Course Scheme of Studies Batches 2020 Till 2022:

FIRST YEAR
FALL SEMESTER

Course Code		Course Title	Credit Hours		
			Th	Lab	Total
HS114	NE	Functional English	3	0	3
MS111	NE	Calculus and Analytical Geometry	3	0	3
MS114	NE	Applied Physics	3	1	4
IE114	E	Engineering Drawing	0	1	1
IE115	E	Engineering Materials & Workshop	1	1	2
IE116	E	Linear Circuit Analysis	3	1	4
HSK1	–	Chinese Language	–	–	NC
-	-	Sub Total =	13	4	17

FIRST YEAR
SPRING SEMESTER

Course Code		Course Title	Credit Hours		
			Th	Lab	Total
HS121	NE	Communication Skills	3	0	3
HS122 HS123	NE	Islamic Studies (For Muslims) Ethical Behavior (For Non-Muslims)	2	0	2
MS121	NE	Differential Equations	3	0	3
IE121	E	Basic Electronics	3	1	4
IE122	E	Fabrication Workshop	0	1	1
IE238	E	Introduction To Computer & Programming	3	1	4
HSK2	–	Chinese Language	–	–	NC
-	-	Sub Total =	14	3	17

SECOND YEAR
FALL SEMESTER

Course Code		Course Title	Credit Hours		
			Th	Lab	Total
HS231	NE	Pakistan Studies	2	0	2
MS231	NE	Complex Variables & Transforms	3	0	3
IE234	E	PCB Manufacturing	1	1	2
IE235	E	Electronic Circuit Design	3	1	4
IE366	E	Object Oriented Programming	3	1	4
IE239	E	Electromagnetic Field Theory	3	0	3
-	-	Sub Total =	15	3	18

SECOND YEAR
SPRING SEMESTER

Course Code		Course Title	Credit Hours		
			Th	Lab	Total
MS241	NE	Linear Algebra	3	0	3
IE245	E	Digital Logic Design	3	1	4
IE246	E	Instrumentation & Measurements	3	1	4
IE247	E	Basic Mechanical Engineering	2	0	2
IE248	E	Electrical Network Analysis	3	1	4
HS200	NE	Community Services	–	–	NC
-	-	Sub Total =	14	3	17

THIRD YEAR
FALL SEMESTER

Course Code		Course Title	Credit Hours		
			Th	Lab	Total
HS351	NE	Technical Report Writing & Professional Skills	2	0	2
IE352	E	Integrated Circuits	3	1	4
IE355	E	Microprocessor Architecture & Programming	3	1	4
IE357	E	Electrical Machines	3	1	4
IE356	E	Signals & Systems	3	1	4
-	-	Sub Total =	14	4	18

THIRD YEAR
SPRING SEMESTER

Course Code		Course Title	Credit Hours		
			Th	Lab	Total
MS361	NE	Probability & Statistics	3	0	3
IE361	E	Feedback Control System	3	1	4
IE362		Power Electronics	3	1	4
IE484	E	Communication Systems	3	1	4
IE363	E	Embedded Systems	2	1	3
-	-	Sub Total =	14	4	18

FOURTH YEAR
FALL SEMESTER

Course Code		Course Title	Credit Hours		
			Th	Lab	Total
MS484	NE	Entrepreneurship	2	0	2
IE471	E	Digital Signal Processing	3	1	4
EL47X		Elective 1 (Engineering)	3	1	4
IE473	E	Industrial Process control	2	1	3
IE485	E	Final Year Design Project	0	3	3
-	-	Sub Total =	10	6	16

FOURTH YEAR
SPRING SEMESTER

Course Code		Course Title	Credit Hours		
			Th	Lab	Total
EL48X	NE	Elective II (Non Engineering)	3	0	3
MS483	NE	Engineering Economics & Management	3	0	3
MS471	NE	Numerical Methods	3	0	3
IE482	E	Industrial Instrumentation Systems	2	1	
IE485	E	Final Year Design Project	0	3	3
-	-	Sub Total =	11	4	15

Elective I (Engineering)
EL471 Electronic Motor Drives (3+1)
EL472 Digital System Design (3+1)
EL473 Digital Control Systems (3+1)
EL475 Artificial Intelligence (3+1)

Elective II (Non- Engineering)
EL481 Organizational Behavior (3+0)
EL482 Professional Ethics (3+0)
EL483 Sociology for Engineers (3+0)

Map of Pre-Requisite Courses for BE (Industrial Electronics Engineering) Applicable on Batches 2019 till 2022.

Fall Semester

First Year	Second Year	Third Year	Fourth Year
IE-114 Engineering Drawing	**IE-234** PCB Manufacturing	**IE-352** Integrated Circuits	**IE-471** Digital Signal Processing
IE-115 Engineering Materials & Workshop	**IE-235** Electronic Circuit Design	**IE-355** Microprocessor Architecture & Programming	**IE-473** Industrial Process Control
IE-116 Linear Circuit Analysis	**IE-239** Electromagnetic Field Theory	**IE-356** Signals & Systems	**IE-478** Industrial Electronics Engineering Project Work I
HS-114 Functional English	**IE-366** Object Oriented Programming	**IE-357** Electrical Machines	**MS-484** Entrepreneurship
MS-111 Calculus and Analytical Geometry	**HS-231** Pakistan Studies	**HS-351** Technical Report Writing and Professional Skills	**EL-471** Elective – I Electronic Motor Drives
MS-114 Applied Physics	**MS-231** Complex Variables & Transforms		**EL-472** Elective – I Digital System Design
HSK-1 Chinese Language Course			**EL-473** Elective – I Digital Control Systems

Spring Semester

First Year	Second Year	Third Year	Fourth Year
IE-121 Basic Electronics	**IE-245** Digital Logic Design	**IE-361** Feedback Control System	**EL-48X** Elective - II
IE-122 Fabrication Workshop	**IE-246** Instrumentation & Measurements	**IE-362** Power Electronics	**IE-482** Industrial Instrumentation Systems
IE-238 Introduction to Computer & Programming	**IE-247** Basic Mechanical Engineering	**IE-363** Embedded Systems	**IE-488** Industrial Electronics Engineering Project Work- II
HS-121 Communication Skills	**IE-248** Electric Network Analysis	**IE-484** Communication Systems	**MS-471** Numerical Methods
MS-121 Differential Equations	**MS-241** Linear Algebra	**MS-361** Probability & Statistics	**MS-483** Engineering Economics & Management
HSK-2 Chinese Language Course	**HS-200** Community Services		
HS-122/ HS-123 Islamic Studies (For Muslims) / Ethical Behaviour (For Non-Muslims)			