

Department of Electronics & Communication Engineering
Bundelkhand Institute of Engineering & Technology, Jhansi

Mission:

To provide knowledgeable, principled and inspiring Engineers for the future society by:

- Providing adequate treatment to curriculum with relevant instructions, assignments, laboratories, workshop experience and real life problems for development of graduate abilities.
- Providing high quality education in Electronics and Communication Engineering for both undergraduate and graduate students.

Vision :

Create High Quality Engineering Professionals

PEOs:

- Our graduate will contribute to industry, society and government.
- Our graduate will have successful technical or professional careers.
- Our graduate will continue to learn and to adapt in world of constantly evolving technology.
- Our graduate may go for higher education.

Programme Outcomes:

- i) The ability to apply knowledge of mathematics, science and engineering fundamentals and an engineering specialization to the solution of complex engineering problems in electronic circuits, communication systems and computer applications.
- ii) The ability to design and conduct experiments as well as to analyze and interpret data.
- iii) The ability to design a system, component or process to meet desired needs within realistic constraint such as economic, environmental, social, ethical health and safety ability and sustainability.
- iv) The ability to function in team and multidisciplinary setting.
- v) The ability to identify, formulate and solve complex engineering problems.
- vi) The understanding of professional and ethical responsibility.
- vii) The ability to communicate effectively.
- viii) The broad education necessary to understand the impact of engineering solution in a global economic, environmental and societal context.

- ix) A recognition of the need for and an ability to engage in life long learning.
- x) An ability to use the technical skills in modern engineering practice.
- xi) A knowledge of contemporary issues.
- xii) An ability to manage projects by own work or as a member or leader in team.

Course Outcomes:

Course Code	Course Title	Course Outcomes (COs)
EAS-101	Engg. Physics-I	Ability to apply knowledge of science fundamental and identify, formulate research literature and analyse complex engineering problems.
EAS-102	Engg. Chemistry	Ability to apply knowledge of science fundamental and identify, formulate research literature and analyse complex engineering problems.
EAS-103	Mathematics-I	Knowledge of mathematics required to solve complex engineering problems.
EEE-101	Electrical Engg	Apply knowledge of engineering fundamentals in engineering specialization to the solution of complex engineering problems.
EEC-101	Electronics Engineering	To learn basics in electronics in order to understand the complex electronic systems.
EME-101	Manufacturing Processes	To have knowledge of manufacturing process adopted practically in engineering field.
EAS-109	Remedial English Language	To develop the ability of effective communication in English as professional language.
EAS-152	Engg. Chemistry Lab	Ability to apply knowledge of science in engineering problems.
EEE-151	Electrical Engg Lab	Ability to apply knowledge of engineering fundamentals to design complex electrical systems.

EWS-151	Workshop Practice	To skill for practical aspect of engineering.
EAS-151	Physics Lab	Ability to apply knowledge of science in engineering problems.
GP-101	General Proficiency	To enhance the general proficiency including human values and ethics.
EAS-201	Engg. Physics-II	Ability to apply knowledge of science fundamental and identify, formulate research literature and analyse complex engineering problems.
EME-202	Engg. Mechanics	Apply knowledge of engineering fundamentals in engineering specialization to the solution of complex engineering problems.
EAS-203	Mathematics-II	Knowledge of mathematics required to solve complex engineering problems.
ECS-201	Computer Concepts & Programming in C	To be able to apply modern tool uses with the understanding of computer fundamentals and programming to solve complex engineering problems.
EAS-204	Professional Communication	To communicate effectively on complex engineering activities with the engineering community.
EAS-205	Environment & Ecology	Understand the impact of professional engineering solution in a global economic, environmental and societal context.
EME-252	Engg. Mechanics Lab	Ability to apply knowledge of engineering fundamentals to design complex mechanical systems.
ECS-251	Computer Programming Lab	To give knowledge of computer fundamentals and programming for applications in continuous domain problem in engineering workshop.
ECE-251	Computer Aided Engg. Graphics	To be expertise on CAD in modern complex engineering system.
EAS-254	Professional Communication Lab	To communicate effectively on complex engineering activities with the engineering community.
GP-201	General Proficiency	To enhance the general proficiency including human values and ethics.

EHU-301/ EHU-302	Industrial Psychology/ Industrial Sociology	To know the major influences and individual psychology, to learn about world environment, engineering psychology, performance management including training and development.
EAS-301/ EOE-031/ EOE-038	Mathematics-III/Science Based open Elective	Knowledge of mathematics required to solve complex engineering problems.
EEC-301	Fundamentals of Electronics Devices	To have knowledge of fundamental of electronic device to apply to design and development of complex electronic circuits.
EEC-302	Digital Electronics	To have knowledge of digital electronics so as to attain strong base to analyze, design and develop complex digital systems.
EEC-303	Electromagnetic Field Theory	To attain knowledge of electromagnetic theory to have ability to analyse communication theory and system.
EEC-304	Fundamentals of Network Analysis & Synthesis	It provide basic knowledge to analyse and synthesize complex electronic circuit for its advance application.
EHU-111	*Human Values & Professional Ethics	To understand the professional and ethical responsibilities.
EEC-351	Electronics Engineering Lab-I	To make concept of basic electronics very clear by understanding the properties of individual electronic components.
EEC-352	Digital Electronics Lab-I	To clear the concepts of digital components and digital circuits to design the complex digital circuits.
EEC-353	PCB & Electronics Workshop	To have skill to fabricate the electronic circuit on printed circuit board in order to use in complex electronic system.
GP-301	General Proficiency	To enhance the general proficiency including human values and ethics.
EHU-401/ EHU-402	Industrial Sociology/ Industrial Psychology	To know the major influences and individual psychology, to learn about world environment, engineering psychology, performance management including training and development.
EOE-041/ EOE-048/ EAS-401/	Science Based open Elective/ Mathematics-III	Knowledge of mathematics required to solve complex engineering problems.

EEC-401	Electronic Circuits	Design and development of complex electronic system with the help of electronic components and integrated circuits.
EEC-402	Computer Architecture & Organization	Deep knowledge of computer system so that concept of computer can be understand for better utilization of computer system in various applications.
EEC-403	Electronic Instrumentation & Measurements	To understand the functionality of measuring instrument for analyse and interpretation of data.
EEC-404	Signals & Systems	Understand the behavior of various signal and to analyse system and various system.
AUC-001	*Human Values & Professional Ethics	To understand the professional and ethical responsibilities.
EEC-451	Electronics Engineering lab-II	To make concept of basic electronics very clear by understanding the properties of individual electronic components.
EEC-452	Digital Electronics lab-II	To clear the concepts of digital components and digital circuits to design the complex digital circuits.
EEC-453	Measurement lab	To understand and to be able to use the effective use of measuring instruments and in testing and measuring the experimental data in complex electronic system.
GP-401	General Proficiency	To enhance the general proficiency including human values and ethics.
EEC-501	Integrated Circuits	To design and development complex electronic system using integrated circuit.
EEC-502	Principles of communication	To understand the concept in communication system to use it in solving the global complex problems.
EEC-503	Microprocessors	To understand and to be able to do the programming of microprocessor to use it in designing and development of complex electronic system.
EEC-504	Antenna & Wave Propagation	To understand in depth the antenna and wave propagation to use it in communication system effectively and to have knowledge on contemporary issues.

EIC-501	Control Systems-1	To study the components of control system and to be able to make analysis and performance behaviour of control system.
EHU-501	Engineering & Managerial Economics	To learn about the management and economics of the industrial environment.
AUC001	*Human values & Professional Ethics	To understand the professional and ethical responsibilities.
EEC-551	Integrated Circuits lab	To design and development complex electronic system practically using integrated circuit.
EIC-551	Control Systems lab	To understand and to be able to study the various control system with their performance behaviour and to be able to find out the stability, gain and phase margin.
EEC-552	Communication lab-1	To study and use the various components in communication system.
EEC-553	Microprocessor lab	To be able to program in assembly language of microprocessor and to be able to interface the peripheral devices.
GP-501	General Proficiency	To enhance the general proficiency including human values and ethics.
EHU-601	Industrial management	To learn about the management and economics of the industrial environment.
EEC-601	Digital Communication	To understand broadly and performance analysis of digital communication system and to be able to understand the further evolving technologies with their platform.
EEC-602	Digital Signal Processing	To have in depth knowledge in Digital Signal Processing.
EEC-603	Microwave Engineering	To understand in detail the microwave engineering in communication system.
EEC-604	Microcontroller	To be able to do programming of 8051 microcontroller and to design and develop the project/embedded system based on microcontroller system.

EEC-012/ EEC-014	Departmental Elective-1 (Data Structures/ Introduction to Electric Drives))	To provide the in depth knowledge of processing of data for specific application in engineering. To have knowledge of power electronics for the application in complex electronics engineering problems.
AUC-001	*Human Values & Professional Ethics	To understand the professional and ethical responsibilities.
EEC-654	Seminar	An ability to manage seminar by own work to communicate effectively, develop self-confidence, knowledge of contemporary issues and to continuously involve in the lifelong learning process.
EEC-651	Communication lab-II	To study and use the various components in communication system.
EEC-652	DSP lab	To study the MATLAB programming in order to analyse the behavior of various transforms and digital filters.
EEC-653	CAD of Electronics lab	Simulation of various logic gates using CMOS technology and Xilinx programming.
GP-601	General Proficiency	To enhance the general proficiency including human values and ethics.
EOE-072	Open elective-I (Quality Management)	To learn about the resources and the utilization in the present market.
EOE-023	Departmental Elective-II (Neural Network)	To understand and to implement the latest technics using artificial neural network and fuzzy logic to solve the complex engineering problem and to understand its use in multidisciplinary settings.
EEC-701	Optical Communication	To learn the optical sources, sources to fiber power launching, link design and optical fiber communication system.
EEC-702	Data Communication Networks	To know internet protocols and standard, IEEE standards, network and data communication in detail, to implement in designing and development of communication system.
EEC-703	VLSI Design	To learn VLSI designing to design and develop complex electronic circuits.

AUC-001	*Human Values & Professional Ethics	To understand the professional and ethical responsibilities.
EEC-751	Microwave & Fiber Optic lab	To perform experiments based on microwave and optical communication in order to understand in depth concepts of latest communication system. Students will carry out design oriented project work using various analog/digital building blocks, the work includes designing of the circuit, hardware preparation, measuring of various parameter, simulation of circuits using software tools, synthesis and interpretation of data and report preparation.
EEC-752	Electronics Circuit Design lab	includes designing of the circuit, hardware preparation, measuring of various parameter, simulation of circuits using software tools, synthesis and interpretation of data and report preparation.
EEC-753	Industrial Training	To interact with industry to understand the practical implementation of the theoretical aspects. An ability to manage project by own made or as a member or as a leader in a team to use the technics, skills and modern engineering tools necessary for engineering practice and to have the knowledge on contemporary issues and ability to function in multidisciplinary settings and to have ability to design a system, component or process to meet desired need within realistic constraints.
EEC-754	Project	contemporary issues and ability to function in multidisciplinary settings and to have ability to design a system, component or process to meet desired need within realistic constraints.
GP-701	General Proficiency	To enhance the general proficiency including human values and ethics.
EOE-084	Open Elective-II (Automation & Robotics)	To be able to develop the concept of automation and robotics.
EEC-031	Departmental Elective-III (Optical Networks)	Wide study of optical network including optical switching, WDM network design used in designing and development of complex communication system.
EEC-801	Wireless & Mobile Communication	To study mobile and wireless communication which is necessary to understand the impact of engineering solution in global economic, environmental, societal context and to have knowledge of contemporary issues.
EEC-802	Electronic Switching	To understand the concept of switching which is necessary in the communication system.
AUC-001	*Human Values & Professional Ethics	To understand the professional and ethical responsibilities.

EEC-851	Project	An ability to manage project by own made or as a member or as a leader in a team to use the technics, skills and modern engineering tools necessary for engineering practice and to have the knowledge on contemporary issues and ability to function in multidisciplinary settings and to have ability to design a system, component or process to meet desired need within realistic constraints.
GP-801	General Proficiency	To enhance the general proficiency including human values and ethics.