

Scheme of Studies B.E. Mechanical (specialization in Automotive)
for Batch-2023

F.E Fall Semester (Automotive)					F.E Spring Semester (Automotive)				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
PH-122	Applied Physics	3	1	4	CY-109	Applied Chemistry	3	1	4
MT-114	Calculus	3	0	3	EE-118	Basic Electricity & Electronics	3	1	4
EA-104	Functional English	3	0	3	ME-112	Thermodynamics	3	0	3
AU-113	Introduction to Automotive Systems	2	0	2	ME-106	Statics	2	1	3
ES-105/ES-127	Pakistan Studies/ Pakistan Studies for Foreigners	2	0	2	AU-112	Engineering Drawing & Computer Graphics	2	1	3
ME-104	Workshop Practice	0	2	2					
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	Total	13	3	16		Total	13	4	17
S.E Fall Semester (BE Mechanical- Specialization in Automotive)					S.E Spring Semester (BE Mechanical- Specialization in Automotive)				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
MT-223	Ordinary Differential Equations & Fourier Series	3	0	3	MT-330	Applied Probability & Statistics	2	1	3
ME-221	Fluid Mechanics - I	3	0	3	ME-218	Solid Mechanics - I	3	0	3
ME-222	Dynamics	3	0	3	ME-209	Materials & Metallurgy	3	1	4
*AU-251	Automotive Propulsion	3	1	4	ES-205/ES-209	Islamic Studies OR Ethical Behaviour	2	0	2
ME-220	Manufacturing Processes - I	3	1	4	ME-219	Mechanics of Machines	3	0	3
ME-113	Computer Aided Drawing	0	1	1	EA-208	Business Communication & Ethics	3	0	3
					EA-200	Community Service	--	--	NC
	Total	15	3	18		Total	16	2	18
T.E Fall Semester (BE Mechanical- Specialization in Automotive)					T.E Spring Semester (BE Mechanical- Specialization in Automotive)				

Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
ME-317	Manufacturing Processes - II	3	1	4	EE-376	Feedback Control Systems	3	0	3
ME-214	Computer Programming & Applications	2	1	3	MT-332	Advanced Calculus & Linear Algebra	3	0	3
ME-302	Solid Mechanics - II	3	1	4	ME-323	Machine Design	3	0	3
ME-316	Fluid Mechanics - II	3	1	4	ME-318	Heat & Mass Transfer	3	0	3
MG/EA-###	Social Science (Elective)	2	0	2	AU-323	Vehicle Noise & Vibrations	3	0	3
*AU-350	Analogue & Digital Electronics	2	0	2	##-###	Foreign Language -I			NC
	Total	15	4	19	ME-437	Machine Design & Vibration Lab	0	1	1
					AU-333	Chassis System Design	2	0	2
						Total	17	1	18

B.E Fall Semester (BE Mechanical- Specialization in Automotive)					B.E Spring Semester (BE Mechanical- Specialization in Automotive)				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
AU-422	Automotive Transmission & Drives	2	0	2	MF-303	Applied Economics for Engineers	3	0	3
ME-319	Refrigeration & Air conditioning	3	0	3	MT-441	Advanced Mathematical Techniques	3	0	3
AU-332	Automobile Instrumentation	2	1	3	AU-438	Electric & Hybrid Electric Vehicles	2	0	2
ME-320	RAC and Heat Transfer Lab	0	1	1	AU-499	Automotive Engineering Project	0	3	3
AU-499	Automotive Engineering Project	0	3	3	ME-435	Operations Management	3	0	3
##-###	Management Elective	2	0	2	XX-###	Technical Elective	3	0	3
XX-###	Technical Elective	3	0	3	MG-481	Entrepreneurship	3	0	3
##-###	Foreign Language - II	--	--	NC		Total	14	3	20
	Total	12	5	17					
Total Cr. Hrs.							143		

Technical Electives

Course Code	Course	Credit Hours		
		Th.	Pr.	Total
Automotive Specialization				
AU-304	Vehicle Dynamics	2	1	3
AU-313	Combustion, Emission & Pollution	3	0	3
AU-434	Automotive Service and Dealership	3	0	3
AU-417	Automotive Paints and Coatings	3	0	3
AU-451	Product Design & Development	3	0	3
AU-453	Introduction to Robotics	2	1	3
AU-454	Autonomous Vehicles	3	0	3
AU-455	Automotive Embedded Systems	3	0	3
AU-456	Vehicle Crashworthiness	3	0	3
Mechanical Specialization				
ME-423	Computer Aided Design/ Computer Aided Manufacturing	2	1	3
ME-425	Finite Element Analysis	2	1	3
ME-439	Mechatronics	2	1	3
ME-438	AI & Internet of Things	2	1	3

Management Elective					Social Elective				
Course Code	Course	Credit Hours			Course Code	Course	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
ME-432	Health, Safety and Environment	2	0	2	MG-228	Sociology and Development	2	0	2
ME-433	Law for Engineers	2	0	2	MG-257	Organizational Behaviour	2	0	2
ME-434	Total Quality Management	2	0	2	EA-321	Logic and Critical Thinking	2	0	2
MG-483	Supply Chain Management	2	0	2	EA-219	Professional Ethics	2	0	2
AU-430	Quality Management & Reliability	2	0	2					