

## Chairman

Prof. Dr. Iftikhar Hussain Ph.D. (UK)

## Professor

Prof. Dr. Sahar Noor Ph.D. (UK)

## Assistant Professors

Dr. Shahid Maqsood	Ph.D. (UK)
Engr. Rashid Nawaz	M.Sc. (USA)
Engr. Syed Asif Ali Shah	M.Sc. (USA)
Dr. Misbah Ullah	Ph.D. (S.Korea)
Engr. Fawad Haidar	M.Sc. (UK)

## Lecturers

Dr. Rehman Akhtar	Ph.D. (USA)
Engr. Aamir Sikandar	M.Sc. (UK)
Engr. Imran Ahmad	M.Sc. (Pak)
Engr. Sikandar Bilal Khattak	M.Sc. (Pak)
Engr. Altaf Hussain	M.Sc. (Pak)
Engr. Khawar Naeem	M.Sc. (Pak)
Engr. Muhammad Omair	M.Sc. (Pak)

## Lab Engineers

Engr. Ishrat Noor	B.Sc. (Pak)
Engr. Abdur Rehman	B.Sc. (Pak)
Engr. Mahawish Mahmood	B.Sc. (Pak)

# Department of Industrial Engineering

Industrial Engineering is a discipline which can contribute a lot towards the optimization and integration of resources, streamlining of processes, eliminating waste, meeting targets and improving quality. With such a powerful combination of various engineering elements coupled with strong management sciences, it was inevitable to launch an Industrial Engineering (IE) discipline at University of Engineering and Technology (UET) Peshawar to produce proper knowledgeable and skilled people for our manufacturing and service sectors. The UET Peshawar launched the IE program in September 2006. Our curricula both at the undergraduate and postgraduate levels are rich in contents covering manufacturing, optimization, quality, ergonomics and management. Working engineers from other engineering disciplines also opt for industrial engineering because their nature of jobs highly demand for industrial engineering knowledge. Our graduates are successfully serving both in national and multinational organizations.

Most of our industries use conventional technologies and conventional techniques to manage them with minimum R & D activities. The result is, low productivity, low quality, more waste, and comparatively high unit price. With such a performance and output, it is very difficult to compete even with the neighboring countries. At the national level, it is the question of survival of our local industries which are facing competition from China, India, Bangladesh and other countries from Far East. Customers are free lancers. They buy products which are affordable and better in quality, whether these products are made in Pakistan or by any other country. We need to streamline and improve the performance of our industries and at the same time need to go for the emerging technologies to compete at the international level to widen the scope and contribute more effectively towards the economy.

The future prospects of industrial engineers are bright not only in Pakistan but also abroad. They are typically found in organizations responsible for managing operations, manufacturing systems, process engineering, automation, supply chain management, quality control, sales, banking, hospitals, airports etc. Studying industrial engineering is one of the smartest decisions, because it is estimated that demand for these professionals will continue to rise every year. Industrial engineers are among the best paid professionals.

## Academic Programmes

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

## Laboratories

Almost all subjects are augmented by practical work/tutorials. The students are trained in the following laboratories:

- Central Workshops
- Automation & Robotics Laboratory
- Computer Integrated Manufacturing Laboratory
- Metrology Laboratory
- Mechanics Laboratory
- Materials & Surface Engineering Laboratory
- CNC Machines Laboratory
- Computer Laboratory
- Ergonomics (Human Factors Engineering) Laboratory
- Virtual Manufacturing Laboratory

## Practical Training

As a requirement for graduation, every student must complete 800 hours of practical work / apprenticeship in an industry. Students are allowed to complete this requirement during summer holidays but not before the 4th semester.

## Field Visits

Industrial visits are regularly conducted to broaden the breadth and depth of technical and practical Industrial Engineering knowledge.

## Research

The Faculty of Industrial Engineering is actively involved in research activities, providing solution to problems of different industries in the following areas:

- Manufacturing Systems
- Industrial Processes
- Inventory Control
- Quality Control
- Operations Research
- Industrial Management
- Supply Chain Management
- Human Factors Engineering



# Scheme of Studies

Semester 1		Contact hours		Credit hours
No.	Course	Lecture	Lab.	Total
BSI-101	Islamic Studies	2	0	2
BSI-142	English Composition and Comprehension	3	0	3
BSI-110	Pak Studies	2	0	2
BSI-122	Calculus	3	0	3
ME-105	Engineering Drawing	3	3	4
IE-115	Introduction to Computing	2	3	3
<b>Total Contact Hours</b>		15	6	
<b>Total Credit Hours</b>		15	2	17

Semester 3		Contact hours		Credit hours
No.	Course	Lecture	Lab.	Total
BSI-351	Probability & Statistics	3	0	3
IE-234	Basic Industrial Engineering	2	0	2
IE-235	Materials Engineering	3	3	4
IE-242	Mechanical Technology**	3	3	4
IE-237	Mechanics of Materials	3	3	4
<b>Total Contact Hours</b>		14	9	
<b>Total Credit Hours</b>		14	3	17

Semester 5		Contact hours		Credit hours
No.	Course	Lecture	Lab.	Total
BSI-242	Numerical Analysis	3	0	3
IE-353	Metrology and Statistical Quality Control	3	3	4
IE-352	Manufacturing Systems	3	3	4
IE-356	Operation Research	3	3	4
IE-355	Work Study and Methods Engineering	2	3	3
<b>Total Contact Hours</b>		14	12	
<b>Total Credit Hours</b>		14	4	18

Semester 7		Contact hours		Credit hours
No.	Course	Lecture	Lab.	Total
IE-472	Design of Experiments**	3	0	3
IE-358	Industrial Facilities Design	2	3	3
IE-412	Operations of Manufacturing Systems	3	3	4
IE-4XX	Elective-I***	3	3	4
IE-498	Project Phase-I	0	9	3
<b>Total Contact Hours</b>		11	18	
<b>Total Credit Hours</b>		11	6	17

Total Credit Hours = 133

\*Can be replaced by some other course of Social Sciences

\*\*Can be replaced by courses from other Disciplines of Engineering

\*\*\*Can be replaced by a course of 4 Credit Hours

List of Elective Courses

Semester 2		Contact hours		Credit hours
No.	Course	Lecture	Lab.	Total
BSI-143	Presentation & Communication Skills	3	0	3
BSI-231	Differential Equations	3	0	3
BSI-111	Applied Linear Algebra	3	0	3
BSI-181	Applied Physics	2	3	3
IE-122	Engineering Management	3	0	3
IE-121	Workshop Practice	0	6	2
<b>Total Contact Hours</b>		14	9	
<b>Total Credit Hours</b>		14	3	17

Semester 4		Contact hours		Credit hours
No.	Course	Lecture	Lab.	Total
IE-241	Engineering Economics	3	0	3
IE-236	Introduction to Computer Aided Design	3	3	4
IE-243	Logical and Critical Thinking*	3	0	3
IE-244	Manufacturing Processes	3	3	4
IE-248	Technical Writing and Comprehension	3	0	3
<b>Total Contact Hours</b>		15	6	
<b>Total Credit Hours</b>		15	2	17

Semester 6		Contact hours		Credit hours
No.	Course	Lecture	Lab.	Total
IE-360	Industrial System Simulation	2	3	3
IE-361	Human Factor Engineering	2	3	3
IE-232	Management of Engineering Projects	3	0	3
IE-366	Production Planning & Control	2	3	3
IE-367	Industrial Maintenance and Safety	3	0	3
<b>Total Contact Hours</b>		12	9	
<b>Total Credit Hours</b>		12	3	15

Semester 8		Contact hours		Credit hours
No.	Course	Lecture	Lab.	Total
IE-4XX	Elective-II	3	3	4
IE-4XX	Elective-III	3	3	4
IE-4XX	Elective-IV***	3	3	4
IE-499	Project Phase-II	0	9	3
<b>Total Contact Hours</b>		9	18	
<b>Total Credit Hours</b>		9	6	15

List of Elective Courses		Lecture	Lab.	Credit hrs
IE-474	CAD/CAM	3	1	4
IE-414	Human Resource Management	3	0	3
IE-416	Computer Integrated Manufacturing	3	1	4
IE-480	Metal Forming & Cutting Analysis	3	1	4
IE-430	Tool and Die Design	3	1	4
IE-410	Automation and Control	3	1	4
IE-362	Total Quality Management	3	1	4
IE-401	Management Information System	3	1	4
IE-425	Reliability Analysis	3	0	3
IE-450	Special Topics	3	0	3
IE-422	Logistics Management	3	0	3

> Subject to change

> Theory & Lab courses are treated separately and code for lab courses is followed by L.