

KOCW Content Development Application

Applicant		Faculty Department Major SIRA		
	Name	Richard Fuchs	Position	Professor
	Contact		E-mail	
Content	Subject	Electrical Engineering and Circuit Analysis 2		
	Credit	2 credits		
	Field	Liberal Arts () Social Science () Engineering (X) Natural Science () Education () Medicine or Pharmaceutical Study () PE or Art ()		
	Outline of the Class	Basic Concepts Revisited – with Practice Examples Mesh Analysis, Voltage and Current Division Revisited Mesh Analysis with Cramer’s Rule Supermeshes Nodal Analysis Sources Superposition Thevenin and Norton Theorems Thevenin and Norton Equivalents for Multiple and Dependent Sources Capacitors National Grid Transformers		
	Weeks	12 weeks		

	Class Type	Video () / Recorded Voice (X)
<p>Will you use contents for a regular class?</p>	<p>Yes () / No (X)</p> <p>※ If you intend to run your contents for a credit class, please consult staff at CTL.</p>	
<p>I submit this document for the KOCW Development Project.</p> <p style="text-align: right;">2021.04.01</p> <p>Applicant : <u>Richard Fuchs</u> (Sign): <i>R. Wayne Fuchs</i></p> <p>Head of CTL, Woo-Song University</p>		

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1. Outline

가. Name of a Class

Class Name	Electrical Engineering and Circuit Analysis 2		
Semester	2021학년도 1학기	Division	Major (X) Liberal Art ()

나. Goal of a Class

This course will be a continuation of **Introduction to Electrical Engineering and Circuit Analysis**. The course will strengthen and advance the electrical engineering concepts that students learned in part one. It will also introduce completely new concepts and techniques for analyzing electronic circuits and will greatly enhance student performance in their future courses on electrification systems used in modern railroads.

다. Method

(1) Methodology : (ex- theory-focused, discussion-oriented, or Practice-centered)

Lectures will begin by establishing a grounding in the basic theory that underlies the topic of study. Theory will then be supplemented with examples that reinforce the concepts being taught. More advanced examples, derived from real engineering problems, will be presented to further strengthen understanding of the material.

(2) Tools : (ex- lecture note, PPT, Word Software, Video)

- Lecture Notes
- PPTs
- PDFs
- Videos

2. Weekly Plan

Week	Content	How to Operate		
		Methodology	Material	Reference
1	Basic Concepts Revisited – with Practice Examples	Lecture Notes PPTs	Original	Created by Instructor
2	Mesh Analysis, Voltage and Current Division Revisited	Lecture Notes PPTs	Original	Created by Instructor
3	Mesh Analysis with Cramer's Rule	Lecture Notes PPTs	Original	Created by Instructor
4	Supermeshes	Lecture Notes PPTs	Original	Created by Instructor
5	Nodal Analysis	Lecture Notes PPTs	Original	Created by Instructor
6	Sources	Lecture Notes PPTs	Original	Created by Instructor
7	Superposition	Lecture Notes PPTs	Original	Created by Instructor
8	Thevenin and Norton Theorems	Lecture Notes PPTs	Original	Created by

				Instructor
9	Thevenin and Norton Equivalents for Multiple and Dependent Sources	Lecture Notes PPTs	Original	Created by Instructor or
10	Capacitors	Lecture Notes PPTs	Original	Created by Instructor or
11	National Grid	Lecture Notes PPTs	Original	Created by Instructor or
12	Transformers	Lecture Notes PPTs	Original	Created by Instructor or

※ You can freely complete the content sections based on the feature of the class.

3. How are you going to use your class?

For a credit class (), For a non-credit class (), For a public view (X)

4. Expected Outcome

This course will familiarize students with the core concepts of electrical engineering and enable them to apply these concepts in their field of study. It will prepare students in such a way that they will gain a greater appreciation and deeper understanding of the electrical systems used in modern railway. Overall, it will provide students with a more robust skill set that will enhance their skills in

solving engineering problems.