(Syllabus)

[1] (Basic Information)			

(Course Information)

/ (Year/Semester)	2023 / 1	(Campus)	(Seoul Campus)
(Course No.)	57405	(Class No.) 01	(Credit) 3
(Course Title)	(ADVANCED NATURAL LANGAGE PROCESSING)	/ (Time/Room)	207 (207 ( )) 234 < > 7,8,9(College of engineering1 207 (207 ( )) 234 < > THU7,8,9)
(Course Classification)	(elective major course)	(Lecture Type)	(Lone-teaching course)
(Course Type)	(Theoretical course)	(Medium of Instruction)	
(Accreditation)		(Accreditation of Engineering Education)	
(College)	(Graduate School)	( ) (Department)	AI (Department of Artificial Intelligence)
e-class (Usage of e-class)	Yes		

(Instructor Information)

(Name)	(Hwanhee Lee)	(Department)	AI (Department of Arificial Intelligence)
(Office Phone No.)		(Contact No.)	02-820-6357
E-mail (E-mail)	hwanheelee@cau.ac.kr	(Department Phone No.)	02-820-6357
(Office Hour)	/ 1 -4 ( )	(Office Location)	310 430
(Course Web-site)	https://sites.google.com/view/cau-li		

[2] / (Learning Objectives/Outcomes)

(Course Description)
- ChatGPT AI . , . .   - , 2 . BERT , GPT-3, ChatGPT   .

(Prerequisites and Co-requisites)
/ , ( )

(Learning Objectives)
- ChatGPT .   - , .   - .

(Learning Outcomes)
- BERT GPT-3, ChatGPT   -

[3] (Course Methods)

(Teaching and Learning Methods)

(Teaching and Learning Methods)	(Additional Description)
(Lecture)	face-to-face class ( )
(Individual Practical Training)	

(Assignments)

(Assignments)	(No.)	(, ,)(Assignments Description)
(Individual)	1	.

(Textbooks, Reading, and other Materials)

(Textbook/Reference)	(Title)	(Author)	/ (Year of Publication/etc)	/ (Publisher/Name of Journal)	/ (No. of Edition)
(Main Textbook)	Slides				

[4] (Student Assessment)

(Assessment Item)	(%)(Assessment Ratio)	(Additional Description)
(Attendance)	10	
(Mid-term Exam)	35	
(Final Exam)	35	
(Assignment)	20	1

[5] (Course Schedule)

(Week)	(Instructor)	(Topic & Content)	(Student Assignment)	(Additional Description & Instructor Assignment)
1		Natural Language Processing Basics		Intoduction/Word Vector/Language Model
2		Natural Language Processing Basics		Self-Attention and Transformers
3		Encoder-only Models		ELMo/BERT/RoBERTa/ELECTRA
4		Decoder-only Models		GPT/GPT-2/GPT-3/PaLM
5		Encoder-decoder Models		T5/BART/mT5
6		In-context learning		GPT-3
7		Prompting for few-shot learning		Prompting Method, Calibration
8		Mid-Term Exam		
9		Prompting as parameter-efficient fine-tuning		p-tuning, LoRA, Adapter
10		Data Augmentation		GPT3Mix
11		Bias & Toxicity		Gender Bias, Detoxification
12		Reasoning		Chain-of-thoughts
13		Retrieval-based LMs		Retrieval Augmented Language Models
14		Training LMs with human feedback		ChatGPT
15		Multimodal LMs		DALL-E/CLIP
16		Final Exam		

[6] (Guide to Learning)

,   ,   e-class   .

(Previous Exam Samples)
<　　　　　　　　>(<Download Additional Sample>)
.
71　　　　　　　　　　　　　6　　47 . (　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)
.　　　　　　　　　　　　　　　　　　　, . 1.　　　:　　,　　　,　　　　,　　　　　　, 2　　　:　　　,　　　　, 3　/　　　:　　　　　　　　,　　　　　, 4　　　　, 　　　: 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