

# COURSE DETAIL

## COMPUTER AIDED ANALYSIS AND OPTIMIZATION OF INTEGRATED CIRCUIT

**Country**

Taiwan

**Host Institution**

National Taiwan University

**Program(s)**

National Taiwan University

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Electrical Engineering

**UCEAP Course Number**

106

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

COMPUTER AIDED ANALYSIS AND OPTIMIZATION OF INTEGRATED CIRCUIT

**UCEAP Transcript Title**

COMP OPTM INTG CIRC

**UCEAP Quarter Units**

4.50

**UCEAP Semester Units**

3.00

### **Course Description**

The course outline is as follows:

[Lecture 1](#) - Introduction

[Lecture 2](#) - Formulation of Circuit Equations

[Lecture 3](#) - Direct Methods for Linear Systems

[Lecture 4](#) - Direct Methods for Sparse Linear Systems

[Lecture 5](#) - Iterative Methods and QR Factorization

[Lecture 6](#) - Krylov-Subspace Methods - I

[Lecture 7](#) - Krylov-Subspace Methods - II

[Lecture 8](#) - Solutions for Nonlinear Equations

[Lecture 9](#) - Modified Newton Methods

[Lecture 10](#) - Methods for Ordinary Differential Equations

[Lecture 11](#) - Multistep Methods

Lecture 12 - Large Timestep Issues

[Lecture 13](#) - Digital Systems Verification

### **Language(s) of Instruction**

English

### **Host Institution Course Number**

EE5043

### **Host Institution Course Title**

COMPUTER AIDED ANALYSIS AND OPTIMIZATION OF INTEGRATED CIRCUIT

### **Host Institution Campus**

### **Host Institution Faculty**

College of Electrical Engineering and Computer Science

### **Host Institution Degree**

### **Host Institution Department**

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