

Industrial and Manufacturing Engineering

First Year

Fall Semester

Spring Semester

Course Code	Course Title	Credit Hrs			Course Code	Course Title	Credit Hrs		
		Th	Pr	Total			Th	Pr	Total
MT-114	Calculus	3	0	3	EA-111	Functional English	2	0	2
ME-101	Engineering Mechanics	3	1	4	AU-112	Engineering Drawing and Computer Graphics	2	1	3
EE-122	Basic Electricity and Electronics	3	0	3	MT-230	Statistics and Probability	3	0	3
ME-104	Workshop Practice	0	2	2	IM-101	Computer Applications in Engineering	2	1	3
ES-105/ ES-127	Pakistan Studies OR Pakistan Studies for Foreigners	2	0	1	IM-107	Thermofluids	3	1	4
IM-106	Introduction to Engineering Management	2	0	2	ES-205/ ES-209	Islamic Studies OR Ethical Behaviour	2	0	2
Total		12	3	15	Total		14	3	17

Second Year

Fall Semester

Spring Semester

Course Code	Course Title	Credit Hrs			Course Code	Course Title	Credit Hrs		
		Th	Pr	Total			Th	Pr	Total
IM-213	Metrology and Quality Control	3	1	4	IM-208	Materials Engineering	3	1	4
IM-215	Mechanics of Materials	3	1	4	MF-303	Applied Economics for Engineers	3	0	3
IM-203	Manufacturing Processes	3	1	4	IM-218	Machine Design**	3	0	3
MT-225	Linear Algebra & Ordinary Differential Equations	3	0	3	IM-219	Computer Aided Engineering Design**	2	0	2
ES-###	Social Science Elective*	2	0	2	IM-220	Digital Design and Virtual Manufacturing Lab*	0	1	1
					MT-333	Advanced Calculus & Fourier Analysis	3	0	3
					EA-200	Community Service	-	-	NC
Total		14	3	17	Total		14	2	16

Third Year									
Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hrs			Course Code	Course Title	Credit Hrs		
		Th	Pr	Total			Th	Pr	Total
EA-304	Business Communication & Ethics	3	0	3	IM-###	Engineering Elective - I	3	1	4
IM-321	Operations Research and Management	3	1	4	IM-327	Advanced Manufacturing Processes	3	1	4
IM-322	Methods Engineering	2	0	2	IM-328	Industrial Automation and Control	3	1	4
IM-330	Health, Safety & Environment	2	0	2	IM-329	Sustainable Manufacturing	2	0	2
IM-324	Project Management	2	1	3	IM-320	Modeling and Simulation	2	1	3
MT- 443	Numerical Analysis	3	0	3	##-###	Foreign Language -I	-	-	NC
IM-325	Industrial Engineering & Safety Lab	0	1	1					
IM-330	Health, Safety & Environment	2	0	2					
Total		15	3	18	Total		13	4	17

Final Year									
Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hrs			Course Code	Course Title	Credit Hrs		
		Th	Pr	Total			Th	Pr	Total
IM-423	Computer Aided Manufacturing	2	1	3	MG-481	Entrepreneurship	3	0	3
MG-483	Supply Chain Management	2	0	2	IM-427	Smart Manufacturing	2	0	2
IM-430	Applications of AI in Industrial and Manufacturing	2	0	2	IM-405	Finite Element Analysis	3	1	4
IM-428	Product Design and Development	3	1	4	IM-###	Engineering Elective - II	3	1	4
IM-425	Power Plant and HVAC	3	1	4	IM-429	Smart Manufacturing Lab	0	1	1
IM-409	Manufacturing Engineering Project	0	3	3	IM-409	Manufacturing Engineering Project	0	3	3
##-###	Foreign Language -II	-	-	NC					
Total		12	6	18	Total		11	6	17

Engineering Electives		Social Sciences Elective	
IM-416	Management Information System	EA-219	Professional Ethics
IM-418	Condition Monitoring	EA-228	Sociology and Development
IM-420	Basics of Additive Manufacturing	EA-230	Organizational Behavior
IM-428	Applied Thermo Fluids		
IM-422	Ergonomics in Workplace Design		
IM-429	Data Analytics		
IM-431	Manufacturing of Composites		