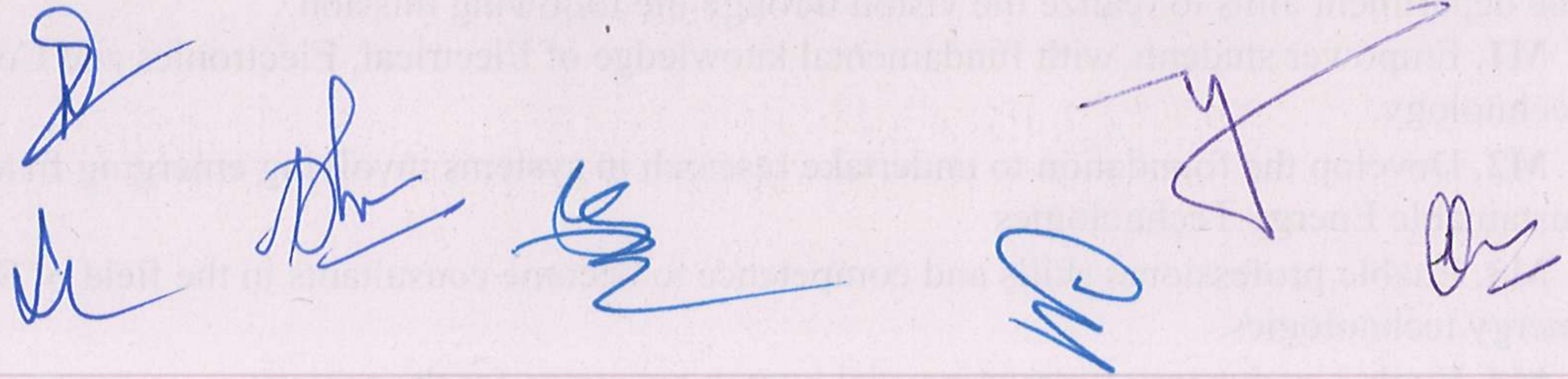


B.Tech. Degree
PROGRAMME
in
Sustainable Energy Technology
CURRICULUM
(w. e. f. Session 2024-2025)

DEPARTMENT OF ELECTRICAL ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA - 136119



Course Category	Explanation
Open Elective (OE)	
Program Elective (PE)	
Program Core (PC)	
Non-Conventional Institute Core (NCIC)	
Institute Core (IC)	



VISION AND MISSION OF THE INSTITUTE

VISION

To be a role-model in technical education and research, responsive to global challenges.

MISSION

To impart technical education that develops innovative professionals and entrepreneurs and to undertake research that generates cutting-edge technologies and futuristic knowledge, focusing on the socio-economic needs.

VISION AND MISSION OF THE DEPARTMENT

VISION

To strive continuously for excellence in education and research related to Electrical Engineering by nurturing human resource to contribute for sustainable development of industry and society.

MISSION

The department aims to realize the vision through the following mission:

M1. Empower students with fundamental knowledge of Electrical, Electronics and Computational Technology.

M2. Develop the foundation to undertake research in systems involving emerging fields of Sustainable Energy Technologies

M3. Enable professional skills and competence to become consultants in the field of Sustainable Energy technologies.

M4. Evolve as dynamic entrepreneurial human resources for the society.

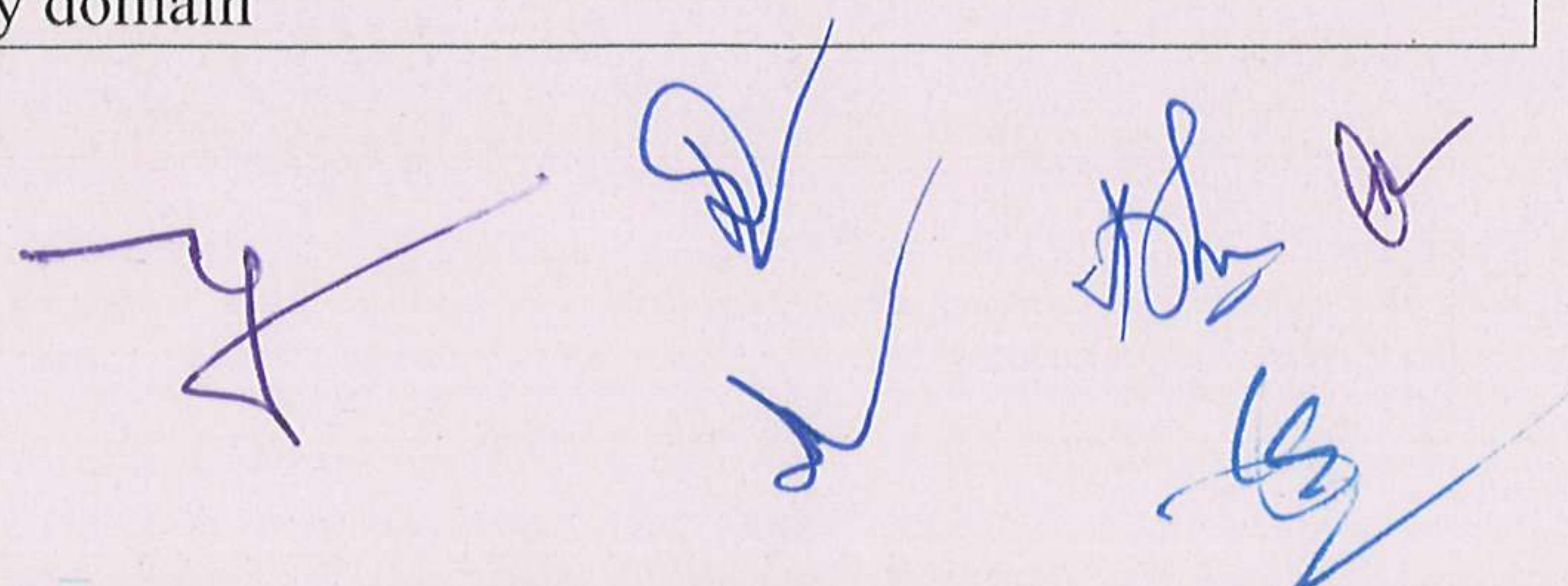
Course Structure for B. Tech. Programmes For Academic Year 2024-25 onwards

The Course Structure for B. Tech. Programmes shall have the following categories of courses: -

Sr. No.	Category
I.	Institute Core (IC)
	Non-Conventional Institute Core (NC)
	Program Core (PC)
	Program Elective (PE)
	Open Elective (OE)

Course category explanation:

Course category	Explanation
IC	Basic Sciences
	Engineering Arts and Sciences
	Humanities and Social Sciences
PC	Courses specific to the relevant discipline
PE	Elective Courses specific to the relevant discipline
OE	Elective Courses from any domain



NC	Courses only qualifying in nature
----	-----------------------------------

B.Tech. Sustainable Energy Technology
SEMESTER-WISE STRUCTURE OF CURRICULUM

Year: SEMESTER-I

Sr. No.	Course Category	Course Title	Course Code	Lecture (L) / Tutorial (T) / Practical (P) per week			Credits
				L	T	P	
	IC	Communication Skills in English (for CoE, IT, AI & ML, IIOT and M&C) OR Financial Education (for CoE, IT, AI & ML, IIOT and M&C)	HSIC101				
			HSIC103				
		Economics for Engineers (for EE, SET, CE, ECE, ME & PIE) OR Business Studies (for EE, SET, CE, ECE, ME & PIE)	HSIC102				
			HSIC104				
		Differential Calculus and Integral Calculus (SET)	MAIC101				
		Engineering Physics	PHIC101				
		Engineering Graphics (for EE, SET and CE)	CEIC101				
		Engineering Graphics (for ME, and PIE)	MEIC101				
		Engineering Practice (for CoE, IT, and ECE)	MEIC102				
		Problems Solving and Programming Using C (for CoE, IT, AI & ML)	CSIC101				
	Problems Solving and Programming Using C (for EE, SET, CE, ECE, ME, PIE, IIOT & M&C)	CSIC103					
	Energy and Environmental Science	CHIC101					



	NC	Human values and social responsibility (for CoE, IT, AI & ML, IIOT and M&C)	**NC###				
		Indian Knowledge system (for EE, SET, CE, ECE, ME & PIE)	**NC###				
		NCC/ Sports/ Yoga	SWNC101				
		NSS/ Clubs/ Technical Societies	SWNC102				
Total				16	0	17	20

* Continuous Evaluation Model as per guidelines and the credit to be awarded at the end of 6th Semester based on Cumulative performance up to 6th Semester.

Minimum number of students required to register for the subject to be offered is 50, and maximum number is 80 in one lecture group, limited to only 2 lecture groups for any subject.

@ In lieu of tutorial, wherever necessary, assignments and interactions with the students may be conducted at their own convenience by the faculty concerned.

** Two letters signifying the Department offering the course.

Three digits indicating course number.

B.Tech. Sustainable Energy Technology

Year: SEMESTER-II

Sr. No.	Course Category	Course Title	Course Code	Lecture (L) / Tutorial (T) / Practical (P) per week			Credits
				L	T	P	
	IC	Communication Skills in English (for EE, SET, CE, ECE, ME & PIE)	HSIC101				
		OR Financial Education (for EE, SET, CE, ECE, ME & PIE)	HSIC103				
		Economics for Engineers (for CoE, IT, AI & ML, IIOT and M&C)	HSIC102				
		OR Business Studies (for CoE, IT, AI & ML, IIOT and M&C)	HSIC104				
		Integral Calculus and Difference Equations (for other than SET)	MAIC102				
		Laplace and Fourier Transform (SET)	MAIC103				
		Advanced Engineering Physics (for CE, ME, and PIE)	PHIC102				
		Advanced Engineering Physics (for ECE)	PHIC103				
		Advanced Engineering Physics (for EE)	PHIC104				
		Advanced Engineering Physics (for IIOT)	PHIC105				
		Semiconductors for Energy Systems (SET)	PHIC106				
		Digital System Design (for CoE, IT, AI & ML and M&C)	CSIC100				
		Engineering Practice (for CE, EE, SET, ME, and PIE)	MEIR102				
		Engineering Graphics (Web	CSIC102				



		Design) (For CoE, ECE, IT, AI & ML, IIOT and M&C)					
		Chemistry (for CE, ME, and PIE)	CHIC102				
		Chemistry (for EE, and ECE)	CHIC103				
		ELECTROCHEMISTRY AND FUEL CELL TECHNOLOGY (SET)	CHIC104				
		Programming using Python (for CoE, IT, AI & ML, IIOT and M&C)	CSIC104				
	AU	Human values and social responsibility (for EE, SET, CE, ECE, ME & PIE)	**NC###				
		Indian Knowledge system (for CoE, IT, AI & ML, IIOT and M&C)	**NC###				
		NCC/ Sports/ Yoga	SWNC101				
		NSS/ Clubs/ Technical Societies	SWNC102				
	PC	Electrical Circuit Theory (EE, SET)	EEPC101				
Total				17	0	15	20

* Continuous Evaluation Model as per guidelines and the credit to be awarded at the end of 6th Semester based on Cumulative performance up to 6th Semester.

Minimum number of students required to register for the subject to be offered is 50, and maximum number is 80 in one lecture group, limited to only 2 lecture groups for any subject.

@ In lieu of tutorial, wherever necessary, assignments and interactions with the students may be conducted at their own convenience by the faculty concerned.

** Two letters signifying the Department offering the course.

Three digits indicating course number.