DEPARTMENT OF ELECTRONICS
MATA GUJRI MAHILA MAHAVIDYALAYA (AUTONOMOUS), JABALPUR

PROGRAM EDUCATIONAL OBJECTIVES (PEOS),
PROGRAM OUTCOMES (POS) & PROGRAM SPECIFIC OUTCOMES (PSOS)

B.Sc. (ELECTRONICS)

Vision

- To be a center of excellence in teaching as well as practical training in Electronics and to provide service, research, education and training of quality in the field of Electronics.

Mission

- To improve upon the quality of education with special emphasis on practical hands.

PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

PEO 1: To impart fundamental knowledge of the subject.

PEO 2: To understand and examine the structure of various number systems and its application in **digital** design.

PEO 3: To understand, analyze and design various combinational and sequential **circuits.**

PEO 4: To introduce the concepts of analogue communication systems.

PEO5: Elaborate discussion about the importance of signal generators and analyzers in Measurement.

PEO6: To understand operation of semiconductor devices.

PEO7: To understand DC analysis and AC models of semiconductor devices.

PROGRAM OUTCOMES (POS)

This course provides the knowledge of analog and digital communication system analysis and design. After study through lectures and assignments, students will be able to

PO 1:Gain the knowledge of components of analogue communication system.

PO 2: To analyze various methods of baseband/band pass Analogue transmission and detection.

PO 3: Understanding fundamentals and conceptualizing the facts **.**

PO 4: Improvisation of practical skills .

PO 5: Understand various functions of network and also the stability of network.

PO 6: 5. Learn the various parameters and their interrelationship, able to solve numericals with series, cascade, parallel connection using two port parameters.

PO 7: 6. Synthesize the network using passive elements.

PROGRAM SPECIFIC OUTCOMES (PSOS)

PSO 01: Utilize the basic knowledge in mathematics, science and Electronics and Create, select and apply appropriate techniques, resources and modern technology in multi-disciplinary environment.

PSO 02: Apply research based knowledge to design and conduct experiments, analyze, synthesize and interpret the data pertaining to Electronics and Communication Engineering problems and arrive at valid conclusions

PSO 03: Ability to use and apply the techniques & skills in modern engineering practice.

COURSE OUTCOME:

CO 1: Basic Electronics–

- Understand the current voltage characteristics of semiconductor devices.
- Analyze dc circuits and relate ac models of semiconductor devices with their physical Operation.
- Design and analyze of electronic circuits, 4. Evaluate frequency response to understand behavior of Electronics circuits.

CO 2: Digital Electronics–

- Develop a digital logic and apply it to solve real life problems.
- Analyze, design and implement combinational logic circuits.
- Classify different semiconductor memories.
- Analyze, design and implement sequential logic circuits.

CO 3: Microprocessor –

- Describe the general architecture of a microcomputer system and architecture &organization of 8085 & 8086 Microprocessor and understand the difference between 8085 and advanced microprocessor.
- Understand and realize the Interfacing of memory & various I/O devices with 8085 microprocessor

CO 4:Instrumentation-

- Identify the various parameters that are measurable in electronic instrumentation.
- Employ appropriate instruments to measure given sets of parameters.
- Practice the construction of testing and measuring set up for electronic systems.
- To have a deep understanding about instrumentation concepts which can be applied to Control systems.
- Relate the usage of various instrumentation standards.
- Identify and describe operation of biomedical instrumentation.

CO5: Power Electronics –

- Relate basic semiconductor physics to properties of power devices, and combine circuit mathematics and characteristics of linear and non□linear devices.
- Describe basic operation and compare performance of various power semiconductor devices, passive components and switching circuits.
- Identify the critical areas in application levels and derive typical alternative solutions, select suitable power converters to control Electrical Motors and other industry grade apparatus.
- Recognize the role power electronics play in the improvement of energy usage efficiency and the applications of power electronics in emerging areas.

CO6: Communication Electronics-

- Analyze the performance of a baseband and pass band digital communication system in terms of error rate and spectral efficiency.
- Perform the time and frequency domain analysis of the signals in a digital communication system.
- Analyze Performance of spread spectrum communication system.