

# Mechanical Engineering Department

## FIRST YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
CY-109	Applied Chemistry	3	1	4	PH-122	Applied Physics	3	1	4
MT-114	Calculus	3	0	3	HS-104	Functional English	3	0	3
CE-103	Engineering Surveying-I	3	1	4	EE-124	Basic Electricity and Electronics	2	1	3
HS-105	Pakistan Studies OR	2	0	2	ME-104	Workshop Practice	0	2	2
HS-127	Pakistan Studies (for Foreigners)				ME-106	Statics	2	1	3
ME-111	Engineering Drawing	2	1	3	ME 112	Thermodynamics	3	0	3

## SECOND YEAR

Spring Semester					Fall Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
HS 205	Islamic Studies OR	2	0	2	MT 330	Applied Probability & Statistics	2	1	3
HS 209	Ethical Behaviour (for Non-Muslims)				ME 202	Solid Mechanics-I	3	1	4
MT 223	Ordinary Differential Equations & Fourier Series	3	0	3	ME 209	Materials & Metallurgy	3	1	4
ME 204	Fluid Mechanics-I	3	1	4	ME 214	Computer Programming & Applications	2	1	3
ME 213	Dynamics	2	1	3	ME 217	Elements of Machine Dynamics & Design	3	0	3
ME 215	Internal Combustion Engines	2	1	3					
ME 216	Production Engineering - I	3	0	3					

## THIRD YEAR

Spring Semester					Fall 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	MT 332	Advanced Calculus & Linear Algebra	3	0	3
ME 307	Production Engineering –II	3	1	4	EE 373	Machine Control System	3	1	4
ME 312	Powerplant Engineering	3	1	4	ME 305	Machine Design	3	1	4
ME 313	Solid Mechanics – II	3	0	3	ME 315	Heat & Mass Transfer	3	1	4
ME 314	Fluid Mechanics-II	3	0	3	ME 403	Refrigeration & Air Conditioning	3	1	4

## FINAL YEAR

Spring Semester					Fall Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
MF-303	Applied Economics for Engineers	3	0	3	HS 403	Entrepreneurship	3	0	3
ME 306	Mechanical Vibration	3	1	4	MT 441	Advanced Mathematical Techniques	3	0	3
ME-409	*Mechanical Engineering Project	0	3	3	ME-409	Mechanical Engineering Project	0	3	3
ME 419	Stress Analysis	3	0	3	ME 417	Compressible Flow and Propulsion Systems	3	0	3
ME 420	Operations Management	2	0	2	ME-###	Elective Course 2	2/3	1/0	3
ME-###	Elective Course 1	2/3	1/0	3					

### ELECTIVE COURSES

ME-421	Gas Turbines
ME-422	Nuclear Power
ME-423	Computer Aided Design / Computer Aided Manufacturing
ME-424	Clean Energy Technology
ME-425	Finite Element Analysis
ME-426	Plant Maintenance
ME 428	Health, Safety and Environment
ME 429	Water Treatment and Desalination

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