

## Chairman

Prof. Muhammad Pervez M.Sc (Pak)

## Professors

Prof. Dr. Irfan Ullah Ph.D. (USA)  
 Prof. Dr. M.A Irfan Ph.D. (USA)  
 Prof. Dr. Rizwan M. Gul Ph.D. (USA)  
 Prof. Dr. Hamid Ullah Ph.D. (Thailand)  
 Prof. Dr. M. Naeem Khan Ph.D. (Pak)

## Associate Professor

Engr. Iftikhar Ahmad M.Sc (Pak)  
 Engr. M. Masood Ahmad M.Sc (Pak)  
 Dr. Afzal Khan Ph.D. (USA)

## Assistant Professors

Engr. Muhammad Ali Arif M.Sc (UK)  
 Dr. S. Shaukat Ali Shah Ph.D. (Thailand)  
 Dr. Khizar Azam Ph.D. (Pak)  
 Dr. Muhammad Ali Kamran Ph.D. (UK)  
 Engr. Umar Ibrahim M.Sc (Pak)  
 Engr. Feroz Shah M.Sc (Pak)  
 Engr. Ihsan Ullah M.Sc (Pak)  
 Dr. M. Alamzeb Khan Ph.D. (UK)  
 Dr. Muhammad Sadiq Ph.D. (USA)

## Lecturers

Engr. Bilal Ahmad M.Sc (UK)  
 Engr. Tabassum Yasmin M.Sc (Pak)  
 Engr. Naveed Ullah B.Sc (Pak)  
 Engr. Naveed Ahmad M.Sc (USA)  
 Engr. Fakhre Alam B.Sc (Pak)  
 Engr. Zuhaib Ali Khan M.Sc (Pak)  
 Engr. Adeel Ahmad M.Sc (Pak)  
 Engr. Fazli Yazdan B.Sc (Pak)  
 Engr. Zeeshan Zahir M.Sc (Pak)  
 Engr. Adnan Rasheed B.Sc (Pak)

## Lab Engineer

Engr. M. Usman Khan M.Sc (Pak)

# Department of Mechanical Engineering

The knowledge of mechanical engineering is used to build useful products and devices for society. This can range from a device as small as a catheter injected into the human body, to a fax machine or printer, to a modern jet engine, to as large as a power plant for a major city.

Mechanical engineering encompasses the generation, conversion, transmission, and utilization of mechanical and thermal energy. This includes design, construction, and operation of all kinds of mechanical and thermal devices and systems. Of all the engineering disciplines, Mechanical Engineering offers the greatest breadth, flexibility, and individuality. Indeed, Mechanical Engineering education is an ideal preparation for working and living in a technological world.

### Academic Programmes

- B.Sc. Mechanical Engineering
- M.Sc. Mechanical Engineering
- Ph.D. Mechanical Engineering

### Laboratories

Practical work in laboratories is an essential part of the curriculum. Almost all subjects taught are augmented by practicals in the laboratories. The Department has a Thermodynamiaics & Fuels lab, Power Plants lab, Fluid Mechanics lab, refrigeration lab,

heat transfer lab, metallurgy lab, computer lab, and a rapid proto-typing lab. In the area of production and manufacturing, facilities include conventional and CNC machine tools. Also included are Dynamics & Vibration lab, Control & instrumentation lab, and advance CAD/CAM lab.

### Computing Facilities

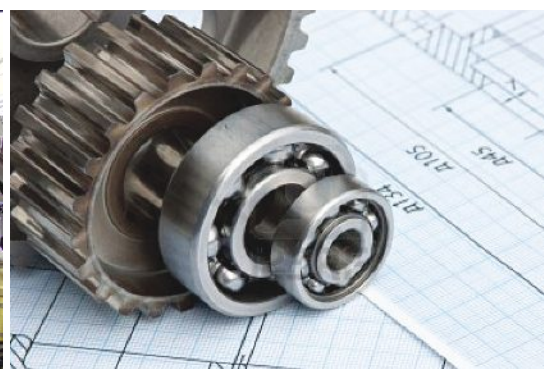
The Department has three well-equipped computer laboratories with networked PCs. Latest CAD and simulation software prepare the students to be well versed with current computer applications.

### Industrial Visits

Industrial visits are regularly conducted every year to broaden the horizon of students and to appraise them with the industry of Pakistan.

### Research

Faculty is actively involved in research in the areas of vibration, design, stress analysis, materials engineering, impact analysis, mechanisms and applications of artificial Intelligence in mechanical engineering.



# Scheme of Studies

Semester 1		Contact hours		Credit hours
No.	Course	Lecture	Lab.	Total
BSI-101	Islamic Studies	2	0	2
BSI-110	Pakistan Studies	2	0	2
BSI-122	Calculus	3	0	3
EE-109	Electrical Technology	3	0	3
EE-109L	Electrical Technology Lab	0	3	1
ME-106	Engineering Workshops	0	3	1
ME-108	Computer Programming Lab	0	6	2
BSI-142	English Composition & Comprehension	3	0	3
<b>Total Contact Hours</b>		13	12	
<b>Total Credit Hours</b>		13	4	17

Semester 2		Contact hours		Credit hours
No.	Course	Lecture	Lab.	Total
BSI-231	Differential Equations	3	0	3
BSI-143	Communication & Presentation Skills	3	0	3
ME-101	Engineering Statics	3	0	3
ME-206	Thermodynamics	3	0	3
ME-206L	Thermodynamics Lab	0	3	1
ME-105	Engineering Drawing & Graphics	2	0	2
ME-105L	Engineering Drawing & Graphics Lab	0	3	1
ME-203	Solid Mechanics-I	3	0	3
<b>Total Contact Hours</b>		17	6	
<b>Total Credit Hours</b>		17	2	19

Semester 3		Contact hours		Credit hours
No.	Course	Lecture	Lab.	Total
BSI-111	Linear Algebra	3	0	3
ME-201	Engineering Dynamics	3	0	3
ME-201L	Engineering Dynamics Lab	0	3	1
ME-102	Fluid Mechanics-I	3	0	3
ME-204	Solid Mechanics-II	3	0	3
ME-204L	Solid Mechanics-II Lab	0	3	1
ME-205	CAD-I Lab.	0	6	2
<b>Total Contact Hours</b>		12	12	
<b>Total Credit Hours</b>		12	4	16

Semester 4		Contact hours		Credit hours
No.	Course	Lecture	Lab.	Total
BSI-242	Numerical Analysis	3	0	3
ME-207	Engineering Metallurgy	3	0	3
ME-207L	Engineering Metallurgy Lab	0	3	1
ME-215	Machine Design-I	3	0	3
ME-202	Fluid Mechanics-II	3	0	3
ME-202L	Fluid Mechanics-II Lab	0	3	1
<b>Total Contact Hours</b>		12	6	
<b>Total Credit Hours</b>		12	2	14

Semester 5		Contact hours		Credit hours
No.	Course	Lecture	Lab.	Total
ME-302	Small Business Development & Entrepreneurship	3	0	3
ME-301	Mechanics of Machines & Vibration	3	0	3
ME-301L	Mechanics of Machines & Vibration Lab	0	3	1
ME-305	Machine Design-II	3	0	3
ME-307	Engineering Materials	3	0	3
ME-309	Engineering Economics	3	0	3
ME-304	Manufacturing Processes	3	0	3
ME-304L	Manufacturing Processes Lab	0	3	1
<b>Total Contact Hours</b>		18	6	
<b>Total Credit Hours</b>		18	2	20

Semester 6		Contact hours		Credit hours
No.	Course	Lecture	Lab.	Total
ME-310	Ethical & Legal Dimensions of Engineering	2	0	2
ME-308	Quality Engineering	3	0	3
ME-306	Power Plants-I	3	0	3
ME-306L	Power Plants-I Lab	0	3	1
ME-303	Mechatronics	3	0	3
ME-303L	Mechatronics Lab	0	3	1
ME-315	CAD-II Lab	0	6	2
<b>Total Contact Hours</b>		11	12	
<b>Total Credit Hours</b>		11	4	15

Semester 7		Contact hours		Credit hours
No.	Course	Lecture	Lab.	Total
ME-402	Production Automation	3	0	3
ME-402L	Production Automation Lab	0	3	1
ME-406	Power Plants-II	3	0	3
ME-404	Heat & Mass Transfer	3	0	3
ME-404L	Heat & Mass Transfer Lab	0	3	1
ME-407	Refrigeration & Air-Conditioning	3	0	3
ME-405	Instrumentation	2	0	2
ME-411	Project	0	9	3
<b>Total Contact Hours</b>		14	15	
<b>Total Credit Hours</b>		14	5	19

Semester 8		Contact hours		Credit hours
No.	Course	Lecture	Lab.	Total
ME-407L	Refrigeration & Air-Conditioning Lab	0	3	1
ME-408	Automatic Controls	3	0	3
ME-408L	Instrumentation & Control Lab	0	3	1
ME-403	Maintenance Engineering	2	0	2
ME-409	Industrial Management	3	0	3
ME-410	Industrial Health & Safety	2	0	2
ME-411	Project	0	9	3
<b>Total Contact Hours</b>		10	15	
<b>Total Credit Hours</b>		10	5	15

Total Credit Hours = 135

\*Project will be covered in 7th & 8th semesters