



FACULTY OF  
ENGINEERING AND  
TECHNOLOGY



2024 - 25

**Integrated B.Tech. Electronics and Communication  
Engineering** (Artificial Intelligence & Machine Learning)

**Programme Structure**

<b>Division</b>	Faculty of Engineering and Technology
<b>School Name</b>	School of Engineering and Technology
<b>Department Name</b>	Department of Polytechnic
<b>Programme Name</b>	Integrated B.Tech Electronics and Communication (AI_ML)

## Semester 1

Sr. No.	Course Name /Course Title	Course Type	Total Credits
1	Foundation of Engineering Mathematics	PF	4
2	Physics-I	PF	4
3	Chemistry-I	PF	3
4	Problem Solving & Programme Design Using C	PF	3
5	Graphic for Engineers	PF	2
6	English	PF	2
7	Yoga-I	UC	1
8	Environment and Sustainability	UC	1

## Semester 2

Sr. No.	Course Name /Course Title	Course Type	Total Credits
1	Calculus and Basic statistics	PF	4
2	Physics-II	PF	4
3	Chemistry-II	PF	3
4	Basics of Mechanics	PF	4
5	Fundamentals of Electrical & Electronics Engineering	PF	3
6	Electronic Components and Applications	PF	2
7	Sports	UC	1

### Semester 3

Sr. No.	Course Name /Course Title	Course Type	Total Credits
1	Linear Algebra and Differential Calculus	PF	3
2	Electronic Devices & Circuits	PM	5
3	Electronic Measurement & Instruments	PM	4
4	Digital Electronics	PM	4
5	Electrical Engineering	PM	4
6	Skill Course-1: PCB Design	PM	2
7	Effective Communication	UC	1
8	Critical Thinking	UC	1

### Semester 4

Sr. No.	Course Name /Course Title	Course Type	Total Credits
1	Integral Calculus	PF	3
2	Linear Integrated Circuits	PM	4
3	Basics of Analog & Digital communication	PM	4
4	Introduction to Microcontroller	PM	4
5	Basics of Power Electronics	PM	4
6	Skill Course-II: Simulation software	PM	2
7	Advance Excel	UC	1
8	*Financial Literacy(On-Line Mode)	UC	1
9	Yoga- II	UC	1

## Semester 5

Sr. No.	Course Name /Course Title	Course Type	Total Credits
1	Fundamentals of Control System	PM	4
2	Data Structure with C	PM	4
3	VLSI with VHDL	PM	1
4	Introduction to IOT	PM	3
5	Programme Elective I	PE	4
	1. Embedded System-I		
	2. Optical fiber Communication		
	3.Fundamentals of Mechatronics		
6	CapstoneProject-stage 1	PR	1
7	Industrial Internship	PR	4
8	Foundation of Peace	UC	2
9	SLDP	UC	1

## Semester 6

Sr. No.	Course Name /Course Title	Course Type	Total Credits
1	Programme Elective II	PE	4
	1. Embedded System-II		
	2. Wireless Communication		
	3. Mechatronics		
2	Introduction to AI	PM	3
3	Data Communication & Networking	PM	3
4	Python for Data Science	PM	2

Sr. No.	Course Name /Course Title	Course Type	Total Credits
5	CapstoneProject stage - 2	PR	3
7	Skill Course-III: Data Visualization Tool	PM	2
8	Co Creation	UC	1
9	Indian Constitution	UC	1
10	IKS ( General)	UC	2

\*Modifications to the programmes and courses are contingent upon adherence to university guidelines and procedures. Any proposed changes must undergo a thorough review process, including consultation with relevant academic departments, approval from the appropriate administrative bodies, and compliance with accreditation standards.

Additionally, consideration will be given to feedback from students, faculty, and other stakeholders to ensure that modifications align with the overall educational objectives and mission of the university. The implementation of any approved changes will be communicated transparently to the university community, and appropriate measures will be taken to facilitate a smooth transition for all affected parties.