

강 의 계 획 서

년도/학기	2015-1학기	학수번호	EEE2011 / 45
교과목명	회로이론1	교강사명	이병국
수강대상대학	수업계획서 추후 입력예정		
수업시간	월[EE]15:00-16:15, 수[EE]15:00-16:15		
강의실	[21534] 제1공학관21동 5층 첨단강의실		
개요/진행	전기전자 및 컴퓨터공학의 기초가 되는 전기회로의 해석에 필요한 기본 이론지식을 함양하고 회로의 기본소자인 저항, 인덕터, 커패시터 및 전원 등 수동소자와 능동소자의 개념 및 전류와 전압의 수학적 관계를 이용하여 직류회로 및 마디해석, 지로해석등에 관해 집중적으로 학습하고자 한다. 본 강의는 회로이론에 대해 전혀 지식이 없는 초보자라도 기초부터 이론까지 회로이론에 대한 지식을 습득하고 전기회로 해석 능력을 개발한다.		

■ 내용

3 월	Ch. 1, Circuit Variables 1,1 Electrical Engineering: An Overview 1,2 The International System of Units 1,3 Circuit Analysis: An Overview 1,4 Voltage and Current 1,5 The Ideal Basic Circuit Element 1,6 Power and Energy Ch. 2, Circuit Elements 2,1 Voltage and Current Sources 2,2 Electrical Resistance 2,3 Construction of a Circuit Model 2,4 Kirchhoff's Laws 2,5 Analysis of a Circuit Containing Dependent Sources Ch. 3, Simple Resistive Circuits 3,1 Resistor in Series 3,2 Resistor in Parallel 3,3 The Voltage-Divider and Current-Divider Circuits 3,4 Voltage Division and Current Division Ch. 3, Simple Resistive Circuits 3,5 Measuring Voltage and Current 3,6 Measuring Resistance-The Wheatstone Bridge 3,7 Delta-to-Wye Equivalent Circuits
4 월	Ch. 4, Techniques of Circuit Analysis 4,1 Terminology 4,2 Instruction to the Node-Voltage Method 4,3 The Node-Voltage Method and Dependent Sources 4,4 The Node-Voltage Method: Some Special Cases Ch. 4, Techniques of Circuit Analysis 4,5 Introduction to the Mesh-Current Method 4,6 The Mesh-Current Method and Dependent Sources 4,7 The Mesh-Current Method: Some Special Cases 4,8 The Node-Voltage Method vs. Mesh-Current Method Ch. 4, Techniques of Circuit Analysis 4,9 Source Transformations 4,10 Thevenin and Norton Equivalents 4,11 More on Deriving a Thevenin Equivalent 4,12 Maximum Power Transfer 4,13 Superposition 중간고사
5 월	Ch. 5, The Operational Amplifier 5,1 Operational Amplifier Terminals 5,2 Terminal Voltage and Currents 5,3 The Inverting-Amplifier Circuit 5,4 The Summing-Amplifier Circuit Ch. 5, The Operational Amplifier 5,5 The Noninverting-Amplifier Circuit 5,6 The Difference-Amplifier Circuit 5,7 A More Realistic Model for the Operational Amplifier Ch. 6, Inductance, Capacitance, and Mutual Inductance 6,1 The Inductor 6,2 The Capacitor 6,3 Series-Parallel Combinations of Inductance 6,4 Mutual Inductance 6,5 A Closer Look at Mutual Inductance Ch. 7, Response of First-Order RL and RC circuits 7,1 The Natural Response of an RL Circuit 7,2 The Natural Response of an RC Circuit
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■ 참고문헌

도서구분	도서명	저자	발행년도	출판사
교재	Electric Circuits	James W. Nilsson	2015	Pearson

