SCHEME OF STUDIES
MATERIALS ENGINEERING

Batch 2016-17

FIRST YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
SPRING	MM-101	Introduction to Engineering Materials	3	0	3
	MM-102	Engineering Mechanics	3	0	3
	MM-103	Engineering Drawing	1	3	2.5
	HS-101	Applied Physics	3	1	4
	HS-102	Functional English	3	0	3
FALL	MM-104	Introduction to Electronics	3	1	4
	MM-105	Engineering Drawing and Computer Graphics	1	3	2.5
	CH-103	Applied Chemistry	3	1	4
	HS-103	Calculus	3	0	3
	HS-104	Islamic Studies OR	2	0	2
	HS-105	Pakistan Studies (for Foreigners)	2	0	2
		Foreign Language-I	3	0	3
					30

Pre-Requisites for the 1st Semester

SECOND YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-106	Physical Metallurgy	3	1	4
	MM-107	Engineering Materials and Their Applications	3	0	3
	MM-108	Engineering Thermodynamics	3	0	3
	MM-109	Differential Equations and Complex Variables	3	0	3
	MM-110	Mechanical, Thermodynamics & Electrics	3	1	4
	HS-106	Islamic Studies OR	2	0	2
	HS-107	Pakistan Studies (for Foreigners)	2	0	2
SPRING	MM-111	Science of Materials	3	1	4
	MM-112	Mechanical Properties of Materials	3	1	4
	MM-113	Statistics, Probability and Graphs	3	0	3
	HS-108	Arabic Language	2	0	2
	HS-109	Ethical Behavior	2	0	2
					30

Pre-Requisites for the 2nd Semester

THIRD YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-114	Corrosion, Prevention and Protection	3	1	4
	MM-115	Inspection and Testing of Materials	3	1	4
	MM-116	Ceramics and Refractories	3	1	4
	MM-117	Business Communication and Ethics	3	0	3
	MM-118	Mathematical Methods	3	0	3
	MM-119	Electronic Materials and Dielectrics	3	1	4
SPRING	MM-120	Materials Characterization and Analytical Techniques	3	1	4
	MM-121	Construction Materials	3	1	4
	MM-122	Engineering Mathematics for Engineers	3	0	3
	MM-123	Entrepreneurship	3	0	3
	MM-124	Advanced Mathematical Techniques	3	0	3
					30

Pre-Requisites for the 3rd Semester

FINAL YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-125	Phase Transformations in Materials	3	1	4
	MM-126	Nanomaterials and Nanotechnology	3	1	4
	MM-127	Composite Materials	3	1	4
	MM-128	**Nuclear Materials**	3	1	4
	MM-129	**Total Quality Management**	3	0	3
	MM-130	**Design and Selection of Materials**	3	1	4
	MM-131	**Design and Selection of Materials**	3	1	4
	MM-132	**Advanced Materials**	3	1	4
SPRING	MM-133	**Corrosion Engineering and Failure, Mechanism and Analysis**	3	1	4
	MM-134	**Biomaterial and Functional Materials**	3	1	4
	MM-135	**Health, Safety and Environment**	3	0	3
	MM-136	**Industrial Engineering Project**	0	3	1.5
					30

Pre-Requisites for the 4th Semester

Batch 2017-18

FIRST YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-101	Introduction to Engineering Materials	3	0	3
	MM-102	Engineering Mechanics	3	0	3
	MM-103	Engineering Drawing	1	3	2.5
	HS-101	Applied Physics	3	1	4
	HS-102	Functional English	3	0	3
SPRING	MM-104	Introduction to Electronics	3	1	4
	MM-105	Engineering Drawing and Computer Graphics	1	3	2.5
	CH-103	Applied Chemistry	3	1	4
	HS-103	Calculus	3	0	3
	HS-104	Islamic Studies OR	2	0	2
	HS-105	Pakistan Studies (for Foreigners)	2	0	2
		Foreign Language-I	3	0	3
					30

SECOND YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-106	Physical Metallurgy	3	1	4
	MM-107	Engineering Materials and Their Applications	3	0	3
	MM-108	Engineering Thermodynamics	3	0	3
	MM-109	Differential Equations and Complex Variables	3	0	3
	MM-110	Mechanical, Thermodynamics & Electrics	3	1	4
	HS-106	Islamic Studies OR	2	0	2
	HS-107	Pakistan Studies (for Foreigners)	2	0	2
SPRING	MM-111	Science of Materials	3	1	4
	MM-112	Mechanical Properties of Materials	3	1	4
	MM-113	Statistics, Probability and Graphs	3	0	3
	HS-108	Arabic Language	2	0	2
	HS-109	Ethical Behavior	2	0	2
					30

THIRD YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-114	Corrosion, Prevention and Protection	3	1	4
	MM-115	Inspection and Testing of Materials	3	1	4
	MM-116	Ceramics and Refractories	3	1	4
	MM-117	Business Communication and Ethics	3	0	3
	MM-118	Mathematical Methods	3	0	3
	MM-119	Electronic Materials and Dielectrics	3	1	4
SPRING	MM-120	Materials Characterization and Analytical Techniques	3	1	4
	MM-121	Construction Materials	3	1	4
	MM-122	Engineering Mathematics for Engineers	3	0	3
	MM-123	Entrepreneurship	3	0	3
	MM-124	Advanced Mathematical Techniques	3	0	3
					30

FINAL YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-125	Phase Transformations in Materials	3	1	4
	MM-126	Nanomaterials and Nanotechnology	3	1	4
	MM-127	Composite Materials	3	1	4
	MM-128	**Nuclear Materials**	3	1	4
	MM-129	**Total Quality Management**	3	0	3
	MM-130	**Design and Selection of Materials**	3	1	4
	MM-131	**Design and Selection of Materials**	3	1	4
	MM-132	**Advanced Materials**	3	1	4
SPRING	MM-133	**Corrosion Engineering and Failure, Mechanism and Analysis**	3	1	4
	MM-134	**Biomaterial and Functional Materials**	3	1	4
	MM-135	**Health, Safety and Environment**	3	0	3
	MM-136	**Industrial Engineering Project**	0	3	1.5
					30

Pre-Requisites for the 4th Semester

Batch 2018

FIRST YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-101	Introduction to Engineering Materials	3	0	3
	MM-102	Engineering Mechanics	3	0	3
	MM-103	Engineering Drawing	1	3	2.5
	HS-101	Applied Physics	3	1	4
	HS-102	Functional English	3	0	3
SPRING	MM-104	Introduction to Electronics	3	1	4
	MM-105	Engineering Drawing and Computer Graphics	1	3	2.5
	CH-103	Applied Chemistry	3	1	4
	HS-103	Calculus	3	0	3
	HS-104	Islamic Studies OR	2	0	2
	HS-105	Pakistan Studies (for Foreigners)	2	0	2
		Foreign Language-I	3	0	3
					30

SECOND YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-106	Physical Metallurgy	3	1	4
	MM-107	Engineering Materials and Their Applications	3	0	3
	MM-108	Engineering Thermodynamics	3	0	3
	MM-109	Differential Equations and Complex Variables	3	0	3
	MM-110	Mechanical, Thermodynamics & Electrics	3	1	4
	HS-106	Islamic Studies OR	2	0	2
	HS-107	Pakistan Studies (for Foreigners)	2	0	2
SPRING	MM-111	Science of Materials	3	1	4
	MM-112	Mechanical Properties of Materials	3	1	4
	MM-113	Statistics, Probability and Graphs	3	0	3
	HS-108	Arabic Language	2	0	2
	HS-109	Ethical Behavior	2	0	2
					30

THIRD YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-114	Corrosion, Prevention and Protection	3	1	4
	MM-115	Inspection and Testing of Materials	3	1	4
	MM-116	Ceramics and Refractories	3	1	4
	MM-117	Business Communication and Ethics	3	0	3
	MM-118	Mathematical Methods	3	0	3
	MM-119	Electronic Materials and Dielectrics	3	1	4
SPRING	MM-120	Materials Characterization and Analytical Techniques	3	1	4
	MM-121	Construction Materials	3	1	4
	MM-122	Engineering Mathematics for Engineers	3	0	3
	MM-123	Entrepreneurship	3	0	3
	MM-124	Advanced Mathematical Techniques	3	0	3
					30

FINAL YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-125	Phase Transformations in Materials	3	1	4
	MM-126	Nanomaterials and Nanotechnology	3	1	4
	MM-127	Composite Materials	3	1	4
	MM-128	**Nuclear Materials**	3	1	4
	MM-129	**Total Quality Management**	3	0	3
	MM-130	**Design and Selection of Materials**	3	1	4
	MM-131	**Design and Selection of Materials**	3	1	4
	MM-132	**Advanced Materials**	3	1	4
SPRING	MM-133	**Corrosion Engineering and Failure, Mechanism and Analysis**	3	1	4
	MM-134	**Biomaterial and Functional Materials**	3	1	4
	MM-135	**Health, Safety and Environment**	3	0	3
	MM-136	**Industrial Engineering Project**	0	3	1.5
					30

Pre-Requisites for the 4th Semester

Batch 2019

FIRST YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-101	Introduction to Engineering Materials	3	0	3
	MM-102	Engineering Mechanics	3	0	3
	MM-103	Engineering Drawing	1	3	2.5
	HS-101	Applied Physics	3	1	4
	HS-102	Functional English	3	0	3
SPRING	MM-104	Introduction to Electronics	3	1	4
	MM-105	Engineering Drawing and Computer Graphics	1	3	2.5
	CH-103	Applied Chemistry	3	1	4
	HS-103	Calculus	3	0	3
	HS-104	Islamic Studies OR	2	0	2
	HS-105	Pakistan Studies (for Foreigners)	2	0	2
		Foreign Language-I	3	0	3
					30

SECOND YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-106	Physical Metallurgy	3	1	4
	MM-107	Engineering Materials and Their Applications	3	0	3
	MM-108	Engineering Thermodynamics	3	0	3
	MM-109	Differential Equations and Complex Variables	3	0	3
	MM-110	Mechanical, Thermodynamics & Electrics	3	1	4
	HS-106	Islamic Studies OR	2	0	2
	HS-107	Pakistan Studies (for Foreigners)	2	0	2
SPRING	MM-111	Science of Materials	3	1	4
	MM-112	Mechanical Properties of Materials	3	1	4
	MM-113	Statistics, Probability and Graphs	3	0	3
	HS-108	Arabic Language	2	0	2
	HS-109	Ethical Behavior	2	0	2
					30

THIRD YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-114	Corrosion, Prevention and Protection	3	1	4
	MM-115	Inspection and Testing of Materials	3	1	4
	MM-116	Ceramics and Refractories	3	1	4
	MM-117	Business Communication and Ethics	3	0	3
	MM-118	Mathematical Methods	3	0	3
	MM-119	Electronic Materials and Dielectrics	3	1	4
SPRING	MM-120	Materials Characterization and Analytical Techniques	3	1	4
	MM-121	Construction Materials	3	1	4
	MM-122	Engineering Mathematics for Engineers	3	0	3
	MM-123	Entrepreneurship	3	0	3
	MM-124	Advanced Mathematical Techniques	3	0	3
					30

FINAL YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-125	Phase Transformations in Materials	3	1	4
	MM-126	Nanomaterials and Nanotechnology	3	1	4
	MM-127	Composite Materials	3	1	4
	MM-128	**Nuclear Materials**	3	1	4
	MM-129	**Total Quality Management**	3	0	3
	MM-130	**Design and Selection of Materials**	3	1	4
	MM-131	**Design and Selection of Materials**	3	1	4
	MM-132	**Advanced Materials**	3	1	4
SPRING	MM-133	**Corrosion Engineering and Failure, Mechanism and Analysis**	3	1	4
	MM-134	**Biomaterial and Functional Materials**	3	1	4
	MM-135	**Health, Safety and Environment**	3	0	3
	MM-136	**Industrial Engineering Project**	0	3	1.5
					30

Pre-Requisites for the 4th Semester

Batch 2020

FIRST YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-101	Introduction to Engineering Materials	3	0	3
	MM-102	Engineering Mechanics	3	0	3
	MM-103	Engineering Drawing	1	3	2.5
	HS-101	Applied Physics	3	1	4
	HS-102	Functional English	3	0	3
SPRING	MM-104	Introduction to Electronics	3	1	4
	MM-105	Engineering Drawing and Computer Graphics	1	3	2.5
	CH-103	Applied Chemistry	3	1	4
	HS-103	Calculus	3	0	3
	HS-104	Islamic Studies OR	2	0	2
	HS-105	Pakistan Studies (for Foreigners)	2	0	2
		Foreign Language-I	3	0	3
					30

SECOND YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-106	Physical Metallurgy	3	1	4
	MM-107	Engineering Materials and Their Applications	3	0	3
	MM-108	Engineering Thermodynamics	3	0	3
	MM-109	Differential Equations and Complex Variables	3	0	3
	MM-110	Mechanical, Thermodynamics & Electrics	3	1	4
	HS-106	Islamic Studies OR	2	0	2
	HS-107	Pakistan Studies (for Foreigners)	2	0	2
SPRING	MM-111	Science of Materials	3	1	4
	MM-112	Mechanical Properties of Materials	3	1	4
	MM-113	Statistics, Probability and Graphs	3	0	3
	HS-108	Arabic Language	2	0	2
	HS-109	Ethical Behavior	2	0	2
					30

THIRD YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-114	Corrosion, Prevention and Protection	3	1	4
	MM-115	Inspection and Testing of Materials	3	1	4
	MM-116	Ceramics and Refractories	3	1	4
	MM-117	Business Communication and Ethics	3	0	3
	MM-118	Mathematical Methods	3	0	3
	MM-119	Electronic Materials and Dielectrics	3	1	4
SPRING	MM-120	Materials Characterization and Analytical Techniques	3	1	4
	MM-121	Construction Materials	3	1	4
	MM-122	Engineering Mathematics for Engineers	3	0	3
	MM-123	Entrepreneurship	3	0	3
	MM-124	Advanced Mathematical Techniques	3	0	3
					30

FINAL YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-125	Phase Transformations in Materials	3	1	4
	MM-126	Nanomaterials and Nanotechnology	3	1	4
	MM-127	Composite Materials	3	1	4
	MM-128	**Nuclear Materials**	3	1	4
	MM-129	**Total Quality Management**	3	0	3
	MM-130	**Design and Selection of Materials**	3	1	4
	MM-131	**Design and Selection of Materials**	3	1	4
	MM-132	**Advanced Materials**	3	1	4
SPRING	MM-133	**Corrosion Engineering and Failure, Mechanism and Analysis**	3	1	4
	MM-134	**Biomaterial and Functional Materials**	3	1	4
	MM-135	**Health, Safety and Environment**	3	0	3
	MM-136	**Industrial Engineering Project**	0	3	1.5
					30

Pre-Requisites for the 4th Semester

Batch 2021

FIRST YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-101	Introduction to Engineering Materials	3	0	3
	MM-102	Engineering Mechanics	3	0	3
	MM-103	Engineering Drawing	1	3	2.5
	HS-101	Applied Physics	3	1	4
	HS-102	Functional English	3	0	3
SPRING	MM-104	Introduction to Electronics	3	1	4
	MM-105	Engineering Drawing and Computer Graphics	1	3	2.5
	CH-103	Applied Chemistry	3	1	4
	HS-103	Calculus	3	0	3
	HS-104	Islamic Studies OR	2	0	2
	HS-105	Pakistan Studies (for Foreigners)	2	0	2
		Foreign Language-I	3	0	3
					30

SECOND YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-106	Physical Metallurgy	3	1	4
	MM-107	Engineering Materials and Their Applications	3	0	3
	MM-108	Engineering Thermodynamics	3	0	3
	MM-109	Differential Equations and Complex Variables	3	0	3
	MM-110	Mechanical, Thermodynamics & Electrics	3	1	4
	HS-106	Islamic Studies OR	2	0	2
	HS-107	Pakistan Studies (for Foreigners)	2	0	2
SPRING	MM-111	Science of Materials	3	1	4
	MM-112	Mechanical Properties of Materials	3	1	4
	MM-113	Statistics, Probability and Graphs	3	0	3
	HS-108	Arabic Language	2	0	2
	HS-109	Ethical Behavior	2	0	2
					30

THIRD YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-114	Corrosion, Prevention and Protection	3	1	4
	MM-115	Inspection and Testing of Materials	3	1	4
	MM-116	Ceramics and Refractories	3	1	4
	MM-117	Business Communication and Ethics	3	0	3
	MM-118	Mathematical Methods	3	0	3
	MM-119	Electronic Materials and Dielectrics	3	1	4
SPRING	MM-120	Materials Characterization and Analytical Techniques	3	1	4
	MM-121	Construction Materials	3	1	4
	MM-122	Engineering Mathematics for Engineers	3	0	3
	MM-123	Entrepreneurship	3	0	3
	MM-124	Advanced Mathematical Techniques	3	0	3
					30

FINAL YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-125	Phase Transformations in Materials	3	1	4
	MM-126	Nanomaterials and Nanotechnology	3	1	4
	MM-127	Composite Materials	3	1	4
	MM-128	**Nuclear Materials**	3	1	4
	MM-129	**Total Quality Management**	3	0	3
	MM-130	**Design and Selection of Materials**	3	1	4
	MM-131	**Design and Selection of Materials**	3	1	4
	MM-132	**Advanced Materials**	3	1	4
SPRING	MM-133	**Corrosion Engineering and Failure, Mechanism and Analysis**	3	1	4
	MM-134	**Biomaterial and Functional Materials**	3	1	4
	MM-135	**Health, Safety and Environment**	3	0	3
	MM-136	**Industrial Engineering Project**	0	3	1.5
					30

Pre-Requisites for the 4th Semester

Batch 2022

FIRST YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-101	Introduction to Engineering Materials	3	0	3
	MM-102	Engineering Mechanics	3	0	3
	MM-103	Engineering Drawing	1	3	2.5
	HS-101	Applied Physics	3	1	4
	HS-102	Functional English	3	0	3
SPRING	MM-104	Introduction to Electronics	3	1	4
	MM-105	Engineering Drawing and Computer Graphics	1	3	2.5
	CH-103	Applied Chemistry	3	1	4
	HS-103	Calculus	3	0	3
	HS-104	Islamic Studies OR	2	0	2
	HS-105	Pakistan Studies (for Foreigners)	2	0	2
		Foreign Language-I	3	0	3
					30

SECOND YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-106	Physical Metallurgy	3	1	4
	MM-107	Engineering Materials and Their Applications	3	0	3
	MM-108	Engineering Thermodynamics	3	0	3
	MM-109	Differential Equations and Complex Variables	3	0	3
	MM-110	Mechanical, Thermodynamics & Electrics	3	1	4
	HS-106	Islamic Studies OR	2	0	2
	HS-107	Pakistan Studies (for Foreigners)	2	0	2
SPRING	MM-111	Science of Materials	3	1	4
	MM-112	Mechanical Properties of Materials	3	1	4
	MM-113	Statistics, Probability and Graphs	3	0	3
	HS-108	Arabic Language	2	0	2
	HS-109	Ethical Behavior	2	0	2
					30

THIRD YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-114	Corrosion, Prevention and Protection	3	1	4
	MM-115	Inspection and Testing of Materials	3	1	4
	MM-116	Ceramics and Refractories	3	1	4
	MM-117	Business Communication and Ethics	3	0	3
	MM-118	Mathematical Methods	3	0	3
	MM-119	Electronic Materials and Dielectrics	3	1	4
SPRING	MM-120	Materials Characterization and Analytical Techniques	3	1	4
	MM-121	Construction Materials	3	1	4
	MM-122	Engineering Mathematics for Engineers	3	0	3
	MM-123	Entrepreneurship	3	0	3
	MM-124	Advanced Mathematical Techniques	3	0	3
					30

FINAL YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-125	Phase Transformations in Materials	3	1	4
	MM-126	Nanomaterials and Nanotechnology	3	1	4
	MM-127	Composite Materials	3	1	4
	MM-128	**Nuclear Materials**	3	1	4
	MM-129	**Total Quality Management**	3	0	3
	MM-130	**Design and Selection of Materials**	3	1	4
	MM-131	**Design and Selection of Materials**	3	1	4
	MM-132	**Advanced Materials**	3	1	4
SPRING	MM-133	**Corrosion Engineering and Failure, Mechanism and Analysis**	3	1	4
	MM-134	**Biomaterial and Functional Materials**	3	1	4
	MM-135	**Health, Safety and Environment**	3	0	3
	MM-136	**Industrial Engineering Project**	0	3	1.5
					30

Pre-Requisites for the 4th Semester

Batch 2023

FIRST YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-101	Introduction to Engineering Materials	3	0	3
	MM-102	Engineering Mechanics	3	0	3
	MM-103	Engineering Drawing	1	3	2.5
	HS-101	Applied Physics	3	1	4
	HS-102	Functional English	3	0	3
SPRING	MM-104	Introduction to Electronics	3	1	4
	MM-105	Engineering Drawing and Computer Graphics	1	3	2.5
	CH-103	Applied Chemistry	3	1	4
	HS-103	Calculus	3	0	3
	HS-104	Islamic Studies OR	2	0	2
	HS-105	Pakistan Studies (for Foreigners)	2	0	2
		Foreign Language-I	3	0	3
					30

SECOND YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-106	Physical Metallurgy	3	1	4
	MM-107	Engineering Materials and Their Applications	3	0	3
	MM-108	Engineering Thermodynamics	3	0	3
	MM-109	Differential Equations and Complex Variables	3	0	3
	MM-110	Mechanical, Thermodynamics & Electrics	3	1	4
	HS-106	Islamic Studies OR	2	0	2
	HS-107	Pakistan Studies (for Foreigners)	2	0	2
SPRING	MM-111	Science of Materials	3	1	4
	MM-112	Mechanical Properties of Materials	3	1	4
	MM-113	Statistics, Probability and Graphs	3	0	3
	HS-108	Arabic Language	2	0	2
	HS-109	Ethical Behavior	2	0	2
					30

THIRD YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-114	Corrosion, Prevention and Protection	3	1	4
	MM-115	Inspection and Testing of Materials	3	1	4
	MM-116	Ceramics and Refractories	3	1	4
	MM-117	Business Communication and Ethics	3	0	3
	MM-118	Mathematical Methods	3	0	3
	MM-119	Electronic Materials and Dielectrics	3	1	4
SPRING	MM-120	Materials Characterization and Analytical Techniques	3	1	4
	MM-121	Construction Materials	3	1	4
	MM-122	Engineering Mathematics for Engineers	3	0	3
	MM-123	Entrepreneurship	3	0	3
	MM-124	Advanced Mathematical Techniques	3	0	3
					30

FINAL YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-125	Phase Transformations in Materials	3	1	4
	MM-126	Nanomaterials and Nanotechnology	3	1	4
	MM-127	Composite Materials	3	1	4
	MM-128	**Nuclear Materials**	3	1	4
	MM-129	**Total Quality Management**	3	0	3
	MM-130	**Design and Selection of Materials**	3	1	4
	MM-131	**Design and Selection of Materials**	3	1	4
	MM-132	**Advanced Materials**	3	1	4
SPRING	MM-133	**Corrosion Engineering and Failure, Mechanism and Analysis**	3	1	4
	MM-134	**Biomaterial and Functional Materials**	3	1	4
	MM-135	**Health, Safety and Environment**	3	0	3
	MM-136	**Industrial Engineering Project**	0	3	1.5
					30

Pre-Requisites for the 4th Semester

Batch 2024

FIRST YEAR — SEMESTER SYSTEM

	Course Code	Course Title	CH	LAB	CR
		Materials Engineering			
FALL	MM-101	Introduction to Engineering Materials	3	0	3
	MM-102	Engineering Mechanics	3	0	3
	MM-103	Engineering Drawing	1	3	2.5
	HS-101	Applied Physics	3	1	4
	HS-102	Functional English	3	0	3
SPRING	M