Gurugram University Gurugram

Curriculum for UG Degree Course

in

Electrical and Electronics Engineering

(Engineering and Technology)

Gurugram University Gurugram

GENERAL COURSE STRUCTURE AND CREDIT DISTRIBUTION

STRUCTURE OF UNDERGRADUATE ENGINEERING PROGRAM

S.No.	Category	Breakup of Credits (Total 164.5)
1	Humanities and Social Sciences including Management courses	11
2	Basic Science courses	20
3	Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer etc.	28.5
4	Professional core courses	69
5	Professional Elective courses relevant to chosen specialization/branch	12
6	Open subjects – Electives from other technical and /or emerging subjects	12
7	Project work, seminar and internship in industry or elsewhere	16
8	Mandatory Courses [Induction training, Sports, Constitution of India, Scientific and Technical Writing Skills, Economics for engineers	Non-credit
9	**Total**	**168.5**

SEMESTER WISE SUMMARY OF THE PROGRAM

S.No.	Semester	No. of Contact Hours	Marks	Credits
1.	I	25/24 + 2*	900	20.5/19.5
2.	II	28/29	1000	23/24
3.	III	32	1000	22
4.	IV	32	1000	22
5.	V	32	1100	23
6.	VI	33	1000	23
7.	VII	27	900	21
8.	VIII	22	500	14
	Total	**231**	**7400**	**168.5**

COURSE CODE AND DEFINITIONS

Course Code	Definitions
L	Lecture
T	Tutorial
P	Practical
BSC	Basic Science Courses
ESC	Engineering Science Courses
HSMC	Humanities and Social Sciences including Management courses
PCC	Professional core courses
PEC	Professional elective courses
OEC	Open Elective courses
LC	Laboratory course
MC	Mandatory courses
PROJ	Project

CREDIT DISTRIBUTION IN THE FIRST YEAR OF UNDERGRADUATE ENGINEERING PROGRAM

Bachelor of Technology Semester-1

Subject	Lecture (L)	Tutorial (T)	Laboratory/ Practical (P)	Total credits (C)
Communication Skills in English	2	0	0	2
Mathematics-I	3	1	0	4
Physics	3	1	0	4
Programing for problem solving using C	3	0	0	3
Basics of Environmental Science	2	0	0	2
Communication Skills in English(P).	0	0	2	1
Physics(P)	0	0	2	1
Programing for problem solving using C	0	0	2	1
Workshop Practices (P)	1	0	3	2.5
Sports (Audit Course) Compulsory	0	0	2	2*

ENGINEERING PROGRAM

Bachelor of Technology Semester-II

Subject	Lecture (L)	Tutorial (T)	Laboratory/ Practical (P)	Total credits (C)
Mathematics-II	3	1	0	4
Human Value and Soft Skills	2	0	2	3
Basic of Electrical Engineering	3	0	0	3
Data Structure Using C	3	0	0	3
Python Programming	3	0	0	3
Electronics Engineering-I	3	0	0	3
Basic of Electrical and Electronics Engineering(P)	0	0	2	1
Data Structure Using C(P)	0	0	2	1
Python Programming (P)	0	0	2	1
Electronics Engineering-I Lab(P)	0	0	2	1

HUMANITIES AND SOCIAL SCIENCES INCLUDING MANAGEMENT

S. No.	Code No.	Course Title	Hours Per week			Total Credits	Semester
			L	T	P		
1		Communication Skills in English	2	0	2	3	I
2		Basics of Environmental Science	2	0	0	2	I
3		Human Value and Soft Skills	2	0	2	3	II
4		Organizational Behaviour	3	0	0	3	VII
Total Credits						**11**	

BASIC SCIENCE COURSES (BSC)

S. No.	Code No.	Course	Hours Per Week			Total Credits	Semester
			L	T	P		
1		Physics	3	0	2	5	I
2		Mathematics-I	3	1	0	4	I
3		Mathematics-II	3	1	0	4	II
4		Mathematical and Computational Techniques	3	1	2	4	III
5		Probability Theory and Stochastic Processes	4	1	0	3	IV
Total Credits						**20**	

ENGINEERING SCIENCE COURSE (ESC)

S. No.	Code No.	Course Title	Hours Per Week			Total Credits	Semester
			L	T	P		
1		Programing for Problem Solving using C	3	0	2	4	I
2		Workshop Practices (P)	1	0	3	2.5	I
3		Data Structure Using C	3	0	2	4	II
4		Python Programming	3	0	2	4	II
5		Electronics Engineering-I	3	0	2	4	II
6		Basic of Electrical Engineering	3	0	2	4	II
7		MOOC-1 (Essential)	3	0	0	3	VIII
8		MOOC-2 (Essential)	3	0	0	3	VIII
					Total Credits	**28.5**	

PROFESSIONAL CORE COURSES (PCC)

S. No.	Code No.	Course Title	Hours Per Week			Total Credits	Semester
			L	T	P		
1.		Electrical Machine I	3	1	2	4	III
2.		Digital Electronics	3	1	2	4	III
3.		Network Analysis and Synthesis	3	1	2	4	III
4.		Signals and System	3	0	0	3	III
5.		Electromagnetic Field Theory	3	0	0	3	III
6.		Transmission and Distribution	3	1	2	4	IV
7.		Electrical Machine II	3	1	2	4	IV
8.		Power Electronics	3	1	2	4	IV
9.		Electronic Measurement and Instrumentation	3	0	2	4	IV
10.		Electric Engineering Materials	3	0	0	3	IV
11.		Power System I	3	1	2	4	V
12.		Digital System Design	3	1	2	4	V
13.		Communication Systems	3	1	2	4	V
14.		Digital Signal Processing	3	1	2	4	V
15.		Power System II	3	1	2	4	VI
16.		Control System	3	1	2	4	VI
17.		Microprocessors and Microcontrollers	3	1	2	4	VI
18.		Renewable Energy and Distributed Generation	3	0	2	4	VII
					Total Credits	**69**	

Gurugram University Scheme of Studies and Examination

Bachelor of Technology Semester 7

S.No.	Category	Course Code	Course Title	Hours per week			Credits	Marks for Sessional	Marks for End Term Examination	Total
				L	T	P				
1	PCC		Renewable Energy and Distributed Generation	3	0	0	3	30	70	100
2	HSMC		Organizational Behavior	3	0	0	3	30	70	100
3	PEC		Professional Elective-IV	3	0	0	3	30	70	100
4	OEC		Open Elective-III	3	0	0	3	30	70	100
5	OEC		Open Elective-IV	3	0	0	3	30	70	100
6	PT		Practical Training-II	0	0	2	1	100	-	100
7	PROJ		Project-II	0	0	8	4	100	100	200
8	LC		Renewable Energy and Distributed Generation Lab	0	0	2	1	50	50	100
Total							**21**			**900**

NOTE:

1. Choose any one from Professional Elective Course-IV
2. Choose any one from each of the Open Elective Course-III and IV

PROFESSIONAL ELECTIVE- IV (Semester-VII)

Sr. No	Code	Subject	Credit
1.		High Voltage Engineering	3
2.		Intelligent Instrumentation	3
3.		Solar Technology Appliances and Application	3
4.		Advanced Power Electronics	3
5.		Renewable Energy Converters	3

Gurugram University Scheme of Studies and Examination

Bachelor of Technology Semester 8

S.No.	Category	Course Code	Course Title	Hours per week			Credits	Marks for Sessional	Marks for End Term Examination	Total
				L	T	P				
1	ESC		MOOC-1 (Essential)	3	0	0	3	25	75	100
2	ESC		MOOC-2 (Essential)	3	0	0	3	25	75	100
3	PROJ		Industrial Project / Project-III	0	0	16	8	150	150	300
Total							**14**			**500**