PhD (Electronic Engineering)

Distribution of Courses and Credit Hours:

Structure of Ph.D. Program

Number of Semesters	8 (Typical)
Number of Courses	16 (Minimum)
Credit hours allowed per Semester	12 (Maximum) in Spring/Fall
Coursework Credit Hours	48
Thesis Credit Hours	30
Program Credit Hours	78 Minimum)

Distribution of Courses and Credit Hours:

(1) The duration of teaching time in each semester shall be sixteen (16) weeks.

(2) The minimum number of contact hours for a course of three (03) Credit Hours shall be forty-two (42).

Courses Description	**No. of Courses**	**Credit Hours**
University Compulsory Courses	04	12
Program Compulsory Courses	04	12
Optional / Elective Courses	08	24
Thesis / Dissertation	-----	30
Total		**78**

Scheme of Study

Semester–I		**Semester–II**	
Course Title	**Credit Hours**	**Course Title**	**Credit Hours**
University Compulsory Courses–I	03	University Compulsory Courses–III	03
University Compulsory Courses–II	03	University Compulsory Courses–IV	03
Program Compulsory Courses–I	03	Program Compulsory Courses–III	03
Program Compulsory Courses–II	03	Program Compulsory Courses–IV	03
	12		12
Semester–III		**Semester–IV**	
Course Title	**Credit Hours**	**Course Title**	**Credit Hours**
Elective Courses–I	03	Elective Courses–V	03
Elective Courses–II	03	Elective Courses–VI	03
Elective Courses–III	03	Elective Courses–VII	03
Elective Courses–IV	03	Elective Courses–VIII	03
Identify thesis topic/Initial seminar		**Comprehensive examination**	
	12		12
Semester–V		**Semester–VI**	
1st Progressive Seminar		2nd Progressive Seminar	
Semester–VII		**Semester–VIII**	
Final Progressive Seminar		Thesis Defense	

List of Courses

4.1 University Compulsory Courses

S. No.	**Course Code**	**Courses Name**	**Credit Hours**	**Marks**
1	UCC-641	Advanced Mathematical Modelling and Simulation	03	100
2	UCC-642	Advanced Research Methodology	03	100
3	UCC-643	Probability and Stochastic Processes	03	100
4	UCC-644	Management of Research and Research Ethics	03	100

4.2 Program Compulsory Courses

S. No.	Course Code	Courses Name	Credit Hours	Marks
1	EE-631	Advanced Digital System Design	03	100
2	EE-632	Advanced Semiconductor Device Theory	03	100
3	EE-633	Advanced Embedded Systems Design	03	100
4	EE-634	Advanced Digital Signal Processing	03	100

4.3 Optional/Elective Courses

S. No.	Course Code	Courses Name	Credit Hours	Marks
1	EE-871	Advanced Algorithm Design	03	100
2	EE-872	Advanced Artificial Intelligence	03	100
4	EE-874	Next-Generation Wireless Communication	03	100
5	EE-875	Modern Control Theory	03	100
6	EE-876	Networked Dynamic Systems	03	100
7	EE-877	Advanced Non-Linear Control Systems	03	100
8	EE-878	Power System Stability and Dynamics	03	100
9	EE-879	Power System Transients	03	100
10	EE-880	Artificial Intelligence Techniques in Power Systems	03	100
11	EE-881	Advanced Robotics	03	100
12	EE-882	Advanced Image Processing	03	100
13	EE-883	Advanced Distributed systems	03	100
14	EE-884	Advanced Digital Systems	03	100

15	EE-885	Advanced DC-DC Converters	03	100
16	EE-886	Modern Communication Channel Modeling	03	100
17	EE-887	Smart Grid Networks	03	100
18	EE-888	Robotics & Human-Machine Interaction	03	100
19	EE-889	Wireless Power Transmission	03	100
20	EE-890	Artificial Neural Networks	03	100
21	EE-891	VLSI Design	03	100
22	EE-892	Wireless Sensor Networks	03	100
23	EE-893	Nanotechnology	03	100
24	EE-894	Biomedical Informatics	03	100
25	EE-895	Micro Electromechanical Systems (MEMS)	03	100
26	EE-896	Fuzzy Logic	03	100
27	EE-897	Project–I	03	100
28	EE-898	Project –II	03	100
29	EE-899	Doctoral Dissertation	03	100