

2024Year 1st Semester Syllabus

Created Date	2024-01-08 17:13:52		Last-Modified	2024-01-08 17:13:52
Course Title	BASIC CIRCUIT THEORY		Course Code-Section	EEE2010-04
Credit/Time/ Experiment, Lab, Practical Technique Time	3/Mon5,6,Wed5		Department	Electrical and Electronics Engineering
Time	Mon5,6,Wed5		Location	EngHB039
Exam Date & Time	Midterm exam		Final exam	
Class Language	English		Evaluation Type	Absolute evaluation

Instructor's Profile	Name	Yu Ki Jun		Telephone	
	Department	전기전자공학부		Mail	KIJUNYU@YONSEI.AC.KR
	Office			Interview information	

TA's Name & Contact Information	Name		Contact Information	Telephone	
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Course Description Brief Introduction of the Course	Students will 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.				
Course Goals	1.	Korean	수동 전기 회로의 기본적인 법칙 및 해석 방법에 관한 내용을 배운다.	40%	
		English	Students will learn about the basic principles and analysis methods of passive electric circuits.		
	2.	Korean	키르히호프의 법칙, RLC 회로, Operational Amplifier에 관한 내용을 배운다.	30%	
		English	Students will learn about Kirchhoff's laws, RLC circuits, and Operational Amplifiers.		
	3.	Korean	정현파 정상 상태 분석, 주파수 응답 및 라플라스 변환에 대해 배웁니다.	30%	
		English	Students will learn about sinusoidal Steady-state Analysis, Frequency Response, and Laplace Transform.		
	4.	Korean			
		English			
	5.	Korean			
		English			

Core Competencies	The total measurable competencies must be 100%. Each course objective should set the competency as 25%. The core and major competencies should equal at least 50%.						
	Basic Academic Ability	60%	Mathematical Thinking	20%	Logical Thinking	20%	
Sub-Competencies/Learning Unit1							
Sub-Competencies/Learning Unit2							
Sub-Competencies/Learning Unit3							
Core Competencies(Liberal Arts)/Major competency(Must reflect the interrelationship between core competencies (elective courses) and major competencies (major studies).						
Basic Academic Ability	This course requires Engineering Mathematics as a prequisite.						
Sustainable Development Goals							
Average Recommended Amount of Learning per	Average Reading Volume		Average amount of writing(Based on A4)				
Course Methods (%) Total Amount 100	Lecture	Practice Training	Presentation	Dabate	Team Project		
	100%	0%	0%	0%	0%		
Course Methods 2 Select Relevant Items	PBL Subject	Capstone Design	CBL, Social Innovation Course	Flipped Classroom	Work Experience, Internsh		
Grading Policy(%) Total Amount 100 Free Input for Other Information	Midterm exam	Final exam	Quiz	Individual Assignment	Team Assignment	Attendance	Others
	30%	40%	0%	20%	0%	10%	0%
Assignment/ Report, Project Guide	Title of Assignment/Project Name, and Method of Filling Out		Submission Deadline	Type of Submission and Method			
Prerequisite	Engineering mathematics, Differential Equations		Online Course Address	LearnUs			
Course Material	Course Material Name	Author	Publisher	Publish Year	ISBN		
주교재	Electric Circuits(Global Edition)	James W. Nilsson^Susan A. Riedel	Pearson	2019	9781292261041		
부교재	Introduction to Electric Circuits(Global Edition)	James A. Svoboda & Richard C. Dorf	Wiley	2019	9781119454151		
Main Learner Precautions	2nd year EE students Attendance: 10% Projects and Homework: 20% Midterm Exam: 30% Final Exam: 40%						

Attachment	
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Weekly Plan

week	Period	Weekly Topic & Contents	Remarks
1	2024-03-02 2024-03-08	Introduction Electric circuit variables	(3.2.) Spring semester classes begin (3.6. - 3.8.) Course add and drop period
2	2024-03-09 2024-03-15	Circuit Elements	
3	2024-03-16 2024-03-22	Simple Resistive Circuits	
4	2024-03-23 2024-03-29	Techniques of Circuit Analysis	
5	2024-03-30 2024-04-05	The Operational Amplifier	
6	2024-04-06 2024-04-12	Inductance, Capacitance, and Mutual Inductance	(4.8.) First third of the semester ends 04.10 국회의원선거
7	2024-04-13 2024-04-19	Response of First-Order RL and RC Circuits	
8	2024-04-20 2024-04-26	Natural and Step Responses of RLC Circuits Midterm	(4.20. - 4.26.) Midterm Examinations
9	2024-04-27 2024-05-03	Sinusoidal Steady-State Analysis	(4.29. - 5.1.) Course withdrawal period (5.2. - 5.3.) Application period for S/U evaluation
10	2024-05-04 2024-05-10	Sinusoidal steady-state analysis	(5.2. - 5.4.) Application period for S/U evaluation (5.5.) Children's day (5.6.) Alternative holiday for Children's Day 05.05 어린이날, 05.06 대체공휴일(어린이날)
11	2024-05-11 2024-05-17	Sinusoidal Steady-State Power Calculations	(5.15.) The day of Buddha's coming, Second third of the semester ends 05.15 부처님오신날
12	2024-05-18 2024-05-24	Frequency response	
13	2024-05-25 2024-05-31	Frequency response	
14	2024-06-01 2024-06-07	Laplace transform	(6.6.) Memorial day 06.06 현충일
15	2024-06-08 2024-06-14	Review	(6.8. - 6.14.) Self-study
16	2024-06-15 2024-06-21	Final exam	(6.15. - 6.21.) Final Examinations

- Students with disabilities(SWDs) can request accommodations related to lectures, assignments, or tests by contacting the course professor at the beginning of semester.
(However, accommodations may vary depending on the essentiality of lecture and discretion of professors.)

[Lecture]

- Visual Impairment: alternative, braille, enlarged reading materials, note-taker
- Physical Impairment: alternative reading materials, access to classroom, note-taker, assigned seat
- Hearing Impairment: note-taker/stenographer, recording lecture
- Intellectual Disability/Autism: note-taker

[Assignments and Test]

- Visual/Physical/Hearing Impairment: (reasonable) extra days for submission, alternative type of assignment, extended test time, alternative type of test, arranging separate test room, and proctors, test ghostwriter
- Intellectual Disability/Autism: (reasonable) extra days for submission, alternative type of assignment