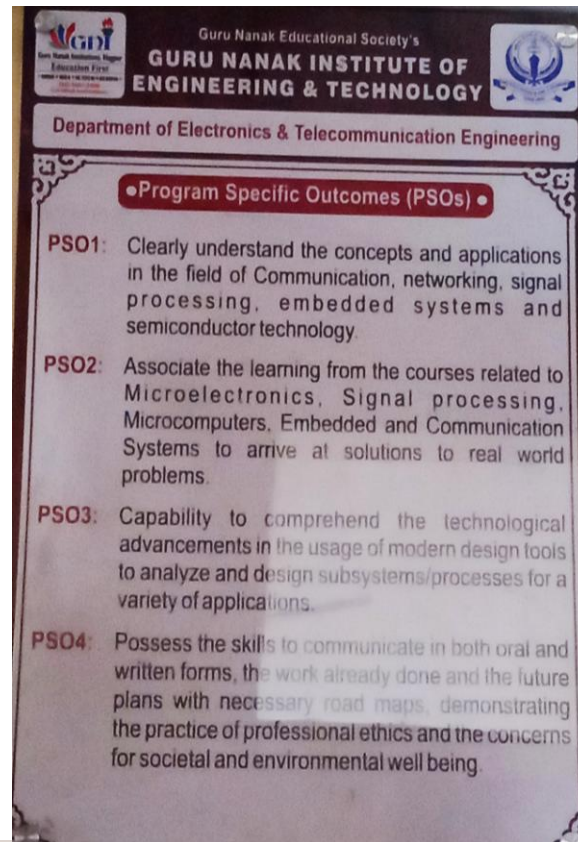


Department of Electronics and Telecommunication



Guru Nanak Educational Society's
**GURU NANAK INSTITUTE OF
ENGINEERING & TECHNOLOGY**

Department of Electronics & Telecommunication Engineering

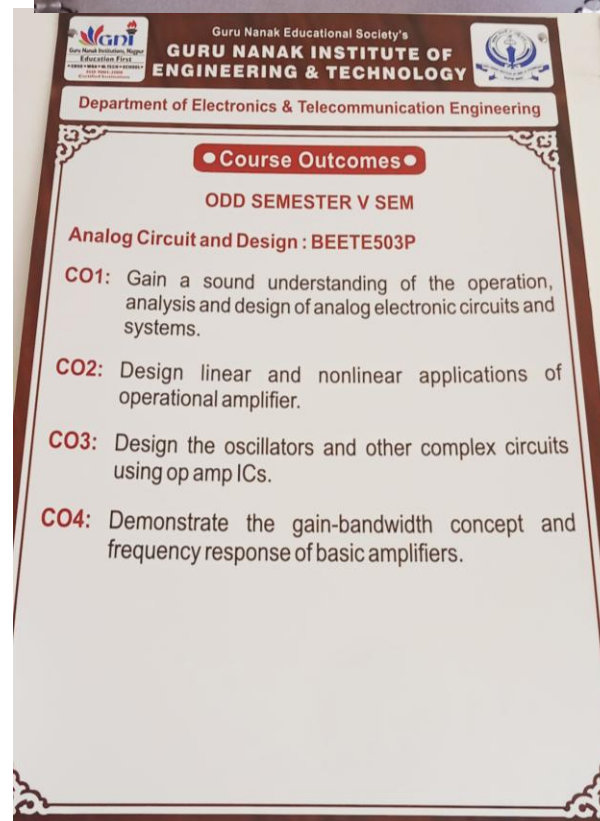
● Program Specific Outcomes (PSOs) ●

PSO1: Clearly understand the concepts and applications in the field of Communication, networking, signal processing, embedded systems and semiconductor technology

PSO2: Associate the learning from the courses related to Microelectronics, Signal processing, Microcomputers, Embedded and Communication Systems to arrive at solutions to real world problems.

PSO3: Capability to comprehend the technological advancements in the usage of modern design tools to analyze and design subsystems/processes for a variety of applications.

PSO4: Possess the skills to communicate in both oral and written forms, the work already done and the future plans with necessary road maps, demonstrating the practice of professional ethics and the concerns for societal and environmental well being.



Guru Nanak Educational Society's
**GURU NANAK INSTITUTE OF
ENGINEERING & TECHNOLOGY**

Department of Electronics & Telecommunication Engineering

● Course Outcomes ●

ODD SEMESTER V SEM

Analog Circuit and Design : BEETE503P

CO1: Gain a sound understanding of the operation, analysis and design of analog electronic circuits and systems.

CO2: Design linear and nonlinear applications of operational amplifier.

CO3: Design the oscillators and other complex circuits using op amp ICs.

CO4: Demonstrate the gain-bandwidth concept and frequency response of basic amplifiers.

Guru Nanak Educational Society's
**GURU NANAK INSTITUTE OF
 ENGINEERING & TECHNOLOGY**

Department of Electronics & Telecommunication Engineering

• Program Outcomes (POs) •

- PO1: Solve complex engineering problems by applying knowledge of mathematics, science and engineering principles.
- PO2: Identify formulate and analyze engineering problem methodically to reach proper conclusions
- PO3: Design a system, component, or process to meet desired technical, safety, health and environmental specifications
- PO4: Design and conduct experiment, analyze and interpret results to get appropriate conclusions.
- PO5: Design, simulate, analyze and implement electronics systems of varying complexity by using appropriate techniques and tools
- PO6: Infer impact of health, safety, legal and societal issues on engineering profession.
- PO7: Assess the impact of technical decisions on sustainable development of society and environment.
- PO8: Adapt professional, ethical and moral responsibilities.
- PO9: Work as a leader or productive member of multi-disciplinary and multi-cultural teams.
- PO10: Communicate effectively through reports, presentations and discussions within both the technical domain and the community at large.
- PO11: Apply the principles of project management both as a member and a team leader for project development.
- PO12: Learn independently and be ready for a lifelong learning to face increasing challenges and responsibilities.

Guru Nanak Educational Society's
**GURU NANAK INSTITUTE OF
 ENGINEERING & TECHNOLOGY**

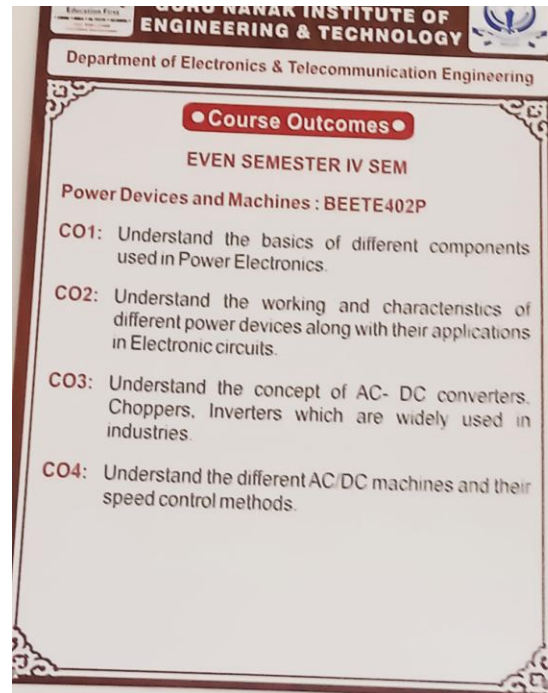
Department of Electronics & Telecommunication Engineering

• Course Outcomes •

ODD SEMESTER V SEM

Analog Circuit and Design : BEETE503P

- CO1: Gain a sound understanding of the operation, analysis and design of analog electronic circuits and systems.
- CO2: Design linear and nonlinear applications of operational amplifier.
- CO3: Design the oscillators and other complex circuits using op amp ICs.
- CO4: Demonstrate the gain-bandwidth concept and frequency response of basic amplifiers.



GURU NANAK INSTITUTE OF
ENGINEERING & TECHNOLOGY

Department of Electronics & Telecommunication Engineering

● Course Outcomes ●

EVEN SEMESTER IV SEM

Power Devices and Machines : BEETE402P

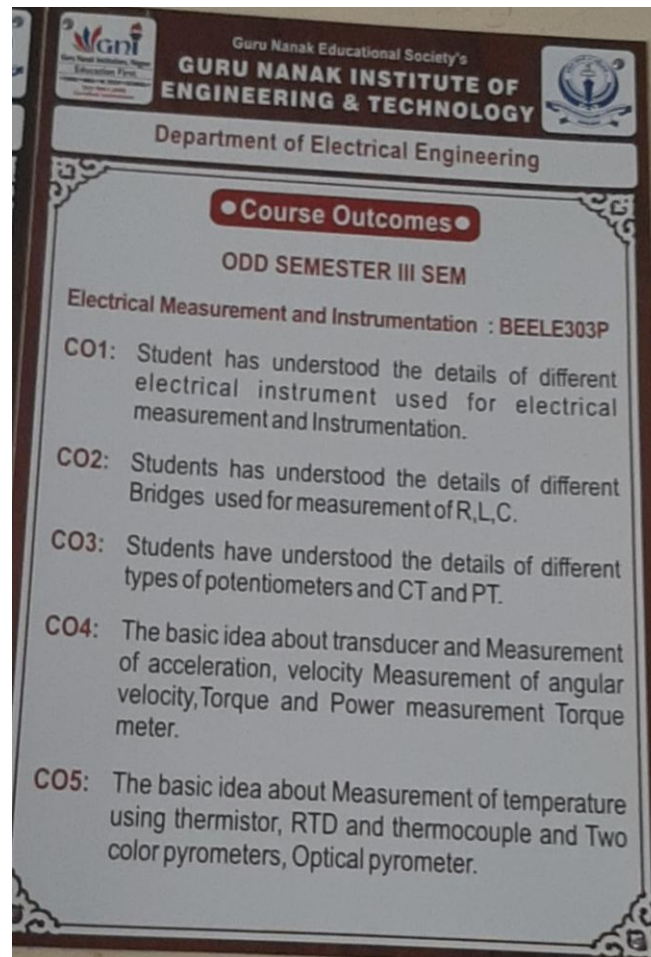
CO1: Understand the basics of different components used in Power Electronics.

CO2: Understand the working and characteristics of different power devices along with their applications in Electronic circuits.

CO3: Understand the concept of AC- DC converters. Choppers, Inverters which are widely used in industries.

CO4: Understand the different AC/DC machines and their speed control methods.

Department of Electrical Engineering



Guru Nanak Educational Society's
**GURU NANAK INSTITUTE OF
ENGINEERING & TECHNOLOGY**

Department of Electrical Engineering

● Course Outcomes ●

ODD SEMESTER III SEM

Electrical Measurement and Instrumentation : BEELE303P

CO1: Student has understood the details of different electrical instrument used for electrical measurement and Instrumentation.

CO2: Students has understood the details of different Bridges used for measurement of R,L,C.

CO3: Students have understood the details of different types of potentiometers and CT and PT.

CO4: The basic idea about transducer and Measurement of acceleration, velocity Measurement of angular velocity, Torque and Power measurement Torque meter.

CO5: The basic idea about Measurement of temperature using thermistor, RTD and thermocouple and Two color pyrometers, Optical pyrometer.

Guru Nanak Educational Society's
**GURU NANAK INSTITUTE OF
ENGINEERING & TECHNOLOGY**

Department of Electrical Engineering

● Course Outcomes ●

EVEN SEMESTER IV SEM

Electrical Machines-I : BEELE404P

CO1: Principle, construction, connections, vector grouping, operation and testing of 3-phase transformer.

CO2: Conversion of 3-phase supply to 2-phase supply, parallel operation of 3-phase Transformers.

CO3: Principle, armature and field construction, types, operation characteristics, armature reaction, commutation, methods to improve commutation in DC generators.

CO4: Principle, types, voltage build up, performance characteristics, torque evaluation in DC motors.

CO5: Principle, construction, types, torque development, performance characteristics, tests to determine performance indices & parameters of equivalent circuit of 3-phase and double cage induction motors, methods of starting, speed control and braking of induction motors.

CO6: Revolving and cross field theories, operation, characteristics, types, equivalent circuit & tests.

Guru Nanak Educational Society's
**GURU NANAK INSTITUTE OF
ENGINEERING & TECHNOLOGY**

Department of Electrical Engineering

● Course Outcomes ●

ODD SEMESTER V SEM

Electrical Machines-II : BEELE505P

CO1: The student has understood principle, construction, laying of armature and field windings, types, generation emf of synchronous generators .

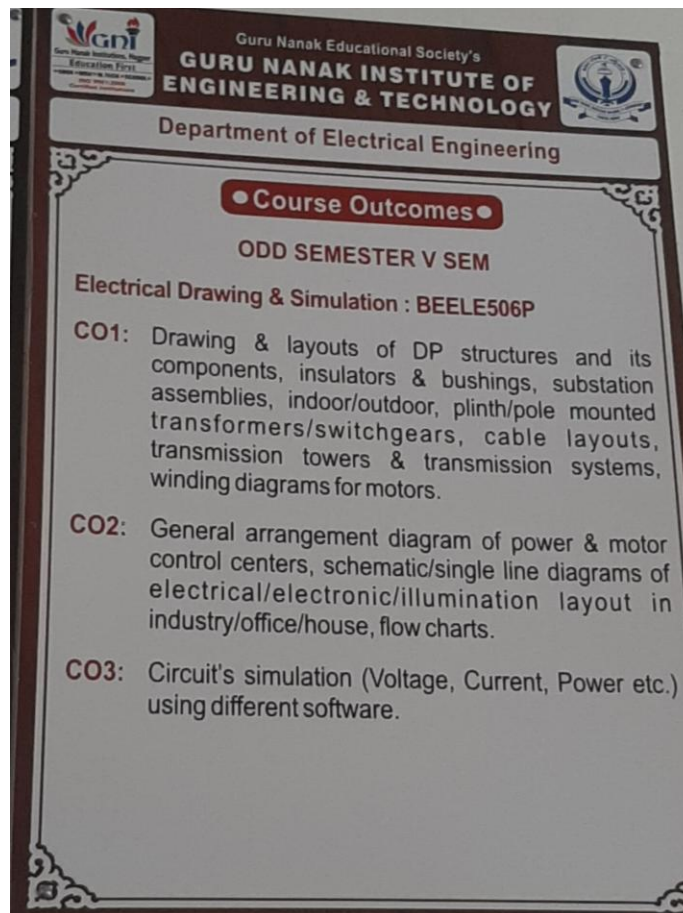
CO2: The student has understood steady state and transient behavior of synchronous generators .

CO3: The student has understood synchronization and parallel operation of synchronous generators .

CO4: The student has understood principle, construction, methods of starting of synchronous motor, its operation with variable load, operation with variable excitation, performance evaluation.

CO5: The student has understood special motors, like Repulsion, Hysteresis, Reluctance, Universal and Schrage motors.

CO6: The Student has understand the MATLAB based Synchronous machine operation.



Guru Nanak Educational Society's
**GURU NANAK INSTITUTE OF
ENGINEERING & TECHNOLOGY**
Department of Electrical Engineering

● Course Outcomes ●

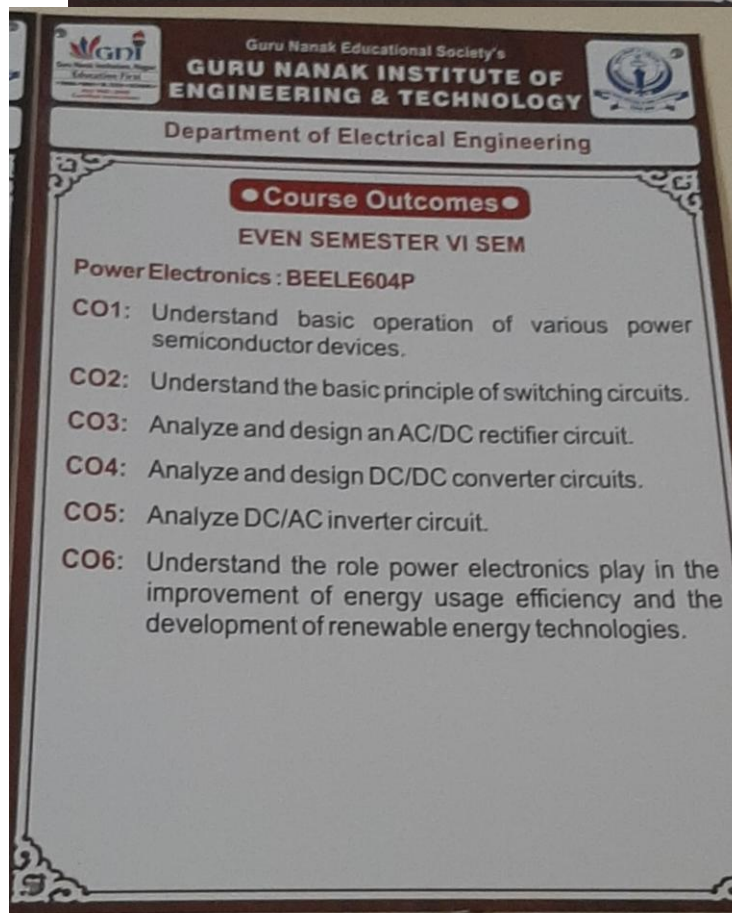
ODD SEMESTER V SEM

Electrical Drawing & Simulation : BEELE506P

CO1: Drawing & layouts of DP structures and its components, insulators & bushings, substation assemblies, indoor/outdoor, plinth/pole mounted transformers/switchgears, cable layouts, transmission towers & transmission systems, winding diagrams for motors.

CO2: General arrangement diagram of power & motor control centers, schematic/single line diagrams of electrical/electronic/illumination layout in industry/office/house, flow charts.

CO3: Circuit's simulation (Voltage, Current, Power etc.) using different software.



Guru Nanak Educational Society's
**GURU NANAK INSTITUTE OF
ENGINEERING & TECHNOLOGY**
Department of Electrical Engineering

● Course Outcomes ●

EVEN SEMESTER VI SEM

Power Electronics : BEELE604P

CO1: Understand basic operation of various power semiconductor devices.

CO2: Understand the basic principle of switching circuits.



CO3: Analyze and design an AC/DC rectifier circuit.

CO4: Analyze and design DC/DC converter circuits.

CO5: Analyze DC/AC inverter circuit.

CO6: Understand the role power electronics play in the improvement of energy usage efficiency and the development of renewable energy technologies.



 Guru Nanak Educational Society's
**GURU NANAK INSTITUTE OF
ENGINEERING & TECHNOLOGY** 

Department of Electrical Engineering

● **Course Outcomes** ●

EVEN SEMESTER VI SEM

Control System - I: BEELE605P

CO1: Model the linear systems and study the control system components specifications through classical and state variable approach.

CO2: Understand the time response and time response specifications.

CO3: Analyze the absolute stability.

CO4: Analyze the relative stability through root locus method.

CO5: Frequency response tools like bode plot and Nyquist plot.

CO6: Understand the introductory concepts of state variable approach.

Department of Management Studies

● Program Specific Outcomes (PSOs) ●

- PSO1:** To guide and channelize the transformation process of every management graduate by providing in-depth knowledge of business management and entrepreneurship embedded with ethics and a sense of social commitment and to make them to strive towards personal victory and value creation to society.
- PSO2:** To ignite a passion for multidisciplinary approach for problem solving, critical analysis and decision making by giving due importance for lateral thinking so that management graduates see things from a perspective which are not just simple but effective.



Department of Management Studies

● Program Outcomes (POs) ●

- PO1: Apply the concepts of business transactions to solve problems involving accounting principles both individually and as part of teams using techniques such as case studies, projects and assignments.
- PO2: Develop a systematic understanding of globalization and its impact on people, businesses and the economy.
- PO3: Demonstrate a critical awareness of current issues (e.g. diversity, social responsibility, sustainability, innovation, knowledge management, etc.) in business and management which is informed by reading relevant research and practice in the field.
- PO4: Function effectively on multi-disciplinary teams (Team work).
- PO5: Analyse a problem, identify, formulate and use the appropriate managerial skills for designing its solution.
- PO6: Recognize and address ethical issues and values and apply them in organizational settings.
- PO7: An understanding of professional, ethical, legal, financial, marketing, sales, logistical security and social issues and responsibilities (Professional integrity).
- PO8: Communicate effectively both in writing and orally (Speaking / Writing skills).
- PO9: Use information and knowledge effectively: learning and organizing data, synthesizing and analyzing in order to abstract meaning from information, and to share knowledge.
- PO10: A Knowledge of contemporary issues (Social awareness).
- PO11: An ability to use current techniques, skills, and tools necessary for managerial practice (Practical managerial analysis skills).
- PO12: An integrated knowledge of and demonstrated ability to perform as management professionals, and will be prepared for continued learning throughout their career. Recognition of the need for, and an ability to engage in continuing professional development and life-long learning (Continuing education awareness).
- PO13: An ability to recognize the importance of professional development by pursuing postgraduate studies or face competitive examinations that offer challenging and rewarding careers in management (Successful career and immediate employment).



Department of Management Studies

• Program Outcomes (POs) •

- PO1: Apply technical/business fundamentals in an individual or team setting, both individually and as part of teams using techniques such as time management, projects and assignments.
- PO2: Develop a systematic understanding of globalization and its impact on various businesses and the economy.
- PO3: Demonstrate a critical awareness of current issues (e.g. diversity, social responsibility, sustainability, innovation, knowledge management, etc.) in business and management which is relevant to working stages, decisions and practice in the field.
- PO4: Function effectively on multi-disciplinary teams (Teamwork).
- PO5: Analyse a problem, identify, formulate and use the appropriate managerial skills for obtaining its solution.
- PO6: Recognize and address ethical issues and values and apply them in organizational settings.
- PO7: An understanding of professional ethical/legal/financial/marketing issues, regulatory security and social issues and responsibilities (Professional integrity).
- PO8: Communicate effectively both in writing and orally (Speaking, listening skills).
- PO9: Use information and knowledge effectively, acquiring and organizing facts, synthesizing and evaluating in order to abstract meaning from information and to share knowledge.
- PO10: A knowledge of contemporary issues (Social awareness).
- PO11: An ability to use current techniques, skills, and tools (necessary) for managerial practice (Practical managerial analysis skills).
- PO12: An integrated knowledge of and demonstrated ability to perform as management professionals, and will be prepared for continued learning throughout their career. Recognition of the need for, and an ability to engage in continuing professional development and lifelong learning (Continuing education awareness).
- PO13: An ability to recognize the importance of professional development by pursuing postgraduate studies or face competitive examinations that offer challenging and rewarding careers in management (Successful career and immediate employment).

Department of Computer Science and Engineering

● Program Educational Objectives (PEOs) ●

- PEO1:** To inculcate ability in creativity & design of computer support systems and impart knowledge and skills to analyze, design, test and implement various software applications.
- PEO2:** To exhibit leadership capability, triggering social and economical commitment and inculcate community services and protect environment.
- PEO3:** To provide an educational foundation that prepares computer professional for excellence, leadership roles along diverse career paths with encouragement to professional ethics.

● Program Specific Outcomes (PSOs) ●

- PSO1:** Professional Skills: The ability to understand, analyze and develop computer programs in the areas related to algorithms, system software, multimedia, web design, big data analytics and networking for efficient design of computer-based systems of varying complexity.
- PSO2:** Problem-Solving Skills: The ability to apply standard practices and strategies in software project development using open-ended programming environments to deliver a quality product for business success.
- PSO3:** Successful Career and Entrepreneurship: The ability to employ modern computer languages, environments and platforms in creating innovative career paths to be an entrepreneur and a zest for higher studies.

Department of Computer Science and Engineering

● Program Educational Objectives (PEOs) ●

- PEO1:** To inculcate ability in creativity & design of computer support systems and impart knowledge and skills to analyze, design, test and implement various software applications.
- PEO2:** To exhibit leadership capability, triggering social and economical commitment and inculcate community services and protect environment.
- PEO3:** To provide an educational foundation that prepares computer professional for excellence, leadership roles along diverse career paths with encouragement to professional ethics.

● Program Specific Outcomes (PSOs) ●

- PSO1:** Professional Skills: The ability to understand, analyze and develop computer programs in the areas related to algorithms, system software, multimedia, web design, big data analytics and networking for efficient design of computer-based systems of varying complexity.
- PSO2:** Problem-Solving Skills: The ability to apply standard practices and strategies in software project development using open-ended programming environments to deliver a quality product for business success.
- PSO3:** Successful Career and Entrepreneurship: The ability to employ modern computer languages, environments and platforms in creating innovative career paths to be an entrepreneur and a zest for higher studies.