HINDUSTAN INSTITUTE OF TECHNOLOGY & SCIENCE (DEEMED TO BE UNIVERSITY)

Revision - 0

WEF: 2026-27 AY

B.TECH- CURRICULUM FRAME WORK- 2026-2027 EEE											
SL. NO	**SEM**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
1	I	BS	TP	EMA61001	Computational Matrices and Calculus	3	0	2	4	2	5
2	I	BS	TP	**Any one course to be opted**		3	0	2	4	2	5
				EPH61001	Physics for Advanced Engineering						
				ECT61001	Engineering Materials						
3	I	HS	TP	GLS61001	Technical English	1	0	0	1	2	1
4	I	ES	TP	**Any one course to be opted**		2	0	2	3	2	4
					Programming Fundamentals using C						
				ECS61020	Python Programming						
				Or							
				EME61001	Engineering Graphics and Computer Aided Design						
5	I	ES	TP	EGE61002	Design Thinking	2	0	2	3	2	4
6	II	HS	TH	EGE61401	Outreach (NSS, Y's Men, Rotaract)	0	0	2	1	4	2
7	I	HS	TH	**Any one course to be opted**		2	0	0	1	2	2
				GLS61008/ GLS6101	Indian Language(Tamil/Telugu)						
				GLS610XX	Foriegn Language						
8	I	OE	TP		Open Elective-1 (HITS CFS)	1	0	2	2	2	3
9	I	ES	PR	EGE61408	Fab Lab for Engineering	0	0	4	2	2	4
					Total	**14**	**0**	**16**	**21**	**20**	**30**
L – Lecture T – Tutorial P – Practical C – Credit S – Self Study TCH – Total Contact Hours											

B.TECH- CURRICULUM FRAME WORK- 2026-2027 EEE											
SL. NO	**SEM**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
Semester-II											
SL. NO	**SEM**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
1	II	BS	TP	EMA61002	Vector Analysis and Transform methods	3	0	2	4	2	5
2	II	BS	TP	**Any one course to be opted**		3	0	2	4	2	5
				EPH61001	Physics for Advanced Engineering						
				ECT61001	Engineering Materials						
3	II	HS	TP	GLS61002	Functional English for Professionals	1	0	2	2	2	3
4	II	PC	TP	EEE61002	Circuits and Networks	2	1	2	4	2	5
5	II	ES	TP	**Any one course to be opted**		2	0	2	3	2	4
					Programming Fundamentals using C						
				ECS61020	Programming in Python						
				OR							
				EME61001	Engineering Graphics and Computer Aided Design						
6	I	ES	TP	EEE61001	Engineering	1	0	2	2	2	3
7	II	HS	TH	GGE61001	Universal Human Values	2	0	0	2	2	2
8	I	HS	TH	**Any one course to be opted**		2	0	0	1	2	2
				GLS61006/ GLS6101	Indian Language						
				GLS610XX	Foriegn Language						
9	II	OE	TP		Open Elective-2 (HITS CFS)	1	0	2	2	2	3
10	II	MC	TH		Mandatory Course I)	3	0	0	*	2	3
					Total	**20**	**1**	**14**	**24**	**20**	**35**
L – Lecture T – Tutorial P – Practical C – Credit S – Self Study TCH – Total Contact Hours											

* Non Credit Course

Semester-III											
SL. NO	**SEM**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
1	III	BS	TH		Applied PEDs and Transform Techniques	3	1	0	4	2	4
2	III	PC	TP	EEE61002	Electrical Machines I	2	1	2	4	2	5
3	III	PC	TH	EEE61003	Principles of Electromagnetics	3	1	2	4	2	4
4	III	PC	TP	EEE61004	Data Structures and OOPS	2	0	2	3	2	4
5	III	PC	TP	EEE61005	Power Plant Engineering	3	0	0	3	2	4
6	III	OE	TP	Exx617xx	Open Elective-3 (HITS CFS)	2	0	2	2	2	4
8	III	ES	TH		Environmental Science and Sustainable Development	2	0	0	2	2	2
9	III	MC	TH		Mandatory Course II)	3	0	0	*	2	3
					Total	**22**	**2**	**8**	**22**	**16**	**34**
L – Lecture T – Tutorial P – Practical C – Credit S – Self Study TCH – Total Contact Hours											

* Non Credit Course# 15 days minimum

B.TECH- CURRICULUM FRAME WORK- 2026-2027 EEE											
SL. NO	**SEM**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
Semester-IV											
SL. NO	**SEM**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
1	IV	BS	TH		Numerical Scientific Computing	3	1	0	4	2	4
2	IV	PC	TP	EEE61006	Control Systems	2	1	2	4	2	5
3	IV	PC	TP	EEE61007	Electrical Machines II	2	0	2	3	2	4
4	IV	PC	TP	EEE61008	Transmission and Distribution	2	0	2	3	2	4
5	IV	PE	TP	EEE615xx	Professional Elective-1	2	0	2	3	2	4
6	IV	OE	TP	Exx617xx	Open Elective-4 (HITS CFS)	2	0	2	2	2	4
7	IV	EEC	DP	EEE61800	Design Project – 1	0	0	2	2	6	2
8	IV	MC	TH		Mandatory Course III)	3	0	0	*	2	3
					Total	**16**	**2**	**12**	**21**	**20**	**30**
L – Lecture T – Tutorial P – Practical C – Credit S – Self Study TCH – Total Contact Hours											

* Non Credit Course

Semester-V											
SL. NO	**SEM**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
1	V	HS	TH		Academic Writing and Research Essentials	1	0	0	1	2	3
2	V	PC	TP	EEE61009	Power Electronics	2	1	2	4	2	5
3	V	PC	TP	EEE61010	Internet of Things for Electrical Engineers	2	0	2	3	2	4
4	V	PC	TP	EEE61011	Microcontroller and Embedded system	2	0	2	3	2	4
5	V	PC	TP	EEE61012	Digital Logic Circuits	2	0	2	3	2	4
6	V	PE	TP	EEE615xx	Professional Elective-3	2	0	2	3	2	4
7	V	OE	TP	Exx617xx	Open Elective-5 (HITS CFS)	2	0	2	2	2	4
8	V	EEC	TP		Placement Training	1	0	2	1	2	3
9	V	EEC	IN	EEE61801	carried out in summer after 4th semester)		#		1	0	0
					Total	**14**	**1**	**14**	**21**	**15**	**30**
L – Lecture T – Tutorial P – Practical C – Credit S – Self Study TCH – Total Contact Hours											

\# 15 days minimum

Semester-VI											
SL. NO	**SEM**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
1	VI	PC	TP	EEE61013	Power System Analysis	2	1	2	4	2	5
2	VI	PC	TP	EEE61014	Power System Protection and Control	2	0	2	3	2	4
3	VI	PC	TP	EEE61015	Solid State Drives	2	0	2	3	2	4
4	VI	PE	TP	EEE615xx	Professional Elective-4	2	0	2	3	2	4
5	VI	OE	TP	Exx617xx	Open Elective-6 (HITS CFS)	2	0	2	2	2	4
6	VI	EEC	DP	EEE61802	Design Project – 2	0	0	4	2	6	2

B.TECH- CURRICULUM FRAME WORK- 2026-2027 EEE											
SL. NO	**SEM**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
7	VII	ES	TH		Entrepreneurship	2	0	0	2	2	2
8	VI	EEC	P		Personality Development and Soft Skill Techniques	0	0	2	1	2	2
					Total	**13**	**1**	**14**	**20**	**20**	**28**
L – Lecture T – Tutorial P – Practical C – Credit S – Self Study TCH – Total Contact Hours											

Semester-VII											
SL. NO	**SEM**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
1	VII	PC	TH	EEE61016	Electrical Energy Utilization and Conservation	3	0	0	3	2	4
2	VII	PC	TP	EEE61017	Electric Vehicle Technology	2	0	2	3	2	4
3	VII	PC	TP	EEE61018	Renewable Energy Systems	2	0	2	3	2	4
4	VII	PE	TP	EEE615xx	Professional Elective-4	2	0	2	3	2	4
5	VII	OE	TP	Exx617xx	Professional Elective-5	2	0	2	3	2	4
6	VII	ES	TH		Research Methodology & IPR	2	0	0	2	2	2
7	VII	EEC	IN	EEE61803	carried out in summer after 6th semester)		#		1	0	0
8	VII	EEC	PJ	EEE61803	Project Phase 1	0	0	6	3	6	6
					Total	**12**	**1**	**16**	**21**	**18**	**28**
L – Lecture T – Tutorial P – Practical C – Credit S – Self Study TCH – Total Contact Hours											

Semester-VIII											
SL. NO	**SEM**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
1	VIII	EEC	PJ	EEE61804	Project Phase - 2	0	0	24	12	10	24
					Total	**0**	**0**	**24**	**12**	**10**	**24**
L – Lecture T – Tutorial P – Practical C – Credit S – Self Study TCH – Total Contact Hours											

Mandatory Course-I											
SL. NO	**SEM**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
1	II	MC	TH	GGE51011	Introduction to Women and Gender Studies	3	0	0	*	2	3
2	II	MC	TH	GGE51012	Public and Personal Administration	3	0	0	*	2	3
3	II	MC	TH	GGE51013	Constitution of India	3	0	0	*	2	3
4	II	MC	TH	EGE51006	Law for Engineers	3	0	0	*	2	3
5	II	MC	TH	GGE51015	Indian Knowledge System (IKS)	3	0	0	*	2	3
L – Lecture T – Tutorial P – Practical C – Credit S – Self Study TCH – Total Contact Hours											

B.TECH- CURRICULUM FRAME WORK- 2026-2027 EEE											
SL. NO	**SEM**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
Mandatory Course-II											
SL. NO	**SEM**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
1	III	MC	TH	GGE51021	Traditional Indian Systems of Medicine and Therapies	3	0	0	*	2	3
2	III	MC	TH	GGE51022	History of Science and Technology in India	3	0	0	*	2	3
3	III	MC	TH	GGE51023	Political and Economic Thought for a Humane Society	3	0	0	*	2	3
4	III	MC	TH	GGE51024	State, Nation-Building and Politics in India	3	0	0	*	2	3
5	III	MC	TH	GGE51025	Industrial Safety	3	0	0	*	2	3
L – Lecture T – Tutorial P – Practical C – Credit S – Self Study TCH – Total Contact Hours											

Mandatory Course-III											
SL. NO	**SEM**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
1	IV	MC	TH	GGE51031	Principles of Management	3	0	0	*	2	3
2	IV	MC	TH	GGE51032	Human Resource Management	3	0	0	*	2	3
3	IV	MC	TH	GGE51033	Green Technology	3	0	0	*	2	3
4	IV	MC	TH	GGE51034	Industrial Management	3	0	0	*	2	3
5	IV	MC	TH	GGE51035	Fintech and Financing new Business	3	0	0	*	2	3
L – Lecture T – Tutorial P – Practical C – Credit S – Self Study TCH – Total Contact Hours											

LIST OF PROFESSIONAL ELECTIVES											
Semester-IV											
PROFESSIONAL ELECTIVE 1											
SL. NO	**VERTICALS**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
1	Renewable Energy system	PE 1	TP	EEE61501	Measurement and Instrumentation	2	0	2	3	2	4
2	Power and Energy System	PE 1	TP	EEE61502	Electrical Safety	2	0	2	3	2	4
3	Artificial intelligence	PE 1	TP	EEE61503	Introduction to Data Science and Python	2	0	2	3	2	4
L – Lecture T – Tutorial P – Practical C – Credit S – Self Study TCH – Total Contact Hours											

B.TECH- CURRICULUM FRAME WORK- 2026-2027 EEE											
SL. NO	**SEM**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
Semester-V											
PROFESSIONAL ELECTIVE 2											
SL. NO	**VERTICALS**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
1	Renewable Energy system	PE 2	TP	EEE61504	Power Plant Engineering	2	0	2	3	2	4
2	Power and Energy System	PE 2	TP	EEE61505	Special Electrical Machines	2	0	2	3	2	4
3	Artificial intelligence	PE 2	TP	EEE61506	Applied statistics for Artificial Intelligence	2	0	2	3	2	4
L – Lecture T – Tutorial P – Practical C – Credit S – Self Study TCH – Total Contact Hours											
Semester-VI											
PROFESSIONAL ELECTIVE 3											
SL. NO	**VERTICALS**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
1	Renewable Energy system	PE 3	TP	EEE61507	Alternative Sources of Energy1	2	0	2	3	2	4
2	Power and Energy System	PE 3	TP	EEE61508	Embedded Internet of Things2	2	0	2	3	2	4
3	Artificial intelligence	PE 3	TP	EEE61509	Artificial Neural Network3	2	0	2	3	2	4
L – Lecture T – Tutorial P – Practical C – Credit S – Self Study TCH – Total Contact Hours											

Semester-VII											
PROFESSIONAL ELECTIVE 4											
SL. NO	**VERTICALS**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
1	Renewable Energy system	PE 4	TP	EEE61510	Energy Conversion and Storage Technologies	2	0	2	3	2	4
2	Power and Energy System	PE 4	TP	EEE61511	Power Quality	2	0	2	3	2	4
3	Artificial intelligence	PE 4	TP	EEE61512	Machine Learning for Electrical Engineers	2	0	2	3	2	4
L – Lecture T – Tutorial P – Practical C – Credit S – Self Study TCH – Total Contact Hours											

B.TECH- CURRICULUM FRAME WORK- 2026-2027 EEE											
SL. NO	**SEM**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
Semester-VII											
PROFESSIONAL ELECTIVE 5											
SL. NO	**VERTICALS**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
1	Renewable Energy system	PE 5	TP	EEE61513	Power Electronics for Renewable Energy Systems	2	0	2	3	2	4
2	Power and Energy System	PE 5	TP	EEE61514	Power System and Smart grid	2	0	2	3	2	4
3	Artificial intelligence	PE 5	TP	EEE61515	Data Science for Electrical Engineers	2	0	2	3	2	4
L – Lecture T – Tutorial P – Practical C – Credit S – Self Study TCH – Total Contact Hours											

LIST OF OPEN ELECTIVES											
Vertical I-Automation and Networking											
SL. NO	**SEM**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
1	I		TP		Python(Pearson VUE)						
2	II		TP		Networking(CISCO-CCST)						
3	III		TP		Fundamentals of IOT(IBM)						
4	IV		TP		Sensors and Interface(Stem.org)						
5	V		TP		IOT using Python(Stem.org)						
6	VI		TP		PLC HMI (Schiender Electric)						
L – Lecture T – Tutorial P – Practical C – Credit S – Self Study TCH – Total Contact Hours											

Vertical II- Internet of Things (IOT)											
SL. NO	**SEM**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**	**TCH**
1	I		TP		HTML& CSS (Pearson VUE)						
2	II		TP		Fundamentals of IOT(IBM)						
3	III		TP		Python(Pearson VUE						

B.TECH- CURRICULUM FRAME WORK- 2026-2027 EEE											
SL. NO	SEM	COURSE CATEGORY	COURSE TYPE	COURSE CODE	NAME OF THE COURSE	L	T	P	C	S	TCH
4	IV		TP		IOT using Python(Stem.org)						
5	V		TP		Networking(CISCO-CCST)						
6	VI		TP		AWS Cloud Foundation(AWS Academy)						
L – Lecture T – Tutorial P – Practical C – Credit S – Self Study TCH – Total Contact Hours											

LIST OF HONORS COURSES											
HONORS IN ELECTRIC VEHICLE TECHNOLOGY											
SL. NO	SEM	COURSE CATEGORY	COURSE TYPE	COURSE CODE	NAME OF THE COURSE	L	T	P	C	S	TCH
1	V	HN	TH	EEE61900	Electric Vehicle Technology	3	0	0	3	0	3
2	VI	HN	TH	EEE61901	Hybrid and Electric Vehicles	3	0	0	3	0	3
3	VII	HN	TH	EEE61902	EV Batteries and Charging System	3	0	0	3	0	3
4	VII	HN	TH	EEE61903	Introduction to Self-Driving Cars	3	0	0	3	0	3
L – Lecture T – Tutorial P – Practical C – Credit S – Self Study TCH – Total Contact Hours											

LIST OF MINORS COURSES											
MINORS IN BATTERY AND ENERGY STORAGE TECHNOLOGIES											
SL. NO	SEM	COURSE CATEGORY	COURSE TYPE	COURSE CODE	NAME OF THE COURSE	L	T	P	C	S	TCH
1	V	HN	TH	EEE51951	Battery Management Systems	3	0	0	3	1	3
2	VI	HN	TH	EEE51952	Battery SOC and SOH Estimation	3	0	0	3	1	3
3	VII	HN	TH	EEE51953	Electrochemical Energy Storage	3	0	0	3	1	3
L – Lecture T – Tutorial P – Practical C – Credit S – Self Study TCH – Total Contact Hours											

Sem	Credits
I	21
II	24
III	22
IV	21

S. No.	Category Code	Category	Breakup of Credits
1	HS	Humanities & Social Science Courses	9
2	BS	Basic Science Courses	24
3	ES	Engineering Science Courses	19
4	PC	Programme Core Courses	60

COURSE TYPE	
TP	Theory with Practical Course
TH	Theory Course
PR	Practical Course
DP	Design Project

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SL. NO	**SEM**	**COURSE CATEGORY**	**COURSE TYPE**	**COURSE CODE**	**NAME OF THE COURSE**	**L**	**T**	**P**	**C**	**S**		**TCH**
V	21		5	DE	Professional Elective Courses	15			**PJ**	Project		
VI	20		6	NE	Open Elective Courses	12			**IN**	Internship		
VII	21		7	EEC	Employment Enhancement Courses	23						
VIII	12		8	MC	Mandatory Courses	*						
Total	**162**		**TOTAL**			**162**						
			9	HN	Honors Courses	12						
			10	MN	Minors Courses	9						

* Non Credit Course