

# Industrial and Manufacturing Engineering

## FIRST YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
MT-114	Calculus	3	0	3	PH-122	Applied Physics	3	1	4
ME-101	Engineering Mechanics	3	1	4	HS-111	Functional English	2	0	2
EE-122	Basic Electricity and Electronics	3	0	3	ME-111	Engineering Drawing	2	1	3
ME-104	Workshop Practice	0	2	2	IM-101	Computer Applications in Engineering	2	1	3
HS-105	Pakistan Studies OR	2	0	2	IM-105	Thermofluids	3	1	4
HS-127	Pakistan Studies for Foreigners				HSK-I	Chinese Language			NC

## SECOND YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
IM-208	Materials Engineering	3	1	4	MT-225	Linear Algebra & Ordinary Differential Equations	3	0	3
IM-209	Mechanics of Materials	3	1	4	MF-303	Applied Economics for Engineers	3	0	3
IM-203	Manufacturing Processes	3	1	4	IM-211	Machine Design	3	1	4
MT-252	Introduction to Probability and Statistics	3	1	4	IM-212	Computer Aided Engineering Design	2	1	3
HS-205	Islamic Studies OR	2	0	2	IM-213	Metrology and Quality Control	3	1	4
HS-209	Ethical Behaviour								
HSK-II	Chinese Language			NC					

## THIRD YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
HS-304	Business Communication & Ethics	3	0	3	IM-308	Operations Research	3	1	4
IM-303	Production Management	3	1	4	IM-307	Advanced Manufacturing Processes	3	1	4
MT-333	Advanced Calculus & Fourier Analysis	3	0	3	IM-408	Automation & Robotics	3	1	4
IM-312	Applied Thermo Fluids	3	1	4	IM-411	Methods Engineering	2	1	3
IM-310	Tool Design	3	1	4	IM-320	Modeling and Simulation	2	1	3

## FINAL YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
IM-405	Finite Element Analysis	3	1	3	HS-403	Entrepreneurship	3	0	3
IM-402	Computer Aided Manufacturing	3	1	4	IM-417	Health, Safety & Environment	2	1	3
MG-450	Principles of Supply Chain Management	3	0	3	MT-441	Advanced Mathematical Techniques	3	0	3
IM-##	Elective Course	3	1	4	IM-413	Plant Engineering	3	1	4
IM-409	*Manufacturing Engineering Project	0	3	3	IM-409	Manufacturing Engineering Project	0	3	3

### Elective Courses (to be chosen from the following)

- IM-416 Management Information System
- IM-418 Condition Monitoring
- IM-419 Project Management

**\* Duration one academic year: Requires literature survey and preliminary work during this Semester**