

**Kadi Sarva Vishvavidyalaya, Gandhinagar**  
**Bachelor of Engineering (Electrical Engineering Syllabus)**

**ANALOG AND DIGITAL ELECTRONICS LAB**  
**B.E. SEM-IV SUBJECT CODE: EE-407**

**Course Objective:**

The educational objectives of this course are

- To present a problem oriented introductory knowledge of Analogue & Digital circuits and its applications.
- To focus on the study of electronic circuits.

**Teaching / Examination Scheme**

SUBJECT		Teaching Scheme				Total Credit	Evaluation Scheme					Total Marks
		L	T	P	Total		THEORY		IE	CIA	PR. / VIVO	
CODE	NAME	Hrs	Hrs	Hrs	Hrs		Hrs	Marks	Marks	Marks	Marks	
EE-407	Analog and Digital Electronics lab	0	0	2	2	1	0	0	0	20	30	50

- **Experiments shall be performed in the laboratory related to course contents.**

**Suggested List of Experiments:**

- 1 To verify the application op-amp as inverting amplifier.
- 2 To verify the application op-amp as Non- inverting amplifier.
- 3 To verify the application op-amp as integrator..
- 4 To verify the application op-amp as diffrentiator.
- 5 To verify the application of IC 555 as an astable multivibrator.
- 6 To verify the application of IC 555 as an monostable multivibrator.
- 7 To study about RS flip flop, clocked RS flip flop, JK flip flop.
- 8 To study about various type of logic gates.
- 9 To verify op-amp as triangular Wave generator.
- 10 To verify op-amp as square Wave generator.

**Instructional Method & Pedagogy**

- At the start of course, the course delivery pattern , prerequisite of the subject will be discussed
- Lecture may be conducted with the aid of multi-media projector, black board, OHP etc.

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- Attendance is compulsory in lectures and laboratory, which may carries five marks in overall evaluation.
- Two internal exams may be conducted and average of the same may be converted to equivalent of 15 marks as a part of internal theory evaluation.
- Assignment based on course content will be given to the student for each unit/topic and will be evaluated at regular interval. It may carry a weight age of five marks in the overall internal evaluation.
- Surprise tests/Quizzes/Seminar /Tutorial may be conducted and having share of five marks in the overall internal evaluation.
- The course includes a laboratory, where students have an opportunity to build an appreciation for the concept being taught in lectures.
- Experiments shall be performed in the laboratory related to course contents.

**Students Learning Outcomes**

On successful completion of the course

- The student can acquire the basic knowledge of measurement principles and their application in electrical engineering.
- The students will be able to effectively employ electrical and electronics instruments for measurements of various electrical quantities.
- On successful completion of the course, a student can acquire the basic knowledge of Analog and Digital electronics.