

Electronic Measurements

EC410

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Course Objectives

- To teach the students the different measuring techniques and the basic use of electronic measurement instruments.
- To explain the theory and principle of operation of signal generators and waveform analyzing instruments.
- To demonstrate the methods of the measurement of signal spectrum and harmonic distortion.
- To give a full understanding of transducers and data acquisition systems.

Grading System

- Class attendance and participation (project): 10
- Tutorial reports: 10
- Quiz 1: Not graded --
- 7th week exam: 20
- Quiz 2: Not graded --
- 12th week exam: 20
- Final Exam: 40
- Total: 100

References

- 1- J. B. Gupta, *A Course in Electronic and Electrical Measurements*, 2003.
- 2- David A. Bell, *Electronic Instrumentation and Measurements*, 1994, 2003 (2nd ed.).
- 3- Rajput, R. K, *Electronic Measurements and Instrumentation*, 2009.
- 4- A. K. Sawhney, *A Course in Electrical and Electronic Measurements and Instrumentation*, 2004.

Contents

1- Oscilloscopes

2- Signal generators

**3- Signal analysis and waveform analyzing
instruments**

4- Analog and digital measuring instruments

5- Transducers and data acquisition systems