

## COURSE DETAIL

### BASIC CIRCUIT THEORY

**Country**

Korea, South

**Host Institution**

Yonsei University

**Program(s)**

Yonsei University

**UCEAP Course Level**

Lower Division

**UCEAP Subject Area(s)**

Electrical Engineering

**UCEAP Course Number**

50

**UCEAP Course Suffix****UCEAP Official Title**

BASIC CIRCUIT THEORY

**UCEAP Transcript Title**

CIRCUIT THEORY

**UCEAP Quarter Units**

4.50

**UCEAP Semester Units**

3.00

## Course Description

Students learn about the basic concepts of electric circuits including; circuit elements, Kirchhoff's law, basic RLC circuits, circuit theorems, Op Amp, sinusoidal steady-state analysis, frequency response and Laplace transform. Topics include Electric circuit variables, Circuit Elements, Simple Resistive Circuits, Techniques of Circuit Analysis, The Operational Amplifier, Inductance, Capacitance, and Mutual Inductance, Response of First-Order RL and RC Circuits, Natural and Step Responses of RLC Circuits, Sinusoidal Steady-State Analysis, and Sinusoidal Steady-State Power Calculations.

Prerequisites: Engineering mathematics, Differential Equations

## Language(s) of Instruction

English

## Host Institution Course Number

EEE2010

## Host Institution Course Title

BASIC CIRCUIT THEORY

## Host Institution Course Details

## Host Institution Campus

## Host Institution Faculty

## Host Institution Degree

## Host Institution Department

Electrical and Electronics Engineering

## Course Last Reviewed

2023-2024

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