Glendale College
Course Outline of Record Report

Course ID 004134
Cyclical Review - May 2025

PHILO123 : Introduction to Symbolic Logic

General Information

Author:	• Michelle Stonis • Mack, Kevin
Course Code (CB01) :	PHILO123
Course Title (CB02) :	Introduction to Symbolic Logic
Department:	PHILO
Proposal Start:	Spring 2026
TOP Code (CB03) :	(1509.00) Philosophy
CIP Code:	(38.0101) Philosophy.
SAM Code (CB09) :	E - Non-Occupational
Distance Education Approved:	No
Will this course be taught asynchronously?:	Yes
Course Control Number (CB00) :	CCC000552606
Curriculum Committee Approval Date:	05/28/2025
Board of Trustees Approval Date:	07/08/2025
Last Cyclical Review Date:	05/28/2025
Course Description and Course Note:	PHILO 123 introduces students to logic, enabling them to analyze and evaluate arguments. Students learn to translate English arguments, use truth tables, create natural deduction derivations, use defined identity relations, acquire an understanding of soundness and validity, and begin to develop a working grasp on logic metatheory.
Justification:	Mandatory Revision Content Change
Academic Career:	• Credit
Mode of Delivery:	• In-Person • Remote • Hybrid • Online
Author:	No value
Course Family:	No value

Academic Senate Discipline

Primary Discipline:	• Philosophy
Alternate Discipline:	No value
Alternate Discipline:	No value

Course Development

Basic Skill Status (CB08)

Course is not a basic skills course.

☐ Allow Students to Gain Credit by Exam/Challenge

Course Special Class Status (CB13)

Course is not a special class.

Pre-Collegiate Level (CB21)

Not applicable.

Grading Basis

- Grade with Pass / No-Pass Option

Course Support Course Status (CB26)

Course is not a support course

General Education and C-ID

General Education Status (CB25)

Not Applicable

Transferability

Transferable to both UC and CSU

Transferability Status

Pending

GCC General Education Requirements	Area	Status	Approval Date	Comparable Course
Area 1B: Oral Communication and Critical Thinking	Oral Communication and Critical Thinking	Pending	No value	No Comparable Course defined.
Area 2: Mathematical Concepts and Quantitative Reasoning	Mathematical Concepts and Quantitative Reasoning	Pending	No value	

Units and Hours

Summary

Minimum Credit Units (CB07)	3
Maximum Credit Units (CB06)	3
Total Course In-Class (Contact) Hours	54
Total Course Out-of-Class Hours	108
Total Student Learning Hours	162

Credit / Non-Credit Options

Course Type (CB04)

Credit - Degree Applicable

Noncredit Course Category (CB22)

Credit Course.

Noncredit Special Characteristics

No Value

Course Classification Code (CB11)

Credit Course.

Funding Agency Category (CB23)

Not Applicable.

Cooperative Work Experience Education Status (CB10)

Variable Credit Course

Weekly Student Hours

	In Class	Out of Class
Lecture Hours	3	6
Laboratory Hours	0	0
Studio Hours	0	0

Course Student Hours

Course Duration (Weeks)	18
Hours per unit divisor	54
Course In-Class (Contact) Hours	
Lecture	54
Laboratory	0
Studio	0
Total	54
Course Out-of-Class Hours	
Lecture	108
Laboratory	0
Studio	0
Total	108

Time Commitment Notes for Students

No value

Units and Hours - Weekly Specialty Hours

Activity Name	Type	In Class	Out of Class
No Value	No Value	No Value	No Value

Prerequisites, Corequisites, Recommended Corequisites, and Recommended Preparation

Advisory

ENGLC1000 - Academic Reading and Writing

Objectives

- Read analytically to understand and respond to diverse academic texts.
- Compose thesis-driven academic writing that demonstrates analysis and synthesis of sources as appropriate to the rhetorical situation.
- Demonstrate strategies for planning, outlining, drafting, revising, editing, and proofreading written work.
- Analyze stylistic choices in their own writing and the writing of others and the context in which readings were produced.
- Write timed, in-class essays exhibiting acceptable college-level control of mechanics, organization, development, and coherence.
- Integrate the ideas of others through paraphrasing, summarizing, and quoting without plagiarism.
- Find, evaluate, analyze, and interpret primary and secondary sources, incorporating them into written essays using appropriate documentation format.
- Proofread and edit essays for presentation so they exhibit no disruptive errors in English grammar, usage, or punctuation.

OR

Advisory

ENGLC1000E - Academic Reading and Writing

Objectives

- Read analytically to understand and respond to diverse academic texts.
- Compose thesis-driven academic writing that demonstrates analysis and synthesis of sources as appropriate to the rhetorical situation.
- Demonstrate strategies for planning, outlining, drafting, revising, editing, and proofreading written work.
- Analyze stylistic choices in their own writing and the writing of others and the context in which readings were produced.
- Write timed, in-class essays exhibiting acceptable college-level control of mechanics, organization, development, and coherence.
- Integrate the ideas of others through paraphrasing, summarizing, and quoting without plagiarism.
- Find, evaluate, analyze, and interpret primary and secondary sources, incorporating them into written essays using appropriate documentation format.
- Proofread and edit essays for presentation so they exhibit no disruptive errors in English grammar, usage, or punctuation.

OR

Advisory

ENGLC1000H - Academic Reading and Writing - Honors

Objectives

- Read analytically to understand and respond to diverse academic texts.
- Compose thesis-driven academic writing that demonstrates analysis and synthesis of sources as appropriate to the rhetorical situation.
- Demonstrate strategies for planning, outlining, drafting, revising, editing, and proofreading written work.
- Analyze stylistic choices in their own writing and the writing of others and the context in which readings were produced.
- Write timed, in-class essays exhibiting acceptable college-level control of mechanics, organization, development, and coherence.
- Integrate the ideas of others through paraphrasing, summarizing, and quoting without plagiarism.
- Proofread and edit essays for presentation so they exhibit no disruptive errors in English grammar, usage, or punctuation.
- Find, evaluate, analyze, and interpret primary and secondary sources, incorporating them into written essays using appropriate documentation format.

Entry Standards

Entry Standards	Description
No value	No value

Course Limitations

Cross Listed or Equivalent Course	Description
No value	No value

Specifications

Methods of Instruction

Methods of Instruction	Collaborative Learning
Methods of Instruction	Lecture
Methods of Instruction	Multimedia
Methods of Instruction	Presentations
Methods of Instruction	Discussion

Out of Class Assignments

- Homework problems (e.g., write a one-page argument for the view that St. Anselm's ontological argument commits a modal fallacy)
- Homework puzzles (e.g., find at least one counterexample to the claim that our formal rules for negation capture our informal conversational negating)

Methods of Evaluation	Rationale
Exam/Quiz/Test	Midterm examination
Writing Assignment	Write a two-page paper (e.g., translate important but formalized claims made in a philosophy journal article by S. Yablo on contingent necessity)
Exam/Quiz/Test	Final examination

Textbook Rationale

No Value

Textbooks

Author	Title	Publisher	Date	ISBN
Daniel Kern	Symbolic Logic (5th edition)	Lulu	2020	978-1716443183

Other Instructional Materials (i.e. OER, handouts)

No Value

Learning Outcomes

Course Objectives

Analyze and compare English sentences by formally representing their truth conditions.

Codify and evaluate arguments for validity using truth tables.

Construct formal derivations using the rules of a natural deduction system of logic.

Extend the propositional calculus to include the formalism of predicate/quantifier logic in order to do translations and complex derivations in first-order logic.

Understand some meta-proofs and meta-theoretical issues concerning first-order predicate logic.

SLOs

Evaluate arguments using truth tables. Expected Outcome Performance: 70.0

ILOs General Education	apply techniques of analysis and critical thinking to critique real world and theoretical topics and issues
PHILO Philosophy - AA-T	identify and evaluate arguments, recognize the importance of reasoning in seeking truth. articulate and distinguish competing theories and perspectives.

Analyze some meta-proofs and meta-theoretical issues concerning first order predicate logic. Expected Outcome Performance: 70.0

ILOs General Education	apply techniques of analysis and critical thinking to critique real world and theoretical topics and issues
PHILO Philosophy - AA-T	identify and evaluate arguments, recognize the importance of reasoning in seeking truth. articulate and distinguish competing theories and perspectives.

Apply an understanding of logic to evaluate arguments. Expected Outcome Performance: 70.0

Course Content

Lecture Content

What Is Logic? (5 hours)

- Why should we study logic?

- Formal versus informal logic
- Introduction to formal languages and examples of formal languages
- Statements versus arguments
- Assessing statements: truth and falsity
- Parts of arguments: premises and conclusion
- Assessing arguments: validity and invalidity
- Soundness versus validity
- Deductive versus inductive logic

Sentential Logic (23 hours)

- Syntax and semantics of sentential logic
    - Sentence letters (propositional variables)
    - Basic connectives and meanings:
        - Conjunction
        - Disjunction
        - Conditional
        - Biconditional
        - Negation
    - Formal syntax for SL
- Translations to and from sentential logic
- Truth tables
    - Truth tables for basic connectives
    - Truth table test for validity or invalidity of arguments
    - Truth table tests for tautologies and contradictions
    - Truth table tests for equivalencies
- Sentential derivations
    - Introduction elimination rules for basic connectives
    - Modus ponens
    - Modus tollens
    - Reductio ad absurdum

Predicate Logic (18 hours)

- Syntax and semantics of predicate logic
    - Individual constants and individual variables
    - Predicate letters (one and two place)
    - Quantifiers
    - Rules for forming simple sentences
    - Rules for forming compound sentences
    - Formal syntax for PL
- UD: restricting universe of quantifiers
- Square of opposition
- Translating from English to predicate logic
- Predicate derivations
    - Review introduction elimination rules for basic connectives
    - Introduce introduction elimination rules for quantifiers
    - Derivation strategies

Theory (8 hours)

- Russell's theory of names as definite descriptions
- Frege's sense and reference
- Leibniz's law
- Logical positivism

Total Hours: 54

Additional Information

Repeatability

Not Repeatable

Justification (if repeatable was chosen above)

No Value

Is it possible this course will have a material fee?

No

I have contacted my library liaison (https://campusguides.glendale.edu/faculty/liaisons):

No

What term(s) will this course be offered?

Fall/Spring

Will any additional resources be needed for this course? (Click all that apply)

- No

If additional resources are needed, add a brief description and cost in the box provided.

No Value