GLA Engineering

Specialization-Wise B.Tech Lateral Entry Syllabus

- **B.Tech Electronics and Communication Engineering (EC)**

Semester III	Semester IV
- Statistics and Probability - Network, Signals & Systems - Electromagnetics & Microwave - Analog Circuits & Systems - Digital System Design - Economics - Program Elective 1 - University Elective 1 - Analog Circuits & Systems Lab - Digital System Design Lab - Self-Study or Project	- Management - Electromagnetics & Microwave - Computer Architecture - Flexi Core 1 - Program Elective 1 - University Elective 2 - Microwave & RF Lab - Computer System Design Lab - Project Based Learning
Semester V	**Semester VI**
- MOS VLSI Design - Modern Communications System - Flexi Core 2 - Program Elective 1 - Program Elective 2 - Program elective 3 - University Elective 3 - VLSI & Embedded System Lab - Communication System Lab - Project Based Learning 2	- Optical Communication (MT, Asa, AR) - Flexi Core 3 - Program Elective 4 - Program Elective 5 - University Elective 4 - Technical Writing Clinic 2 - Optical Communication Lab - Advanced System Design Lab - Research, Innovation & Entrepreneurship
Semester VII	**Semester VIII**
- University Elective 5 - Program Elective 6 - Program Elective 7 - Program Elective 8/University Elective 6 - Internship (Industry/Research)	Major Project

- **B.Tech Electrical and Electronics Engineering (EE)**

Semester III	Semester IV

● Value, Ethics and Governance ● Engineering Mathematics - III ● Analog & Digital System Design ● Electromagnetics Field Theory ● Electrical Circuit Analysis ● Electrical Machines - I ● Analog System Design Lab ● Digital System Design Lab ● Electrical Machinery Lab - I	● Economics ● Engineering Mathematics - IV ● Electrical Machinery - II ● Generation Transmission & Distribution ● Microcontrollers ● Open Elective - I ● Electrical Machinery Lab - II ● Microcontroller Lab ● MATLAB & System Simulation Lab ● Project Based Learning Lab
Semester V	**Semester VI**
● Organization & Management ● Communication Systems ● Digital Signal Processing ● Measurements & Instrumentation ● Power System Analysis ● Open Elective - II ● DSPP Lab ● Measurements & Instrumentation Lab ● Project Based Learning Lab	● Linear Control Theory ● Power Electronics ● Switch Gear & Protection ● Program Elective I ● Program Elective II ● Open Elective - III ● Power Electronics Lab ● Control & Automation Lab ● Minor Project - I
Semester VII	**Semester VIII**
● Program Elective - III ● Program Elective - IV ● Program Elective - V ● Program Elective - VI ● Program Elective - VII ● Minor Project - II ● Seminar/Industrial Training	● Project Work/Practice School

● **B.Tech Mechanical Engineering (ME)**

Semester III	**Semester IV**
● Value, Ethics and Governance ● Engineering Mathematics - III ● Materials Science and Engineering ● Kinematics of Machines ● Thermodynamics ● Strength of Materials ● Computer-Aided Drafting and Design Lab ● Strength of Materials Lab ● Seminar	● Economics ● Engineering Mathematics - IV ● Metrology ● Fluid Mechanics ● Dynamics of Machines ● Open Elective - I ● Metrology Lab ● Fluid Mechanics ● Dynamics of Machines ● Open Elective - I ● Fluid Mechanics Lab

	● Computer-Aided Numerical Methods ● Project-Based Learning - I
Semester V	**Semester VI**
● Organization and Management ● Production Technology - I ● Design of Machine Transfer ● Internal Combustion Engine ● Open Elective - II ● Production Technology - I Lab ● Heat & Mass Transfer Lab ● Internal Combustion Engine Lab ● Project-Based Learning - II	● Production Technology - II ● Introduction to Finite Element Methods ● Refrigeration and Air Conditioning ● Computer Integrated Manufacturing ● Program Elective - I ● Open Elective - III ● Production Technology - II Lab ● Refrigeration and Air Conditioning Lab ● Computer Aided Engineering Lab ● Project Based Learning - III
Semester VII	**Semester VIII**
● Program Elective II ● Program Elective III ● Program Elective IV ● Program Elective V ● Program Elective VI ● Program Elective VII ● Mini Project ● Industrial Training	● Major Project

- **B.Tech Civil Engineering (CE)**

Semester III	**Semester IV**
● Value, Ethics, and Governance ● Engineering Mathematics - III ● Fluid Mechanics ● Building Materials & Construction ● Technology Surveying ● Structural Analysis ● Material Testing Lab ● Surveying Practice	● Economics ● Engineering Mathematics - IV ● Engineering Geology ● Water Supply engineering ● Analysis of Indeterminate Structures ● Open Elective - I ● Geology Lab ● Fluid Mechanics Lab ● Building Drawing and Design
Semester V	**Semester VI**
● Organization and Management ● Geotechnical Engineering ● Highway Engineering ● Design of Reinforcement Concrete Structures	● Applied Geotechnical Engineering ● Design of Steel Structures ● Water Resources Engineering ● Program Elective - I ● Program Elective - II

- Waste Water Management - Open Elective - II Geotechnical Engineering Lab - Environmental Engineering Lab	- Open Elective - III - Computer-Aided Design Lab - Highway Engineering Lab - Estimation and Costing Practice - Project Based Learning
Semester VII	**Semester VIII**
- Program Elective - III - Program Elective - IV - Program Elective - V - Program Elective - VI - Minor Project - Industrial Training - Survey Camp	Major Project