

COURSE TITLE	ANALOG CIRCUIT DESIGN
COURSE CODE	01CT0818
COURSE CREDITS	3

Objective:

- 1 The Objective of this course is to give students an understanding of Analog Circuit Design
- 2 The Objective of this course is to give students an understanding of Analog Circuit Design.

Course Outcomes: After completion of this course, student will be able to:

- 1 Design analog circuits with industry standard specifications
- 2 Analyze error budgeting of various analog circuits
- 3 Design current source for various applications
- 4 Understand detail working of different types of ADC
- 5 Do transformer design and heat sink design

Pre-requisite of course:Basics of Electronics Engineering

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
3	0	0	50	30	20	25	25

Contents : Unit	Topics	Contact Hours
1	<p>Module</p> <p>This course includes the analog circuit design concepts in detail. It covers basic design using transistors and opamp. It covers opamp based voltage regulator as a primary design and covers more opamp based designs which are applications in industry. The course also includes the calculations of probable errors in design with necessary error budgeting concepts which helps in critical design requirements. The course also includes design of current source and 4 to 20ma current transmitter to make students aware with industrial need of such designs. Various types of Analog to Digital converters are also discussed in detail.</p>	42
Total Hours		42

Textbook :

- 1 Electronic Devices and Circuit Theory, 11e, Robert L. Boylestad, Pearson, 2014

References:

- 1 Analog Circuit Design: A Tutorial Guide to Applications and Solutions, Analog Circuit Design: A Tutorial Guide to Applications and Solutions, Bob Dobkin (Editor), Jim Williams (Editor), Newnes, 2011

Suggested Theory Distribution:

The suggested theory distribution as per Bloom’s taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery					
Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking / Creative
10.00	20.00	30.00	40.00		

Instructional Method:

- 1 Students may use supplementary resources such as online videos, NPTEL videos, e-courses, Virtual Laboratory, etc.

Supplementary Resources:

- 1 MOOC Course, NPTEL, COURSERA, Udemy, Infosys, Springboot, SWYAM etc. Online learning platform
- 2 https://onlinecourses.nptel.ac.in/noc25_ee44/preview