Extended Syllabus

Course Title	AI와 언어학 (Linguistics with AI)	Semester	Fall 2026
Credit	3	Course Number	ENG2112-01
Class Time	Mon/Wed 10:30 ~ 11:45	Enrollment Eligibility	Open to all undergraduate students

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Ⅰ. Course Overview

1. Description

This course explores the consilience of linguistics and artificial intelligence, examining how human language and its contexts can be understood and reimagined through computational tools.
Rather than focusing on AI technology itself, the course emphasizes how humanistic insight and creativity can guide the design of products and services that people truly need.
Students will develop the capacity to combine linguistic knowledge with human-centered thinking, reflecting on how humanities majors can create new forms of value in the AI era.

⁕ The finalized course syllabus will be distributed on the first day of class.

2. Prerequisites

There are no formal prerequisites for this course. However, having a basic understanding of NLP and AI concepts will be helpful for following the lectures and hands-on exercises.

3. Course Format (%)

Lecture	Discussion	Experiment /Practicum	Field study	Presentations	Other
70%	10%	%	%	20%	%

4. Evaluation (%): **Tentative**

Mid-term Exam	Final exam	Quizzes	Presentations	Projects	Assignments	Participation	Other
30%	30%	%	10%	25%	%	5%	%

Ⅱ. Course Objectives

Knowledge: Understand how core concepts from linguistics provide perspectives for exploring the consilient relationship between language and AI.

Skill: Develop the ability to use computational tools to examine language and apply AI methods in human-centered contexts.

Attitude: Cultivate a reflective and creative mindset to consider how humanities-trained students can generate unique value in the AI era.

Ⅲ. Course Format

(* In detail)

This course will be conducted in person with active class participation expected.
Lectures will be combined with demonstrations to encourage both conceptual understanding and practical exploration.
Hands-on exercises may be incorporated into class sessions to help students engage directly with computational tools. Because in-class practice may occur, students are strongly encouraged to bring their own laptops to each session.

Ⅳ. Course Requirements and Grading Criteria (Tentative)

- Mid-term Exam (30%) & Final Exam (30%): Two closed-book exams will be given (mid-term and final).
- Project (25%): Team project of any creative topics using generative AI models
- Presentations (10%): All students must make a presentation and participate in discussion sessions for peer-review
- Attendance (5%): Attendance will follow the official university regulations.

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- Grading policy: The relative grading scheme will follow the university's official regulations, but the detailed weight of each component may be adjusted slightly as the course progresses.

Ⅴ. Course Policies

- The FA policy and all course regulations will be applied based on the university's academic policies. Additional course-related regulations will follow the guidelines announced on the cyber campus.
- Any form of academic dishonesty will result in an F grade.
- Except for officially recognized reasons for absence (e.g., military reserve duty, family emergencies), NO make-up quizzes or exams will be given, and no extensions for assignment submissions will be allowed.
- AI Tools Policy: Collaboration with generative AI tools such as Claude and ChatGPT is allowed,

treating them as collaborators in the problem-solving process. However, the direct solicitation of answers or copying solutions, whether from peers or external sources, is strictly prohibited. Note that indiscriminate reliance on AI tools can seriously harm learning efficiency, and this may be revealed as a significant gap between high assignment performance and low exam scores. Therefore, students are strongly encouraged to use AI tools as collaborators rather than as substitutes for their own work.

VI. Materials and References

There is no official textbook for this course. The primary course materials will be lecture slides, which are developed based on the most up-to-date research and resources available.
Two major textbooks were partially referenced in preparing lecture materials:
- Dan Jurafsky and James H. Martin. Speech and Language Processing
- 더 퍼지 AI 시대 누가 미래를 이끄는가? 한지우 지음 (미디어 숲)
Additional readings will be announced during the semester to reflect the latest developments in the field.

Ⅶ. Course Schedule (Tentative)

(* Subject to change)

Week 1 (9/2, 9/7)	**Learning Objectives**	Introduction to AI and Linguistics (To understand the intersection of linguistics and AI/NLP)
	Topics	AI, NLP, GenAI
	Class Work (Methods)	Lecture
	Materials (Required Readings)	Lecture Slides
	Assignments	TBA
	NOTE	9/7(Mon) – No class (Online recording on CyberCampus)
Week 2 (9/9, 9/14)	**Learning Objectives**	Prompt Engineering
	Topics	Generative AI, Prompt Engineering
	Class Work (Methods)	Lecture / Lab session
	Materials (Required Readings)	Lecture Slides
	Assignments	Project Team Building

	NOTE	Laptop required
Week 3 (9/16 9/21)	**Learning Objectives**	Syntax (To understand sentence structures and parsing)
	Topics	Dependency Parsing
	Class Work (Methods)	Lecture
	Materials (Required Readings)	Lecture slides
	Assignments	TBA
Week 4 (9/23 9/28)	**Learning Objectives**	Principles of Machine Learning (1)
	Topics	Machine Learning, Classification
	Class Work (Methods)	Lecture
	Materials (Required Readings)	Lecture slides
	Assignments	TBA
Week 5 (9/30 10/5)	**Learning Objectives**	Principles of Machine Learning (2)
	Topics	Word Embedding, RNN, LSTM, Transformer
	Class Work (Methods)	Lecture
	Materials (Required Readings)	Lecture slides
	Assignments	TBA
	NOTES	10/5(Mon) – No class (개천절 대체휴일, National Holiday)
Week 6 (10/7 10/12)	**Learning Objectives**	Principles of Machine Learning (3)
	Topics	Transformer, Tokenization
	Class Work (Methods)	Lecture

	Materials (Required Readings)	Lecture slides
	Assignments	TBA
Week 7 (10/14 10/19)	**Learning Objectives**	Generative AI – (1)
	Topics	Large Language Model
	Class Work (Methods)	Lecture
	Materials (Required Readings)	Lecture Slides
	Assignments	Project Proposal
Week 8 (10/21 10/26)	**Learning Objectives**	Generative AI – (2)
	Topics	Chain-of-Thoughts, Synthetic Data Generation
	Class Work (Methods)	Lecture
	Materials (Required Readings)	Lecture Slides
	Assignments	Project Proposal
	NOTE	**10/21(Wed) – Advance class for Oct. 28.** **10/26(Mon) – Midterm Exam**
Week 9 (10/28 11/2)	**Learning Objectives**	Evaluation
	Topics	Perplexity, BLEU/ROUGE, LLM-as-a-judge
	Class Work (Methods)	Lecture
	Materials (Required Readings)	Lecture Slides
	Assignments	TBA
	NOTE	10/28(Wed) – No class (International conference attendance)
Week 10	**Learning Objectives**	Agentic AI (1) (To understand LLM-based agents and their applications)

(11/4 11/9)	**Topics**	RAG
	Class Work (Methods)	Lecture
	Materials (Required Readings)	Lecture Slides
	Assignments	TBA
Week 11 (11/11 11/16)	**Learning Objectives**	Agentic AI (2) (To understand LLM-based agents and their applications)
	Topics	QA, tool-use, Story Generation
	Class Work (Methods)	Lecture
	Materials (Required Readings)	Lecture Slides
	Assignments	TBA
Week 12 (11/18 11/23)	**Learning Objectives**	AI Ethics
	Topics	Bias, Privacy
	Class Work (Methods)	Lecture
	Materials (Required Readings)	Lecture Slides
	Assignments	TBA
Week 13 (11/25 11/30)	**Learning Objectives**	Trustworthy AI
	Topics	Interpretable AI, Hallucination
	Class Work (Methods)	Lecture
	Materials (Required Readings)	Lecture Slides
	Assignments	TBA
Week 14	**Learning Objectives**	Multimodal AI

(12/2 12/7)	**Topics**	Multimodality, VLM
	Class Work (Methods)	Lecture
	Materials (Required Readings)	L:ecture Slides
	Assignments	TBA
Week 15 (12/9 12/14)	**Learning Objectives**	Final Project Presentation
	Topics	
	Class Work (Methods)	Presentation
	Materials (Required Readings)	
	Assignments	TBA
	NOTES	**All students MUST attend it, otherwise get 0 score for presentation and project.**
Week 16 (12/16 12/21)	**Learning Objectives**	Final Exam
	Topics	
	Class Work (Methods)	
	Materials (Required Readings)	
	Assignments	

Ⅷ. Special Accommodations

Students are strongly encouraged to make active use of office hours (OH) for questions, feedback, and additional support throughout the semester.

IX. Aid for the Challenged Students

Everyone will be welcomed, and I will try to make the class environment accessible for anyone with any type of challenge. Please do not hesitate to contact me.