Faculty of Technology
University of Delhi

The following proposals pertain to the B.Tech. programs currently running in Faculty of Technology at the University of Delhi.

1. The three departments of the Faculty of Technology, UoD, propose to offer the following Minors/ Specializations.

   i.   Department of Computer Science and Engineering
         a. Artificial Intelligence and Machine Learning
         b. Data Science
         c. Software Engineering
         d. Blockchain and Cybersecurity
         e. Augmented Reality / Virtual Reality

   ii.   Department of Electronics and Communication Engineering
         a. Telecommunication Networks
         b. VLSI Technology and System Design
         c. IoT System Design
         d. Computer Vision

   iii. Department of Electrical Engineering
         a. Robotics and Automation
         b. Sustainable Energy Engineering
         c. Electric and Hybrid Vehicle

2. When a student from a department pursues one of the Minors/Specializations in a domain offered by his/her parent department, he/she will be conferred a B.Tech. degree with a **Specialization** in the respective domain.

3. When a student from a department pursues one of the Minors/Specializations in a domain offered by a department other than his/her parent department, he/she will be conferred a B.Tech. degree with a **Minor** in the chosen domain.

4. All the departments are offering Minor Degree in their core disciplines to all students of other department(s).

5. A student of any department can take any Discipline Specific Core course as a Generic Elective (GE) course, provided the same/similar course has not been studied by the student in his/her parent department.

* Observation
When a student opts for a GE outside the faculty/department, time-table conflicts may arise.

Subjects for Department-wise Specializations and Minors for B.Tech. (Second Year) in Faculty of Technology

I. List of Generic Electives for Minors

1. Department of Computer Science and Engineering

S. No.	Sem	DSE/ GE	Minor in CSE (for ECE / EE)	Specializations (Open only for CSE) / Minors (Open to ECE / EE)				
				Artificial Intelligence & Machine Learning	Data Science	Software Engineering	Blockchain and Cybersecurity	Augmented Reality / Virtual Reality
1	III	DSE-1/ GE-3	Fundamentals of DBMS	Probability and Statistics for Computer Science	Probability and Statistics for Computer Science	Software Requirement Engineering	Fundamentals of Cybersecurity	Foundations of Augmented and Virtual Reality
2	IV	DSE-1/ GE-3	Fundamentals of Operating System	Fundamentals of Data Analytics	Fundamentals of Data Analytics	Object Oriented Software Engineering	Cryptography Essentials	3D Graphics and Rendering

2. Department of Electronics and Communication Engineering

S. No.	Sem	DSE/ GE	Minor in ECE (for CSE/ EE)	Specializations (Open only for ECE) / Minors (Open for CSE / EE)			
				Telecommunication Networks	VLSI Technology and System Design	IoT System Design	Computer Vision
1	III	DSE-1/ GE-3	Fundamentals of Analog Electronics	Introduction to Analog Communication	VLSI Technology and Design	Introduction to IoT	Fundamentals of Image Processing
2	IV	DSE-1/ GE-3	Introduction to Signals & Systems	Fundamentals of Digital Communication	Microelectronics Design	Introduction to IoT System Design	Image Filtering and Restoration

3. Department of Electrical Engineering

S. No.	Sem	DSE/ GE	Minor in EE (for CSE/ECE)	Specializations (Open only for EE) / Minors (Open for ECE / CSE)		
				Robotics & Automation	Sustainable Energy Engineering	Electric and Hybrid Vehicle
1	III	DSE-1/ GE-3	Fundamentals of Electrical Circuits	Fundamentals of Signal and Systems	Energy and Its Resources	Introduction to Electric and Hybrid Vehicles
2	IV	DSE-1/ GE-3	Electro-Mechanical Energy Conversion	Sensors & Transducers	Design and Evaluation of Photovoltaic Power Plants	Electric Vehicle Motor

II. List of Discipline-Specific Electives for Minors

1. Department of Computer Science and Engineering

S.No.	Semester	DSE	Paper Title
1.			Object Oriented Programming
2.	III	DSE - 1	Computational Statistics and Probability
3.			Front-end Web Design and Development
4.			Discrete Structures
5.			Foundations of Data Analysis
6.	IV	DSE - 2	Computer Graphics
7.			Introduction to IoT
8.			Optimization Techniques

2. Department of Electronics and Communication Engineering

S.No.	Semester	DSE	Paper Title
1.	III	DSE - 1	Computational Methods
2.			PCB based System Design
3.	IV	DSE - 2	Interfacing Electronics
4.			Modeling Electronic Circuits

3. Department of Electrical Engineering

S.No.	Semester	DSE	Paper Title
1.	III	DSE - 1	Non-Conventional Energy Resources
2.			Signal and Systems
3.	IV	DSE - 2	Electrical Machine Design
4.			Electrical Engineering Materials

This is subject to approval by the Competent Authority.