI YONO QUIZ	2019
Dheeraj Kumar	3rd Prize	NIT Jalandhar Quiz competition	2019
Kapil Kumar Kapoor	3rd Prize	NIT Jalandhar Quiz competition	2019
Dheeraj Kumar	2nd Prize	Inter-zonal Youth Fest	2019
Kapil Kumar Kapoor	2nd Prize	Inter-zonal Youth Fest	2019
Dheeraj Kumar	Bronze Medal	Inter-zonal Youth Fest	2019
Kapil Kumar Kapoor	Bronze Medal	Inter-zonal Youth Fest	2019
Dheeraj Kumar	1st Prize	Inter-University Youth Fest.	2019
Kapil Kumar Kapoor	1st Prize	Inter-University Youth Fest.	2019
Karan Kumar	2nd Position	National Level Quiz Competition	2019
		Intercollege Volley- Ball Tournament	2019

DEPARTMENT LABORATORIES



Students attending Theory class



Performing Computer Aided Designing in CAD Lab

DEPARTMENT LABORATORIES



Students discussing about their Projects with Faculty



Students working on Lathe Machine in Machine Shop



Students with Cut Section of a Car @ In Campus Tata Training Centre

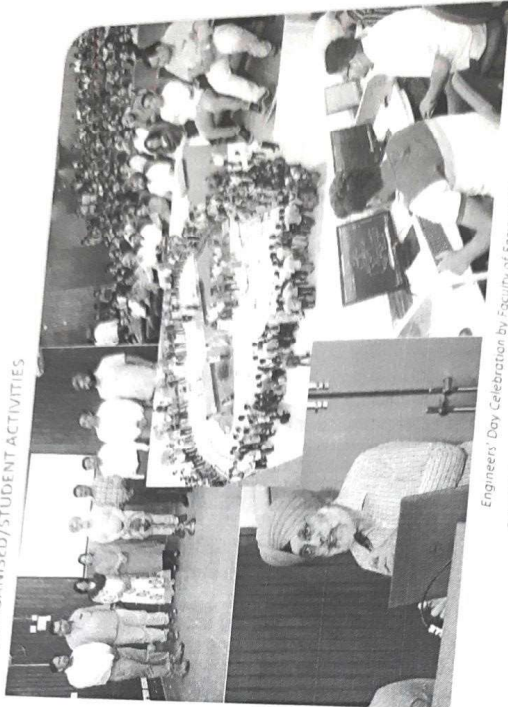
EVENTS ORGANISED/STUDENT ACTIVITIES



Glimpse of one week National level IKGPTU-AICTE sponsored FDP organised by Department during Dec. 09-13, 2019

HOD
 Department of Mechanical Engineering
 I.K.G. P.T.U. Campus
 Kapurthala

EVENTS ORGANISED/STUDENT ACTIVITIES



Engineers' Day Celebration by Faculty of Engineering



44. Department of Mechanical Engineering

- As per University Norms
- Research Areas
 - Thermal Engineering
 - Computational Fluid Dynamics
 - Reliability
 - Biomaterials and Super alloys
 - Conventional Machining
 - Non-conventional Machining
 - Wear, Erosion, Surface Coatings
 - Microwear Processing of Materials
 - Laser Cladding & Welding
 - Surface Engineering
 - Thermal Spray Coatings
 - Advanced Materials

Student Placement Information		Package
Student Name	Company	3.10 LPA
Prashant Veer	Congruex Asia Pacific LLP	3.60 LPA
Shreyansh Kausik	Infosys Ltd.	3.6 LPA & 4.6 LPA
Shivam	Infosys and Accenture	



I.K. GURAL PUNJAB TECHNICAL UNIVERSITY

(A State Govt University)



Department of Mechanical Engineering

Department of Mechanical Engineering was established in the year 2016, when University started its own teaching campus. The faculty of the department is mixture of qualified young and experienced members who are qualified from institutes of repute. Faculty members of the Department have their expertise in Thermal Engineering, Fluid Mechanics, Thermal Spray Coatings, Bio-ceramic Coatings, Non-conventional Machining processes and many more. The department has well equipped laboratories related to basic, core and advance subjects of Mechanical and allied engineering courses. Currently, Department is being headed by Dr. Neel Karth Grover, who has vast experience of about 26 years of teaching UG & PG students and guiding research scholars.

Programme	Intake	Duration
B.Tech. Mechanical Engineering	60	04 Years
M.Tech. Mechanical Engineering (Production)	18	02 Years
Ph.D	As per University Norms	

Research Areas:

- Thermal Engineering
- Computational Fluid Dynamics
- Reliability
- Metallurgy and Super alloys
- User Cladding & Welding
- Surface Engineering
- Thermal Spray Coatings
- Advanced Materials
- Conventional Machining
- Non-conventional Machining
- Wear, Erosion, Surface Coatings
- Microwave Processing of Materials

Faculty Members

Name	Designation	Experience	Specialisation
Dr. Vikas Chawla	Professor & Director (Main Campus), Dean (Academics including College Development)	22 years	Surface Engineering, Friction Welding, Corrosion Engineering
Dr. Neel Karth Grover	Professor & Head of Department, Dean (Student Welfare), Director, Skill Centre, Sultampur Lodhi & TATA Skill Centre, Main Campus	26 years	Fluid and Thermal Engineering
Dr. Deepak Kumar Goyal	Assistant Professor	17 years	Surface Engineering, Wear, Erosion, Corrosion, Mechanics and Machine Design
Dr. Lujhai Singh	Assistant Professor	19 years	Conventional and Non-conventional Machining
Dr. Anil Handa	Assistant Professor	16 years	Friction Welding, Friction Stir Welding, Processible
Dr. Anmol Singh Gill	Assistant Professor	08 years	Engineering Graphics and Solid Mechanics
Dr. Tarun Goyal	Assistant Professor	21 years	Material, Metallurgy and Advanced Manufacturing
Dr. Manoj Mittal	Assistant Professor	24 years	Fluid, Thermal and Manufacturing
Dr. Vivek Aggarwal	Assistant Professor	25 years	Manufacturing and Industrial Engineering
Dr. Amit Bansal	Assistant Professor	09 years	Production and Materials Engineering

Research Publications/Patents/Projects/Research Guidance:

- Paper Presented in National Conferences: 51
- Paper Presented in International Conferences: 99
- Books/Book Chapters Published: 34/08
- Projects Undertaken by Faculty: 02
- Research Scholars Guided (PhD): 25
- Research Publications in National Journals: 42
- Research Publications in International Journals: 225
- Patents: 02
- Research Scholars Guided (M. Tech): 80
- Research Scholars Guided (PhD): 10

Projects undertaken by Faculty:

Project Title/Details	Sanctioned Amount	Funding Agency	Principal/Co-Principal Investigator
Fabrication of bio-compatible, graded porous metallic implants for facilitating drug delivery	Rs 18,30,000/-	Science & Engineering Research Board (SERB)	Dr. Anmol Singh Gill, Principal Investigator
Development and mechanical characterization of the microwave assisted biomedical coatings on stainless steel	Rs 2979900/-	Science & Engineering Research Board (SERB)	Dr. Amit Bansal, Principal Investigator

Student Placement Information

Student Name	Company	Package Offered
Prashant Veer	Congreux Asia Pacific LLP	3.10 LPA
Shreyansh Kaushik	Infosys Ltd.	3.60 LPA
Shivam	Infosys and Accenture	3.6 LPA & 4.6 LPA

Dr. Neel Karth Grover
 Department of Mechanical Engineering
 I.K.G. P.T.U., Ludhiana
 Kapurthala

Awards/Achievements of Students:

Student Name	Award/Achievement	Event	Month-Year
Siddharath Sharma	1st position	Inter-college Volleyball tournament	2019
Siddharath Sharma	2nd Position	PLC design on eve of Engineer's day	2019
Meeamansa Mishra	Silver Medal	Inter-zonal Youth Festival	2019
Yuvraj Kumar	1st position	PPT on eve of Engineer's day	2019
Dheeraj Kumar	3rd position	SBI YONO QUIZ	2019
Kapil Kumar Kapoor	3rd Prize	NIT YONO QUIZ	2019
Kapil Kumar Kapoor	2nd Prize	NIT Jalandhar Quiz competition	2019
Dheeraj Kumar	Bronze Medal	Inter-zonal Quiz competition	2019
Kapil Kumar Kapoor	Bronze Medal	Inter-zonal Youth Fest	2019
Dheeraj Kumar	1st Prize	Inter-zonal Youth Fest	2019
Kapil Kumar Kapoor	1st Prize	Inter-University Youth Fest.	2019
Karan Kumar	Represented IKGPPTU, Kapurthala	Inter-University Youth Fest.	2019
	2nd Position	National Level Quiz Competition	2019
		Intercollege Volley- Ball Tournament	2019

Departmental Laboratories



Students performing in Theory of Machines Lab



Students discussing about their Projects with Faculty



Students working on Lathe Machine in Machine Shop



Students performing in CAD Lab



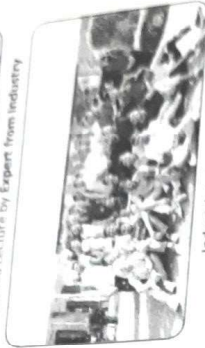
Students working on Lathe Machine in Machine Shop



Students working on Lathe Machine in Machine Shop



Invited lecture by Expert from Industry



Industrial visit of students



PPG organised by Department



Students attending Theory Class

EVENTS ORGANISED/STUDENT ACTIVITIES



Engineers' Day Celebration by Faculty of Engineering



Engineers' Day Celebration by Faculty of Engineering

Department of Mechanical Engineering
I.K.G. P.T.U. Main Campus
Kapurthala

Metric No.	Description
7.1.1	Institutional
Q/M	Provide