ADAMAS UNIVERSITY

SCHOOL OF ENGINEERING & TECHNOLOGY

(B. Tech. in Electrical Engineering)

Course Structure
w.e.f. AY 2020-21

Department of Electrical Engineering
School of Engineering and Technology
ADAMAS University

First Year:

Semester I								
Sl. No.	**Type**	**Course Code**	**Course Title**	**L**	**T**	**P**	**Contact Hrs/Wk**	**Credits**
1	Theory **BSC**	**SMA41101**	Engineering Mathematics – I	3	1	0	4	4
2	Theory **BSC**		Applied Science (Physics + Chemistry)	3	0	0	3	3
3	Theory **ESC**	**ECS41101/ EEE41102**	Introduction to Programming / Electrical and Electronic Technology	3	0	0	3	3
4	Theory **HSSM**	**HEN41117**	HSSM – I (English Communication – I)	3	0	0	3	3
5	Theory **HSSM/ BSC**	**HEN41119/ SBT41108**	HSSM – II (Professional Ethics, Values and the Laws)/ Life Sciences	3	0	0	3	3
6	Practical **BSC**		Applied Science Lab (Physics + Chemistry)	0	0	3	3	2
7	Practical **ESC**	**ECS41201/ EEE41202**	Programming Lab/ Electrical and Electronic Technology Lab	0	0	3	3	2
8	Practical **ESC**	**ECE41201/ EME41204**	Engineering Drawing and CAD/ Engineering Workshop	0	0	3	3	2
9	Practical **MC**	**EMC41201**	Communication and Collaboration Skill – I	0	0	2	2	1
10	Practical **MC**		Avant Garde Project – I	0	0	2	2	1
			Total	**15**	**1**	**13**	**29**	**24**

HSSM: Humanities, Social Sciences & Management

BSC: Basic Science

ESC: Engg. Science

MC: Mandatory Course

Semester II								
Sl. No.	**Type**	**Course Code**	**Course Title**	**L**	**T**	**P**	**Contact Hrs/Wk**	**Credits**
1	Theory **BSC**	**SMA41102**	Engineering Mathematics – II	3	1	0	4	4
2	Theory **ESC**	**EEE41102/ ECS41101**	Electrical and Electronic Technology/ Introduction to Programming	3	0	0	3	3
3	Theory **BSC/ HSSM**	**SBT41108/ HEN41119**	Life Sciences/ HSSM – II (Professional Ethics, Values and the Laws)	3	0	0	3	3
4	Theory **ESC**	**EME41102**	Engineering Mechanics	3	1	0	4	4
5	Theory **ESC**		Environmental Science	3	0	0	3	3
6	Practical **ESC**	**EEE41202/ ECS41201**	Electrical and Electronic Technology Lab/ Programming Lab	0	0	3	3	2
7	Practical **ESC**	**EME41204/ ECE41201**	Engineering Workshop/ Engineering Drawing and CAD	0	0	3	3	2
8	Practical **MC**	**EMC41202**	Communication and Collaboration Skill – II	0	0	2	2	1
9	Practical **MC**		Avant Garde Project – II	0	0	2	2	1
			Total	**15**	**2**	**10**	**27**	**23**

HSSM: Humanities, Social Sciences & Management

BSC: Basic Science

ESC: Engg. Science

MC: Mandatory Course

Second Year:

Semester III								
Sl. No.	**Type**	**Course Code**	**Course Title**	**L**	**T**	**P**	**Contact Hrs/Wk**	**Credits**
1	Theory **BSC**	**SMA42109**	Engineering Mathematics – III (Transform Calculus and Special Functions)	3	0	0	3	3
2	Theory **HSSM**	**HEC42180**	HSSM – IV (Economics for Engineers)	3	0	0	3	3
3	Theory **PC**	**EEE42101**	Professional Core – I **Electric Circuits**	3	1	0	4	4
4	Theory **PC**	**EEE42103**	Professional Core – II **Electrical and Electronic Measurement**	3	0	0	3	3
5	Theory **PC**	**EEE42105**	Professional Core – III **Electrical Machine – I**	3	1	0	4	4
6	Practical **PC**	**EEE42201**	Professional Core – I Lab **Electric Circuits Lab**	0	0	3	3	2
7	Practical **PC**	**EEE42203**	Professional Core – II Lab **Electrical and Electronic Measurement Lab**	0	0	3	3	2
8	Practical **PC**	**EEE42205**	Professional Core – III Lab **Electrical Machine – I Lab**	0	0	3	3	2
9	Practical **ESC**		Design Thinking – I	0	0	3	3	2
10	Practical **MC**		Avant Garde Project – III	0	0	2	2	1
			Total	**15**	**2**	**14**	**30**	**26**

HSSM: Humanities, Social Sciences & Management

BSC: Basic Science

ESC: Engg. Science

PC: Professional Core

MC: Mandatory Course

Second Year:

Semester IV								
Sl. No.	**Type**	**Course Code**	**Course Title**	**L**	**T**	**P**	**Contact Hrs/Wk**	**Credits**
1	Theory **BSC**	**SMA42116**	Engineering Mathematics – IV (Numerical Techniques)	3	0	0	3	3
2	Theory **BSC**		Psychology	2	0	0	2	2
3	Theory **PC**	**EEE42102**	Professional Core – IV **Electrical Machine – II**	3	0	0	3	3
4	Theory **PC**	**EEE42104**	Professional Core – V **Microprocessor and Microcontroller**	3	0	0	3	3
5	Theory **PC**	**EEE42106**	Professional Core – VI **Analog and Digital Electronics**	3	0	0	3	3
6	Practical **BSC**	**SMA42211**	Numerical Techniques Lab	0	0	3	3	2
7	Practical **PC**	**EEE42202**	Professional Core – IV Lab **Electrical Machine – II Lab**	0	0	3	3	2
8	Practical **PC**	**EEE42204**	Professional Core – V Lab **Microprocessor and Microcontroller Lab**	0	0	3	3	2
9	Practical **PC**	**EEE42206**	Professional Core – VI Lab **Analogand Digital Electronics Lab**	0	0	3	3	2
10	Practical **MC**		Design Thinking – II	0	0	3	3	2
11	Practical **MC**		Avant Garde Project – IV	0	0	2	2	1
			Total	**14**	**0**	**17**	**31**	**25**

BSC: Basic Science; **ESC:** Engg. Science; **PC:** Professional Core; **MC:** Mandatory Course

Third Year:

Semester V								
Sl. No.	**Type**	**Course Code**	**Course Title**	**L**	**T**	**P**	**Contact Hrs/Wk**	**Credits**
1	Theory **PC**	**EEE43101**	Professional Core – VII **Power System – I**	3	0	0	3	3
2	Theory **PC**	**EEE43103**	Professional Core – VIII **Control Systems**	3	0	0	3	3
3	Theory **PC**	**EEE43105**	Professional Core – IX **Power Electronics**	3	0	0	3	3
4	Theory **PE**	**EEE43111/ EEE43113/ EEE43115**	Professional Elective – I A. Special Electrical Machines B. Electromagnetic Field Theory C. Electric Vehicle	3	0	0	3	3
5	Practical **PC**	**EEE43201**	Professional Core – VII Lab **Power System – I Lab**	0	0	3	3	2
6	Practical **PC**	**EEE43203**	Professional Core – VIII Lab **Control Systems Lab**	0	0	3	3	2
7	Practical **PC**	**EEE43205**	Professional Core – IX Lab **Power Electronics Lab**	0	0	3	3	2
8	Practical **MC**		Venture Ideation	0	0	2	2	1
9	Practical **MC**		Avant Garde Project – V	0	0	2	2	1
10	Practical **MC**		# Adamas Foundation (CSR Activity)	0	0	--	--	1
			Total	**12**	**0**	**13**	**25**	**21**

PC: Professional Core; **PE:** Professional Elective;

MC: Mandatory Course

Third Year:

Semester VI								
Sl. No.	**Type**	**Course Code**	**Course Title**	**L**	**T**	**P**	**Contact Hrs/Wk**	**Credits**
1	Theory **PC**	**EEE43102**	Professional Core – X **Power System – II**	3	0	0	3	3
2	Theory **PC**	**EEE43104**	Professional Core – XI **Modern Control Systems**	3	0	0	3	3
3	Theory **PE**	**EEE43112/ EEE43114/ EEE43116**	Professional Elective – II A. Power Generation Economics B. Digital Signal Processing C. Sensors and Transducers	3	0	0	3	3
4	Theory **OE**		Open Elective – I	2	0	0	2	2
5	Practical **PC**	**EEE43202**	Professional Core – X Lab **Power System – II Lab**	0	0	3	3	2
6	Practical **PC**	**EEE43204**	Professional Core – XI Lab **Modern Control Systems Lab**	0	0	3	3	2
7	Practical **PE**	**EEE43212/ EEE43214/ EEE43216**	Professional Elective – II Lab A. Power Generation Economics B. Digital Signal Processing C. Sensors and Transducers	0	0	3	3	2
			Total	**11**	**0**	**9**	**20**	**17**

PC: Professional Core; **PE:** Professional Elective; **OE:** Open Elective

Forth Year:

Semester VII								
Sl. No.	**Type**	**Course Code**	**Course Title**	**L**	**T**	**P**	**Contact Hrs/Wk**	**Credits**
1	Theory **HSSM**	**MBA43144**	HSSM – V **(Industrial Management)**	3	0	0	3	3
2	Theory **PC**	**EEE44101**	Professional Core – XII **Electric Drives**	3	0	0	3	3
3	Theory **PE**	**EEE44111/ EEE44113/ EEE44115**	Professional Elective – III A. HVDC Transmission Systems B. Power System Dynamics C. High Voltage Engineering	3	0	0	3	3
4	Theory **OE**		Open Elective – II	3	0	0	3	3
5	Practical **PC**	**EEE44201**	Professional Core – XII Lab **Electric Drives Lab**	0	0	3	3	2
6	Practical **PC**	**EEE44205**	Professional Core – XII Lab **Electrical Machine Design Lab**	0	0	3	3	2
7	Practical **PC**	**EEE44601**	Summer Internship	--	--	--	--	2
8	Practical **PC**	**EEE44401**	Minor Project	0	0	6	6	3
			Total	**12**	**0**	**12**	**24**	**21**

HSSM: Humanities, Social Sciences & Management

PC: Professional Core

PE: Professional Elective

OE: Open Elective

Forth Year:

Semester VIII								
Sl. No.	**Type**	**Course Code**	**Course Title**	**L**	**T**	**P**	**Contact Hrs/Wk**	**Credits**
1	**MC**		Specialization Course – V (Offline/ Online mode)	3	0	0	3 (For Offline mode only)	3
2	**PC**		Industry Work Experience/ SIRE*/ Major Project	0	0	12	12 (For Major Project only)	5
3	**PC**	**EEE44502**	Comprehensive Viva Voce	---			---	2
			Total	**3**	**0**	**12**	**15**	**10**

***SIRE: Scientific Investigation & Research Experience**

PC: Professional Core; **MC:** Mandatory Course;

Open Electives: (For students of other departments)

1. Introduction to Automatic Control
2. Fundamentals of Electrical Machines
3. Elements of Measurement and Instruments
4. Sensors and Transducers
5. Renewable Energy Sources.