Course number	U-LAS00 10006 LE34				
Course title (and course title in English)	Logic I-E2 :Sentential Logic and Deductions Logic I-E2 :Sentential Logic and Deductions		**Instructor's name, job title, and department of affiliation**		
Group	Humanities and Social Sciences	**Field(Classification)**		Philosophy(Foundations)	
Language of instruction	English	**Old group**	Group A	**Number of credits**	2
Number of weekly time blocks	1	**Class style**	Lecture (Face-to-face course)	**Year/semesters**	2025 First semester
Days and periods	Wed.1	**Target year**	Mainly 1st & 2nd year students	**Eligible students**	For all majors

[Overview and purpose of the course]

Logic is the study of arguments and actions taken based on the validity of those arguments.

Students of all disciplines will learn how to transform natural language (English, Japanese, etc) into symbolic representations, and use those representations to assess the validity of arguments. The content of the course is applicable to both study and everyday thought processes.
This course will cover arguments that can be described by sentential logic.

Students will actively practice
(1) transforming English sentences into their symbolic representation,
(2) assessing the representations logically, and
(3) transforming the conclusion of logical arguments back to natural English.

[Course objectives]

(1) Students will be able to capture the intent/meaning of English language documents or statements and represent the meaning symbolically.
(2) Students will be able to derive logical conclusions from a document, and detect examples of poor or incorrect logic.
(3) Students will practice creating documents in natural English language based on logical argument, with emphasis on creating English that is easy to interpret. After completion of the course, students should acquire improved English expression skill.

[Course schedule and contents)]

(1~2) Course overview: what is an argument, and what makes an argument valid?

(3~4) Classes of valid and incorrect arguments, sentence forms, logical connectives, conversion of simple sentences to symbols

(5~6) Truth table definitions of AND, OR, and NOT, argument analysis by truth table, conditional and biconditional truth tables

(7~9) Deductive logic rules, introduction to proofs

(10~11) Deductive proofs using non-conditional rules

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(12~13) Proofs including conditional rules

(14) Summary and review

(15) Final examination

(16) Feedback
(Methods of feedback to be notified during class)

[Course requirements]

None

[Evaluation methods and policy]

Attendance (25%), Quizzes (35%), final examination (40%).

[Textbooks]

Not used

[References, etc.]

References, etc.

Gustason   Elementary Symbolic Logic   Waveland Press   ISBN:0-88133-412-X

[Study outside of class (preparation and review)]

Students are recommended to review prior lecture content for 2-3 hours per week outside of class.

[Other information (office hours, etc.)]

[Essential courses]