BEC-443

Signal System Lab

Student Name :

Roll number :

Under the guidance of

Faculty: Dr. Atul Kumar Dwivedi

Department of Electronics and Communication

BUNDELKHAND INSTITUTE OF ENGINEERING AND

TECHNOLOGY, JHANSI (U. P.), India

Vision

To impart Quality education in Electronics & Communication Engineering to serve the changing needs of industry and society

Mission

1. To strengthen academic infrastructure leading to quality professionals in the field of Electronics & Communication Engineering.

2. To impart the domain knowledge to the students through well designed curriculum based on the inputs from stakeholders to serve the needs of industry and society.

3. To enhance the technical skill through collaborations with premier academic institutions, research organizations and industries to promote the employability and inculcate entrepreneurship.

PSOs

PSO (1): Apply the fundamental concepts of Electronics and Communication Engineering to design a variety of components and systems for applications like signal processing, Image processing, Communication, Networking, Microcontrollers, embedded system, VLSI, Control system.

PSO (2): Apply the concepts learned in Electronics, Signal processing, Image processing, Communication, Networking, Microcontrollers, embedded system, VLSI, Control system to arrive at solutions to real-world problems

Program Outcomes

Engineering Graduates will be able to:

1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems

2. 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.

3. 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.

4. 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.

5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

6. 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.

7. 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.

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

9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

10. 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.

11. **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.
12. **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.

Course outcomes

Upon completion of the course, the students will be able to:		**Bloom's Knowledge Level (KL)**
CO1	Analyse Basic Signals and their operations	KL2
CO2	Analyse Basic Systems and their properties	KL2
CO3	Analyse Signal Transform and their properties	KL2

KL: Bloom's knowledge level, KL1: remember, KL2: Understand, KL3: Apply, KL4: Analyse, KL5: Evaluate, KL6: Create

Rubrics for Evaluation

Category	Level of Performance		
	3 marks	**2 marks**	**1 marks**
Performance in Lab (3)	• Able to perform experiment independently within prescribed time • The result is close or to standard value.	• Able to perform experiment within prescribed time • Large deviation of result from standard value	• Able to perform the experiment partially with no results.
Level of Understanding / Q&A (3)	• Able to show strong theoretical background of experiment • Able to interpret proper data to reach conclusion.	• Partially show strong theoretical background of experiment • Partially able to interpret data to reach conclusion.	• Lack of theoretical background of experiment or lack of interpretation of data
	Documentation Level		
	4 marks	**3 marks**	**2 marks**
Quality of Submission (4)	• Graphs, table, contents are well constructed. • All-important calculations and result have been clearly made. • Conclusions/ observations/ comments done clearly	• Shortfalls found in any of the contents of the report viz. graphs, tables, calculations, results, conclusions/ Comments, etc.	• Report submitted but not written properly.

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Name_____   Roll No_____

Exp. No.	Name of Experiment	Date of Performance	Signature of Course Coordinator