(Syllabus)

[1]　　　　(Basic Information)			

_____ (Course Information)

/ (Year/Semester)	2021 / 1	(Campus)	(Seoul Campus)
(Course No.)	49155	(Class No.) — 01	(Credit) — 3
(Course Title)	(COMPUTER ARCHITECTURE)	/ (Time/Room)	207 ( ) 719 < > 5,6 / 6(College of engineering1 719 < > TUE5,6 / THU6)
(Course Classification)	(Major)	(Lecture Type)	(Lone-teaching course)
(Course Type)	(Theoretical course)	(Medium of Instruction)	
(Accreditation)		(Accreditation of Engineering Education)	(Engineering subject-related course)
(College)	ICT (College of ICT Engineering)	( ) (Department)	ICT (School of Electrical and Electronics Engineering)
e-class (Usage of e-class)	Yes		

_____ (Instructor Information)

(Name)	(Kim JunSeong)	(Department)	(School of Electrical and Electronics Engineering)
(Office Phone No.)	02-820-5294	(Contact No.)	02-820-5294
E-mail (E-mail)	junkim@cau.ac.kr	(Department Phone No.)	02-820-5333
(Office Hour)	3:00-4:00	(Office Location)	207-730
(Course Web-site)			

[2] / (Learning Objectives/Outcomes)

(Course Description)

This course covers computer organization and architecture design. Computer arithmetic, memory hierarchies, and hardware-software interface are also covered.
- to understand principles of microprocessor design at logic and register level
- to understand fundamentals of microprocessor design at microarchitecture level

(Prerequisites and Co-requisites)

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(Learning Objectives)

The objective of this course is to introduce the design concepts used in computer architectures to improve the performance of computations.
- Understand fundamentals of microprocessor design
- Study various techniques in scalar-processor and pipelined-processor designs

(Learning Outcomes)

Students will learn knowledge about computer architectures and performance improvement techniques. Students are expected to feel confident to perform logic design of CPU structures or other hardware systems.

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[3] (Course Methods)

(Teaching and Learning Methods)

(Teaching and Learning Methods)	(Additional Description)
(Lecture)	
/ (Discussion/Debate)	

(Assignments)

(Textbooks, Reading, and other Materials)

(Textbook/Reference)	(Title)	(Author)	/ (Year of Publication/etc)	/ (Publisher/Name of Journal)	/ (No. of Edition)
(Main Textbook)	Computer Organization and Design RISC-V Edition: The Hardware Software Interface	David A. Patterson, John L. Hennessy	2017	Morgan Kaufmann	RISC-V Edition

[4] (Student Assessment)

(Assessment Item)	(%)(Assessment Ratio)	(Additional Description)
(Attendance)	5	. 100%
(Assignment)	10	10% .
(Mid-term Exam)	40	10% .
(Final Exam)	45	10% .

[5] (Course Schedule)

(Week)	(Instructor)	(Topic & Content)	(Student Assignment)	(Additional Description & Instructor Assignment)
1		Computer Abstractions and Technology		e - QnA
2		Computer Abstractions and Technology		e - QnA
3		Computer Abstractions and Technology		e - QnA
4		Instructions: Language of the Computer		e - QnA
5		Instructions: Language of the Computer		e - QnA
6		Arithmetic for Computers		e - QnA
7		Arithmetic for Computers		e - QnA
8		midterm		
9		The RISC-V Processor		e - QnA
10		The RISC-V Processor		e - QnA
11		Large and Fast: Exploiting Memory Hierarchy		e - QnA
12		Large and Fast: Exploiting Memory Hierarchy		e - QnA
13		Large and Fast: Exploiting Memory Hierarchy		e - QnA
14		Parallel Processors from Client to Cloud		e - QnA
15		Parallel Processors from Client to Cloud		e - QnA
16		final		

[6] (Guide to Learning)

You MUST read all the class materials.
keep your attention and interest...

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(Previous Exam Samples)
<   >(<Download Additional Sample>)
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(Engineering Education)
(Learning Outcomes)
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_____(Title)
a simple processor design
_____(Objective)
computer processor design capability
_____(Restrictions)
a simple ISA
_____(Assessment Method)

funcionality and performance

71   6   47
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(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)

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             : 02-820-6577~9(   ), 031-670-4816(   )
                           (cauable)

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.
1. Visual Impairment: Braille, large print, electronic class materials, volunteer note-taker, adjustments in assessment practices, etc.
2. Hearing Impairment: Volunteer note-taker, stenographer, adjustments in assessment practices, etc.
3 Physical Disabilities/Brain Lesions: Classrooms with wheelchair access, volunteer note-taker, adjustments in assessment practices, etc.
4. Accommodations for students with other psychiatric disabilities or health impairments can be arranged through the Support Center for Students with Disabilities after consultation.
   Inquiry: 02-820-6577~9 (Seoul Campus), 031-670-4816 (Anseong Campus)
 - KakaoTalk Plus Friend ID: @ cauable