DEPARTMENT OF ELECTRICAL ENGINEERING

Non-AEDP Structure incorporating Industry Related Courses and Credits

Semester I & Semester II

AY 2026-27 onwards

Semester I

Theory / Practical	Sl. No	Course Type	Course Code	Course Name	Hours per week			Credit
					L	T	P	C
T/P	1.	BSC	BPY23111T	Physics	3	1	2	5
T	2.	BSC	BMA23112T	Mathematics - I	3	1	0	4
T	3.	BSC	BBI23101T	Biology for Engineers	2	0	0	2
T/P	4.	ESC	BEL23101T	Basic Electrical Engineering	3	1	2	5
P	5.	ESC	BCE23101P	Engineering Graphics	1	0	4	3
P	6.	ESC	BME23102P	Manufacturing Practice Workshop-I	0	0	2	1
P	7.	ESC	BME23103P	Design Thinking & Idea Lab	0	0	2	1
				Total	**12**	**3**	**12**	**21**

Semester II

Theory / Practical	Sl. No	Course Type	Course Code	Course Name	Hours per week			Credit
					L	T	P	C
T/P	1.	BSC	BCH23111T	Chemistry	3	0	2	4
T	2.	BSC	BMA23111T	Mathematics - II	3	1	0	4
T/P	3.	ESC	BCS23101T	Programming for Problem Solving	2	0	4	4
T/P	4.	HSMC	BEN23102T	English for Technical Communication	2	0	2	3
T	5.	MC	UHV23001T	Universal Human Values	2	1	0	3
P	6.	ESC	BME23101P	Manufacturing Practice Workshop-II	0	0	2	1
P	7.	HSMC	JPN23101 P	Communicative Japanese/ Russian	0	0	2	1
p	8.	AUC	SYN23001P	Sports/Yoga/NSS/NCC/Activities	0	0	2	0
				Total	**12**	**2**	**14**	**20**

*SYN23001 – SPORTS, SYN23002 – YOGA, SYN23003 – NSS, SYN23004 – NCC, SYN23005 – OTHER ACTIVITIES

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BOS Member (External)

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DEPARTMENT OF ELECTRICAL ENGINEERING

	Sl. No	T/P	Type	Course code	Name of the Course	Hours per week			Credit
						L	T	P	C
3rd Semester	1	T	BSC	BMA25212T	Mathematics III	3	1	0	4
	2	T/P	PC	BEL23201T	Electrical Circuit Analysis	3	0	2	4
	3	T/P	PC	BEL25201T	Analog Devices and Photovoltaics	3	0	2	4
	4	T/P	PC	BEL23203T	Electrical Machines I	3	0	2	4
	5	T/P	PC	BEL24207T	Digital Electronics	2	0	2	3
	6	T	PC	BEL24204T	Electrical Instruments and Measurements	3	0	2	4
	7	T	VAC	BCH23112T	Environmental Science	2	0	0	2
						19	**1**	**10**	**25**

	Sl. No	T/P	Type	Course code	Name of the Course	Hours per week			Credit
						L	T	P	C
4th Semester	1	T/P	PC	BEL23205T	Electrical Machines II	3	0	2	4
	2	T	PC	BEL23206T	Power System I	3	0	2	4
	3	T	PC	BEL23208T	Principles of Signal & Systems	3	0	2	4
	4	T	PC	BEL23209T	Renewable Energy Engineering	3	0	2	4
	5	T	PC	BEL25302T	Power Electronics	3	0	2	4
	6	T	PC	BEL25321T	Electromagnetic Field Theory	3	0	0	3
	7	T	VAC	BEL23212T	IKS	2	0	0	2
	8	P	SEC	BEL23210P	Mini Project	0	0	2	1
						20	**0**	**12**	**26**

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	Sl. No	T/P	Type	Course code	Name of the Course	Hours per week			Credit
						L	T	P	C
5th Semester	1	T/P	PC	BEL25301T	Control System	3	0	2	4
	2	T/P	PC	BEL25303T	Power System II	3	0	2	4
	3	T/P	PC	BEL25304T	Information and Communication System	3	0	2	4
	4	T	PEC		Program Electives (PEC I)	3	0	0	3
	5	T/P	SEC	BEL23211T	Introduction to Machine Learning in Electrical Engineering	2	0	2	3
	6	T	MDC	BME24111T	Entrepreneurship and Start-up	3	0	0	3
	7	P	SEC	BEL25308P	Summer Internship Presentation	0	0	4	2
						17	**0**	**12**	**23**
	Sl. No	**T/P**	**Type**	**Course code**	**Name of the Course**	**Hours per week**			**Credit**
						L	T	P	C
6th Semester	1	T/P	PC	BEL25309T	Power System III	3	0	2	4
	2	T/P	SEC	BEL25310T	Microprocessor and Microcontroller	3	1	2	5
	3	T/P	PC	BEL25311T	Advanced Measurements and Instrumentation	3	0	2	4
	4	T	PEC II		Program Electives (PEC II)	3	0	0	3
	5	T/P	PC	BEL25312T	Electric Vehicle	3	0	2	4
	6	T	VAC	BEL25316T	Indian Constitution	2	0	0	2
						17	1	8	22

PEC I	BEL25305T	Electrical Safety
	BEL25306T	Solar Photovoltaic Technology
	BME23201T	Engineering Mechanics
	BME23303T	Mechatronics, Robotics and Control

PEC II	BEL26301T	Machine Intelligence and Learning
	BEL25313T	Operating Systems
	BEL25314T	Instrumentation for Solar Energy System

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	Sl. No	T/P	Course Type	Course code	Name of the Course	Hours per week			Credit
						L	T	P	C
7th Semester	1	T	PEC	BEL2642xT	Program Elective Course-1	3	0	0	3
	2	T	PEC	BEL2542xT	Program Elective Course-2	3	0	0	3
	3	T	MDC	BEL2544xT	Multidisciplinary Course-1	3	0	0	3
	4	T	VAC		Accountancy	2	0	0	2
	5	P	PCC	BEL26401P	Project-1	0	0	12	6
	6	P	PCC	BEL26402P	Internship-2	0	0	4	2
						11	0	16	19

PEC 3	BEL26420T	Multivariable Control
	BEL26421T	Optimal Control Theory
	BEL26422T	Power System Protection
	BEL26423T	Power System Reliability

PEC 4	BEL26424T	Illumination Engineering
	BEL26425T	Sensors and Actuators
	BEL26426T	Robotics and Automation
	BEL26427T	HVDC and FACTS
	BEL26428T	Industrial Drives

MDC	BEL25441T	Biomedical Engineering
	BEL25442T	Smart Urban Planning
	BEL25443T	Digital Image Processing
	BEL25444T	I.C. Technology
	BEL25445T	Speech Processing
	BEL25446T	Computer Networks
	BEL25447T	Sustainable Energy Policy
	BEL25448T	Operation Research
	BEL25449T	Smart Grid Technology

	Sl. No	T/P	Course Type	Course code	Name of the Course	Hours per week			Credit
						L	T	P	C
8th Semester	1	P	PCC	BEL26403 P	Project-2 Design Major Project or Start-up or One year Research in Industry/ other Academic or Research Institute	0	0	32	16

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DEPARTMENT OF ELECTRICAL ENGINEERING

Total Credit for 4 year B.Tech in Electrical Engineering (From Batch 2026-27)

Semester	Lecture	Tutorial	Practical	Credit
First	**12**	**3**	**12**	**21**
Second	**12**	2	**14**	**20**
Third	19	0	10	25
Fourth	20	2	12	26
Fifth	17	0	12	23
Sixth	17	1	8	22
Seventh	11	0	16	19
Eighth	0	0	32	16
	108	8	116	172

Theory + Tutorial to Practical Hours = 116:116 = 50:50 ratio