

(Syllabus)

[1] (Basic Information)			
<u>(Course Information)</u>			
/ (Year/Semester)	2024 / 1	(Campus)	(Seoul Campus)
(Course No.)	56735	(Class No.)	01 (Credit) 3
(Course Title)	(MEMORY DEVICES)	/ (Time/Room)	
(Course Classification)	(elective major course)	(Lecture Type)	(Lone-teaching course)
(Course Type)	(Theoretical course)	(Medium of Instruction)	
(Accreditation)		(Accreditation of Engineering Education)	
(College)	ICT (College of ICT Engineering)	() (Department)	ICT
e - class (Usage of e - class)	Yes		
<u>(Instructor Information)</u>			
(Name)	(YONG SHIM)	(Department)	(School of Electrical and Electronics Engineering)
(Office Phone No.)	02 - 820 - 5483	(Contact No.)	02 - 820 - 5483
E - mail (E - mail)	yongshim@cau.ac.kr	(Department Phone No.)	02 - 820 - 5333
가 (Office Hour)		(Office Location)	310 - 628
(Course Web - site)			

[2] / (Learning Objectives/Outcomes)					
<u>(Course Description)</u>					
SRAM, DRAM, Flash 가					
<u>(Prerequisites and Co-requisites)</u>					
CMOS					
<u>(Learning Objectives)</u>					
-					
<u>(Learning Outcomes)</u>					
-					
[3] (Course Methods)					
<u>(Teaching and Learning Methods)</u>					
(Teaching and Learning Methods)		가 (Additional Description)			
- (Lecture)					
/ - (Individual Practical Training)					
<u>(Assignments)</u>					
(Assignments)		(No.)	(, ,)(Assignments Description)		
(Report)		2			
<u>(Textbooks, Reading, and other Materials)</u>					
(Textbook/Reference)	(Title)	(Author)	/ (Year of Publication/etc)	/ (Publisher/Name of Journal)	/ (No. of Edition)
(Reference)	CMOS SRAM Circuit Design and Parametric Test in Nano - Scaled Technologies				
(Reference)	DRAM Circuit Design, A Tutorial				
(Reference)	Inside NAND Flash Memories				
[4] 가 (Student Assessment)					

가 (Assessment Item)	가 (%) (Assessment Ratio)	가 (Additional Description)
(Attendance)	10	
(Assignment)	20	
(Mid-term Exam)	35	
(Final Exam)	35	

[5] (Course Schedule)

(Week)	(Instructor)	(Topic & Content)	(Student Assignment)	가 (Additional Description & Instructor Assignment)
1		MOS transistor and Passive Components		MOS transistor, Passive Component
2		Memory System (Overview)		
3		DRAM Cell and its Basic Operation		DRAM
4		DRAM Peripheral Circuits		DRAM
5		Cadence Virtuoso, Schematic Design & Simulation		Cadence Virtuoso
6		DRAM Cell Design and Simulation		Virtuoso DRAM Cell
7		SRAM Cell and its Basic Operation		SRAM
8		Mid-term week		
9		SRAM Peripheral Circuits		SRAM
10		Cadence Virtuoso & SRAM Simulation		Virtuoso SRAM Cell
11		Flash Memory Generals & Cell structure		Flash Cell
12		Flash Memory Array and its Basic Operation		Flash /
13		Emerging Memory Devices 1		
14		Emerging Memory Devices 2		
15		Memory device and AI hardware		가
16		Final Exam Week		

[6]	(Guide to Learning)
<p>- . ()</p> <p>- 가 .)</p> <p>- , / ' 가 ; CMOS</p>	<p>. (</p>
(Previous Exam Samples)	
< 가 >(<Download Additional Sample>)	
가 .	
71 【 】 6 47 【 】	
<p>【 In pursuant to the Article 71 ‘Discipline ’ of the Chung -Ang University Regulations, and Article 47 ‘Punishment for Cheating during Examination ’ under Chapter 6 of the Academic Affairs Management Rules, any student caught engaging in academic misconduct during an exam will be subject to disciplinary action.】</p>	
<p>1. : , , , 가</p> <p>2. : , , 가</p> <p>3. / : 가 , 가</p> <p>4. : 02-820-6577~9(), 031-670-4816() (cauable)</p>	
<p>In this class, students with disabilities are eligible for reasonable accommodations depending on the type and severity of disability. If you wish to receive accommodations listed below, please contact the Support Center for Students with Disabilities.</p> <p>1. Visual Impairment: Braille, large print, electronic class materials, volunteer note-taker, adjustments in assessment practices, etc.</p> <p>2. Hearing Impairment: Volunteer note-taker, stenographer, adjustments in assessment practices, etc.</p> <p>3. Physical Disabilities/Brain Lesions: Classrooms with wheelchair access, volunteer note-taker, adjustments in assessment practices, etc.</p> <p>4. Accommodations for students with other psychiatric disabilities or health impairments can be arranged through the Support Center for Students with Disabilities after consultation.</p> <p>Inquiry: 02-820-6577~9 (Seoul Campus), 031-670-4816 (Anseong Campus)</p> <p>- KakaoTalk Plus Friend ID: @cauable</p>	