NiT

JIS GROUP
Educational Initiatives

CURRICULUM ESSENTIALS

ELECTRONICS AND COMMUNICATION ENGINEERING

NARULA INSTITUTE OF TECHNOLOGY
WWW.NIT.AC.IN

VISION

To develop responsible citizens who would 'think global and act local' and become the change agents of society to meet the challenges of future.

DEPARTMENT MISSION

M1: To impart State-of-Art Technical Education.

M2: To encourage the students for professional ethics & social responsibilities.

M3: To inculcate team work & leadership qualities to make the students industry ready & employable.

M4: To carry out research leading to the realisation of knowledge and intellectual property.

M5: To facilitate graduates to become an entrepreneur.

Program Educational Objectives (PEO)

PEO1: KNOWLEDGE OF BASIC ENGINEERING SCIENCES:

To exhibit knowledge in Mathematics, Engineering Fundamentals, Electronics & Communication Engineering and related fields for professional achievement in industry and organizations.

PEO2: ENGINEERING DESIGN SKILLS:

To equip the students with the necessary problem solving skills relevant to the general practice of Engineering design.

PEO3: PROBLEM SOLVING ABILITY:

To produce engineering graduates who have the problem solving ability to pursue advanced studies and research in all disciplines.

PEO4: TECHNICAL KNOWLEDGE:

To impart the knowledge of theory and practices of ECE and its applications in areas of modern research and current industry trends to the students.

PEO5: PROFESSIONAL SKILL:

To inculcate professional and ethical attitude, effective communication skills, teamwork skills, leadership qualities, managerial skills & multidisciplinary approach in the students for successful career and entrepreneurship.

Program Outcome (PO)

PO1. ENGINEERING KNOWLEDGE:
Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2. PROBLEM ANALYSIS:
Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3. DESIGN/DEVELOPMENT OF SOLUTIONS:
Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4. CONDUCT INVESTIGATIONS OF COMPLEX PROBLEMS:
Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5. MODERN TOOL USAGE:
Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

PO6. THE ENGINEER AND SOCIETY:
Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

Program Outcome (PO)

PO7. ENVIRONMENT AND SUSTAINABILITY:
Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8. ETHICS:
Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9. INDIVIDUAL AND TEAM WORK:
Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10. COMMUNICATION:
Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11. PROJECT MANAGEMENT AND FINANCE:
Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12. LIFE-LONG LEARNING:
Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs)

PSO1: Ability to Identify, Formulate & Solve problems of basics of Electronics & Communication Engineering and to apply them to various areas like Analog & digital Circuits, Signal & systems, Communication, VLSI, Embedded System etc.

PSO2: Ability to design the systems of Electronics & Communication Engineering using advanced hardware and software tools with analytical skills to achieve the Soceital needs.

PSO3: Knowledge of social & environmental awareness along with ethical responsibility to achieve a successful career addresses the real world applications using optimal resources as an entrepreneur.