



Course Scheme B.Sc. Mechanical Engineering Session 2025

SEMESTER 1

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
HS-101	Functional English	3	0	3	0
CS-101	Application of ICT	2	0	2	0
NS-101	Calculus and Analytical Geometry	3	0	3	0
NS-102	Applied Chemistry	3	0	3	0
EE-101	Electrical Engineering	2	0	2	0
ME-121	Thermodynamics-I	3	0	3	0
CS-102	Application of ICT Lab	0	1	0	3
ME-111	Engineering Drawing Lab	0	1	0	3
ME-112	Engineering Graphics Lab	0	1	0	3

16	3	16	9
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Semester Credit Hours:

19

Semester Contact Hours:

25

Program Credit Hours:

19

SEMESTER 2

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
HS-102	Islamic Studies/Ethics	2	0	2	0
HS-103	Pakistan Studies	2	0	2	0
NS-103	Linear Algebra & Differential Equations	3	0	3	0
ME-113	Engineering Materials	2	0	2	0
ME-114	Engineering Mechanics-I (Statics)	3	0	3	0
ME-122	Fluid Mechanics-I	3	0	3	0
HS-104	Understanding of the Holy Quran-I	0	1	0	3
ME-115	Workshop Practice	0	2	0	6

15	3	15	9
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Semester Credit Hours:

18

Semester Contact Hours:

24

Program Credit Hours:

37



SEMESTER 3

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
NS-201	Complex Variables & Transforms	3	0	3	0
CS-201	Computer Systems and Programming	2	0	2	0
EE-201	Electronics Engineering	2	0	2	0
ME-211	Mechanics of Materials-I	3	0	3	0
ME-212	Engineering Mechanics-II: (Dynamics)	2	0	2	0
ME-221	Thermodynamics-II	2	0	2	0
CS-202	Computer Systems and Programming Lab	0	1	0	3
EE-202	Electrical and Electronics Engineering Lab	0	1	0	3
ME-213	Engineering Mechanics Lab	0	1	0	3
ME-222	Thermodynamics Lab	0	1	0	3

14	4	14	12
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Semester Credit Hours:	18
Semester Contact Hours:	26

Program Credit Hours:	55
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SEMESTER 4

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
HS-201	Professional Ethics	2	0	2	0
HS-202	Engineering Economics	2	0	2	0
NS-202	Numerical Analysis	2	0	2	0
ME-214	Manufacturing Processes	2	0	2	0
ME-215	Mechanics of Materials-II	3	0	3	0
ME-223	Fluid Mechanics-II	2	0	2	0
NS-203	Numerical Analysis Lab	0	1	0	3
ME-216	Mechanics of Materials Lab	0	1	0	3
ME-217	Manufacturing Processes Lab	0	1	0	3
ME-224	Fluid Mechanics Lab	0	1	0	3

13	4	13	12
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Semester Credit Hours:	17
Semester Contact Hours:	25

Program Credit Hours:	72
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SEMESTER 5

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
HS-301	Expository Writing	3	0	3	0
FM-311	Precision Engineering and Metrology	2	0	2	0
ME-311	Mechanics of Machines	2	0	2	0
ME-312	Systems and Control	2	0	2	0
ME-313	Machine Design-I	2	0	2	0
ME-321	Heat & Mass Transfer	3	0	3	0
FM-312	Precision Engineering and Metrology Lab	0	1	0	3
ME-314	Systems and Control Lab	0	1	0	3
ME-322	Heat & Mass Transfer Lab	0	1	0	3

14	3	14	9
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Semester Credit Hours:	17
Semester Contact Hours:	23

Program Credit Hours:	89
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SEMESTER 6

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
HS-302	Civics and Community Engagement	2	0	2	0
CS-301	Applied Artificial Intelligence & Machine Learning	2	0	2	0
NS-301	Probability & Stochastic	3	0	3	0
ME-315	Machine Design-II	2	0	2	0
ME-323	Heating, Ventilation and Air Conditioning	3	0	3	0
HS-303	Understanding of the Holy Quran-II	0	1	0	3
CS-302	Applied AI & Machine Learning Lab	0	1	0	3
ME-316	CAD Lab	0	1	0	3
ME-324	HVAC Lab	0	1	0	3

12	4	12	12
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Semester Credit Hours:	16
Semester Contact Hours:	24

Program Credit Hours:	105
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SEMESTER 7

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
HS-401	Ideology and Constitution of Pakistan	2	0	2	0
MS-401	Project Management	2	0	2	0
ME-411	Mechanical Vibrations	3	0	3	0
ME-412	Technical Elective-I	2	0	2	0
ME-421	Internal Combustion Engines	2	0	2	0
ME-413	Mechanics of Machines and Vibrations Lab	0	1	0	3
ME-414	Technical Elective-I Lab	0	1	0	3
ME-422	IC Engines Lab	0	1	0	3
ME-499A	Final Year Design Project-I	0	3	0	9

11	6	11	18
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Semester Credit Hours:	17
Semester Contact Hours:	29

Program Credit Hours:	122
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SEMESTER 8

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
MS-402	Entrepreneurship	2	0	2	0
FM-411	Mechatronics & Robotics Engineering	2	0	2	0
ME-415	Reverse Engineering and Inspection Techniques	2	0	2	0
MD-402	Occupational Health & Safety	1	0	1	0
ME-423	Renewable Energy Technology	2	0	2	0
ME-424	Technical Elective-II	2	0	2	0
FM-412	Mechatronics & Robotics Engineering Lab	0	1	0	3
ME-416	Reverse Engineering and Inspection Techniques Lab	0	1	0	3
ME-425	Technical Elective-II Lab	0	1	0	3
ME-499B	Final Year Design Project-II	0	3	0	9

11	6	11	18
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Semester Credit Hours:	17
Semester Contact Hours:	29

Program Credit Hours:	139
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Note: • Internship of 6-8 weeks is mandatory as per PEC guidelines.
• Community Service is mandatory as per PEC guidelines.

List of Technical Electives

Course Code	Subject	Theory	Practical	Theory	Practical
ME-412a	Finite Element Analysis	2	1	2	3
ME-412b	Tribology	2	1	2	3
ME-412c	Maintenance Engineering	2	1	2	3
ME-412d	Stress Analysis	2	1	2	3
ME-412e	Composite Materials	2	1	2	3
ME-412f	Aerodynamics	2	1	2	3
ME-412g	Automotive Engineering	2	1	2	3
ME-412h	Advanced Manufacturing Systems	2	1	2	3
ME-422a	Power Plant	2	1	2	3
ME-422b	Gas Dynamics	2	1	2	3
ME-422c	Computational Fluid Dynamics	2	1	2	3
ME-422d	Nuclear Engineering	2	1	2	3
ME-422e	Energy Conversion Systems	2	1	2	3
ME-422f	Combustion Engineering	2	1	2	3
ME-422g	Thermal Systems Design	2	1	2	3
ME-422h	Cryogenics and Low-Temperature Engineering	2	1	2	3



Course Scheme B.Sc. Mechanical Engineering Session 2024

SEMESTER 1

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
GS-101	Calculus and Analytical Geometry	3	0	3	0
GS-102	Applied Chemistry	3	0	3	0
HS-101	Functional English	3	0	3	0
HS-102	Islamic Studies	2	0	2	0
EE-101	Electrical Engineering	2	0	2	0
ME-121	Thermodynamics-I	3	0	3	0
ME-111	Engineering Drawing Lab	0	1	0	3
ME-112	Engineering Graphics Lab	0	1	0	3

16	2	16	6
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Semester Credit Hours:

18

Semester Contact Hours:

22

Program Credit Hours:

18

SEMESTER 2

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
GS-103	Linear Algebra & Differential Equations	3	0	3	0
HS-103	Ideology and Constitution of Pakistan	2	0	2	0
CS-101	Applications of ICT	2	1	2	3
ME-113	Engineering Mechanics-I (Statics)	3	0	3	0
ME-114	Materials Engineering	2	0	2	0
ME-122	Fluid Mechanics-I	3	0	3	0
ME-115	Workshop Practice	0	2	0	6

15	3	15	9
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Semester Credit Hours:

18

Semester Contact Hours:

24

Program Credit Hours:

36



SEMESTER 3

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
GS-201	Complex Variables & Transforms	3	0	3	0
HS-201	Expository Writing	3	0	3	0
CS-201	Computer Systems and Programming	2	1	2	3
ME-211	Mechanics of Materials-I	3	0	3	0
ME-212	Engineering Mechanics-II: (Dynamics)	2	0	2	0
ME-221	Thermodynamics-II	2	0	2	0
ME-213	Engineering Mechanics Lab	0	1	0	3
ME-222	Thermodynamics Lab	0	1	0	3

15	3	15	9
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Semester Credit Hours:	18
Semester Contact Hours:	24

Program Credit Hours:	54
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SEMESTER 4

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
HS-202	Communication and Presentation Skills	2	0	2	0
HS-203	Civics and Community Engagement	2	0	2	0
EE-201	Electronics Engineering	2	0	2	0
EE-202	Electrical and Electronics Engineering Lab	0	1	0	3
ME-214	Manufacturing Processes	2	0	2	0
ME-215	Mechanics of Materials-II	3	0	3	0
ME-223	Fluid Mechanics-II	2	0	2	0
ME-216	Mechanics of Materials Lab	0	1	0	3
ME-217	Manufacturing Processes Lab	0	1	0	3
ME-224	Fluid Mechanics Lab	0	1	0	3

13	4	13	12
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Semester Credit Hours:	17
Semester Contact Hours:	25

Program Credit Hours:	71
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SEMESTER 5

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
GS-301	Numerical Analysis	2	1	2	3
ME-311	Mechanics of Machines	2	0	2	0
ME-312	Systems and Control	2	0	2	0
ME-313	Machine Design-I	2	0	2	0
ME-321	Heat & Mass Transfer	3	0	3	0
ME-314	Precision Engineering and Metrology	2	0	2	0
ME-315	Systems and Control Lab	0	1	0	3
ME-316	Precision Engineering and Metrology Lab	0	1	0	3
ME-322	HMT Lab	0	1	0	3

13	4	13	12
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Semester Credit Hours:	17
Semester Contact Hours:	25

Program Credit Hours:	88
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SEMESTER 6

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
HS-301	Engineering Economics	2	0	2	0
CS-301	Applied Artificial Intelligence & Machine Learning	2	0	2	0
CS-302	Applied AI & Machine Learning Lab	0	1	0	3
GS-302	Probability & Stochastic	3	0	3	0
MS-301	Project Management	1	1	1	3
ME-317	Machine Design-II	2	0	2	0
ME-323	Heating, Ventilating and Air Conditioning	3	0	3	0
ME-318	CAD Lab	0	1	0	3
ME-324	HVAC Lab	0	1	0	3

13	4	13	12
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Semester Credit Hours:	17
Semester Contact Hours:	25

Program Credit Hours:	105
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SEMESTER 7

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
ME-411	Mechanical Vibrations	3	0	3	0
ME-412	Technical Elective-I	2	0	2	0
ME-413	Reverse Engineering and Inspection Techniques	2	0	2	0
ME-421	Internal Combustion Engines	2	0	2	0
ME-414	Mechanics of Machines and Vibrations Lab	0	1	0	3
ME-415	Technical Elective-I Lab	0	1	0	3
ME-416	Reverse Engineering and Inspection Techniques Lab	0	1	0	3
ME-422	IC Engines Lab	0	1	0	3
ME-499A	Final Year Design Project-I	0	3	0	9

9	7	9	21
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Semester Credit Hours:	16
Semester Contact Hours:	30

Program Credit Hours:	121
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SEMESTER 8

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
MS-401	Entrepreneurship	2	0	2	0
MD-401	Mechatronics & Robotics Engineering	2	0	2	0
MD-402	Mechatronics & Robotics Engineering Lab	0	1	0	3
MD-403	Occupational Health & Safety	1	0	1	0
ME-423	Renewable Energy Technology	3	0	3	0
ME-424	Technical Elective-II	2	0	2	0
ME-425	Technical Elective-II Lab	0	1	0	3
ME-499B	Final Year Design Project-II	0	3	0	9

10	5	10	15
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Semester Credit Hours:	15
Semester Contact Hours:	25

Program Credit Hours:	136
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Note: • Internship of 6-8 weeks is mandatory as per PEC guidelines.
• Translation of Holy Quran (Non Credited each Semester) Mandatory to pass.



List of Technical Electives

Course Code	Subject	Theory	Practical	Theory	Practical
ME-412a	Finite Element Analysis	2	1	2	3
ME-412b	Tribology	2	1	2	3
ME-412c	Maintenance Engineering	2	1	2	3
ME-412d	Stress Analysis	2	1	2	3
ME-412e	Composite Materials	2	1	2	3
ME-412f	Aerodynamics	2	1	2	3
ME-412g	Automotive Engineering	2	1	2	3
ME-412h	Advanced Manufacturing Systems	2	1	2	3
ME-422a	Power Plant	2	1	2	3
ME-422b	Gas Dynamics	2	1	2	3
ME-422c	Computational Fluid Dynamics	2	1	2	3
ME-422d	Nuclear Engineering	2	1	2	3
ME-422e	Energy Conversion Systems	2	1	2	3
ME-422f	Combustion Engineering	2	1	2	3
ME-422g	Thermal Systems Design	2	1	2	3
ME-422h	Cryogenics and Low-Temperature Engineering	2	1	2	3



Course Scheme B.Sc. Mechanical Engineering Session 2023

SEMESTER 1

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
GS-101	Applied Mathematics-I	3	0	3	0
EE-101	Electrical Engineering	2	0	2	0
EE-102	Electrical Engineering Lab	0	1	0	3
IS-101	Islamic Studies	2	0	2	0
HS-101	Comprehension & Composition	2	0	2	0
CS-101	Computer Systems & Programming	2	0	2	0
CS-102	Computer Systems & Programming Lab	0	1	0	3
ME-121	Thermodynamics-I	3	0	3	0
ME-111	Engineering Drawing Lab	0	1	0	3
ME-112	Engineering Graphics Lab	0	1	0	3

14	4	14	12
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Semester Credit Hours:

18
26

Semester Contact Hours:

Program Credit Hours:

18

SEMESTER 2

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
GS-102	Applied Mathematics-II	3	0	3	0
PS-101	Pakistan Studies	2	0	2	0
HS-102	Communication Skills	1	1	1	3
ME-122	Fluid Mechanics - I	3	0	3	0
ME-113	Engineering Mechanics - I (Statics)	3	0	3	0
ME-114	Engineering Materials	3	0	3	0
ME-115	Workshop Practice Lab	0	2	0	6

15	3	15	9
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Semester Credit Hours:

18
24

Semester Contact Hours:

Program Credit Hours:

36



SEMESTER 3

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
GS-201	Applied Mathematics-III	3	0	3	0
GS-202	Applied Chemistry	3	0	3	0
HS-201	Engineering for Social Change	2	0	2	0
ME-211	Mechanics of Materials-I	3	0	3	0
ME-212	Manufacturing Processes	2	0	2	0
ME-221	Thermodynamics- II	2	0	2	0
ME-213	Manufacturing Processes Lab	0	1	0	3
ME-222	Thermodynamics Lab	0	1	0	3

15	2	15	6
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Semester Credit Hours:

17

Semester Contact Hours:

21

Program Credit Hours:

53

SEMESTER 4

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
EE-201	Basic Electronics	2	0	2	0
EE-202	Basic Electronics Lab	0	1	0	3
CS-201	Applied AI and Machine Learning	2	1	2	3
MS-201	Engineering Management and Economics	2	0	2	0
ME-214	Engineering Mechanics-II (Dynamics)	3	0	3	0
ME-223	Fluid Mechanics-II	3	0	3	0
ME-224	Fluid Mechanics Lab	0	1	0	3
ME-215	Engineering Mechanics Lab	0	1	0	3
ME-216	CAD Lab	0	1	0	3

12	5	12	15
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Semester Credit Hours:

17

Semester Contact Hours:

27

Program Credit Hours:

70



SEMESTER 5

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
MS-301	Project Management	1	1	1	3
GS-301	Engineering Probability & Statistics	2	0	2	0
ME-311	Systems and Control	2	0	2	0
ME-312	Precision Engineering and Metrology	2	0	2	0
ME-321	Renewable Energy Resources	3	0	3	0
ME-322	Heat & Mass Transfer	3	0	3	0
GS-302	Engineering Probability & Statistics Lab	0	1	0	3
ME-313	Systems and Control Lab	0	1	0	3
ME-314	Precision Engineering and Metrology Lab	0	1	0	3
ME-323	Heat & Mass Transfer Lab	0	1	0	3

13	5	13	15
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Semester Credit Hours:

18

Semester Contact Hours:

28

Program Credit Hours:

88

SEMESTER 6

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
ME-315	Machine Design	3	0	3	0
ME-324	Refrigeration and Air Conditioning	3	0	3	0
ME-316	Mechanics of Machines	3	0	3	0
ME-317	Mechanical Vibrations	3	0	3	0
ME-318	Mechanics of Materials-II	3	0	3	0
ME-325	Refrigeration and Air Conditioning Lab	0	1	0	3
ME-319	Mechanical Vibrations Lab	0	1	0	3
ME-3110	Mechanics of Materials Lab	0	1	0	3

15	3	15	9
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Semester Credit Hours:

18

Semester Contact Hours:

24

Program Credit Hours:

106



SEMESTER 7

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
GS-401	Numerical Methods for Engineers	2	0	2	0
HS-401	Technical & Business Writing	1	1	1	3
MS-401	Entrepreneurship	1	1	1	3
MS-402	Production and Operations Management	2	0	2	0
ME-421	Internal Combustion Engines	2	0	2	0
ME-4XY	Technical Elective-I	2	0	2	0
ME-4XY	Technical Elective-I Lab	0	1	0	3
GS-402	Numerical Methods Lab	0	1	0	3
ME-499A	Design Project	0	3	0	9
ME-422	Internal Combustion Engines Lab	0	1	0	3

10	8	10	24
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Semester Credit Hours:	18
Semester Contact Hours:	34

Program Credit Hours:	124
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SEMESTER 8

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
ME-423	Power Plants	2	0	2	0
ME-4XY	Technical Elective-II	2	0	2	0
ME-4XY	Technical Elective-III	2	0	2	0
ME-424	Power Plants Lab	0	1	0	3
ME-4XY	Technical Elective-II Lab	0	1	0	3
ME-4XY	Technical Elective-III Lab	0	1	0	3
ME-499B	Design Project	0	3	0	9

6	6	6	18
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Semester Credit Hours:	12
Semester Contact Hours:	24

Program Credit Hours:	136
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LIST of ELECTIVES

Finite Element Analysis	(Design Elective 7th technical elective 1)
Maintenance Engineering	(Design Elective 7th technical elective 1)
Advanced Stress Analysis	(Design Elective 8th technical elective 2)
CAD/CAM Theory and Application	(Design Elective 8th technical elective 2)
Environment and Pollution Control	(Thermofluids Elective 8th technical elective 3)
Tribology	(Thermofluids Elective 8th technical elective 3)



Course Scheme B.Sc. Mechanical Engineering Session 2022

SEMESTER 1

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
GS-101	Applied Mathematics-I	3	0	3	0
EE-101	Electrical Engineering	2	0	2	0
EE-102	Electrical Engineering Lab	0	1	0	3
IS-101	Islamic Studies	2	0	2	0
HS-101	Comprehension & Composition	2	0	2	0
CS-101	Computer Systems & Programming	2	0	2	0
CS-102	Computer Systems & Programming Lab	0	1	0	3
ME-121	Thermodynamics-I	3	0	3	0
ME-111	Engineering Drawing Lab	0	1	0	3
ME-112	Engineering Graphics Lab	0	1	0	3

14	4	14	12
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Semester Credit Hours:

18

Semester Contact Hours:

26

Program Credit Hours:

18

SEMESTER 2

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
GS-102	Applied Mathematics-II	3	0	3	0
PS-101	Pakistan Studies	2	0	2	0
HS-102	Communication Skills	1	1	1	3
ME-122	Fluid Mechanics – I	3	0	3	0
ME-113	Engineering Mechanics - I (Statics)	3	0	3	0
ME-114	Engineering Materials	3	0	3	0
ME-115	Workshop Practice Lab	0	2	0	6

15	3	15	9
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Semester Credit Hours:

18

Semester Contact Hours:

24

Program Credit Hours:

36



SEMESTER 3

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
GS-201	Applied Mathematics-III	3	0	3	0
GS-202	Applied Chemistry	3	0	3	0
HS-201	Engineering for Social Change	2	0	2	0
ME-211	Mechanics of Materials-I	3	0	3	0
ME-212	Manufacturing Processes	2	0	2	0
ME-221	Thermodynamics- II	3	0	3	0
ME-213	Manufacturing Processes Lab	0	1	0	3
ME-222	Thermodynamics Lab	0	1	0	3

16	2	16	6
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Semester Credit Hours:	18
Semester Contact Hours:	22

Program Credit Hours:	54
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SEMESTER 4

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
EE-201	Basic Electronics	2	0	2	0
EE-202	Basic Electronics Lab	0	1	0	3
MS-201	Engineering Economics	2	0	2	0
ME-215	Engineering Mechanics-II (Dynamics)	3	0	3	0
ME-216	Machine Tools and Machining	2	0	2	0
ME-223	Fluid Mechanics-II	3	0	3	0
ME-224	Fluid Mechanics Lab	0	1	0	3
ME-217	Engineering Mechanics Lab	0	1	0	3
ME-218	Machine Tools and Machining Lab	0	1	0	3
ME-219	CAD Lab	0	1	0	3

12	5	12	15
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Semester Credit Hours:	17
Semester Contact Hours:	27

Program Credit Hours:	71
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SEMESTER 5

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
MS-301	Total Quality Management	2	0	2	0
ME-311	Systems and Control	2	0	2	0
ME-312	Mechanics of Machines	3	0	3	0
ME-313	Mechanics of Materials-II	3	0	3	0
ME-314	Precision Engineering and Metrology	2	0	2	0
GS-301	Engineering Probability & Statistics	2	0	2	0
GS-302	Engineering Probability & Statistics Lab	0	1	0	3
ME-315	Systems and Control Lab	0	1	0	3
ME-316	Mechanics of Materials Lab	0	1	0	3
ME-317	Precision Engineering and Metrology Lab	0	1	0	3

14	4	14	12
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Semester Credit Hours:

18

Semester Contact Hours:

26

Program Credit Hours:

89

SEMESTER 6

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
ME-321	Renewable Energy Resources	2	0	2	0
ME-318	Machine Design	3	0	3	0
ME-322	Heat & Mass Transfer	3	0	3	0
ME-323	Heating Ventilation and Air Conditioning	3	0	3	0
ME-319	Mechanical Vibrations	3	0	3	0
ME-324	Renewable Energy Resources Lab	0	1	0	3
ME-325	HMT & HVAC Lab	0	1	0	3
ME-3110	Mechanism & Mechanical Vibrations Lab	0	1	0	3

14	3	14	9
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Semester Credit Hours:

17

Semester Contact Hours:

23

Program Credit Hours:

106



SEMESTER 7

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
GS-401	Numerical Methods for Engineers	2	0	2	0
HS-401	Technical & Business Writing	1	1	1	3
MS-401	Entrpenuership	1	1	1	3
MS-402	Production and Operations Management	2	0	2	0
ME-421	Internal Combustion Engines	3	0	3	0
ME-411	Technical Elective-I	2	0	2	0
ME-412	Technical Elective-I Lab	0	1	0	3
GS-402	Numerical Methods Lab	0	1	0	3
ME-499A	Design Project	0	3	0	9

11	7	11	21
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Semester Credit Hours:	18
Semester Contact Hours:	32

Program Credit Hours:	124
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SEMESTER 8

Course Code	Subject	Credit Hours		Contact Hours	
		Theory	Practical	Theory	Practical
ME-422	Power Plants	2	0	2	0
ME-413	Technical Elective-II	2	0	2	0
ME-423	Technical Elective-III	2	0	2	0
ME-424	IC Engine & Power Plant Lab	0	1	0	3
ME-414	Technical Elective-II Lab	0	1	0	3
ME-425	Technical Elective-III Lab	0	1	0	3
ME-499B	Design Project	0	3	0	9

6	6	6	18
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Semester Credit Hours:	12
Semester Contact Hours:	24

Program Credit Hours:	136
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LIST of ELECTIVES

Finite Element Analysis	(Design Elective 7th technical elective 1)
Maintenance Engineering	(Design Elective 7th technical elective 1)
Advanced Stress Analysis	(Design Elective 8th technical elective 2)
CAD/CAM Theory and Application	(Design Elective 8th technical elective 2)
Environment and Pollution Control	(Thermofluids Elective 8th technical elective 3)
Tribology	(Thermofluids Elective 8th technical elective 3)