

UNIT INFORMATION

UNIT CODE	PHL100
UNIT NAME	Logic
ASSOCIATED HIGHER EDUCATION AWARDS	Diploma in the Liberal Arts: Foundations of Wisdom Bachelor of Arts in the Liberal Arts Bachelor of Arts/Bachelor of Education (Secondary)
DURATION	One semester
LEVEL	AQF 7
UNIT COORDINATOR	Dr Simon Kenneddy
TEACHING STAFF	Natasha Baulis
CORE / ELECTIVE	UG Core
WEIGHTING	Unit credit points 10 Course credit points: 80 – Diploma in the Liberal Arts: Foundations of Wisdom 240 – Bachelor of Arts in the Liberal Arts 320 – Bachelor of Arts/Bachelor of Education (Secondary)
LEARNING DELIVERY	Interactive engagement through on-campus or online learning modes with full access to CHC’s learning portal of resources: On-Campus mode <ul style="list-style-type: none"> • Weekly lecture/tutorial. Plus, CHC learning portal resources (see below). On-line mode <ul style="list-style-type: none"> • CHC learning portal (Moodle™) including: <ul style="list-style-type: none"> ○ Synchronous and asynchronous virtual lectures (multi-user collaborative learning interfaces, lecture capture, interactive Power Point presentation and resources) ○ lecture capture recordings bank ○ weekly readings ○ learning guides; ○ assessment guides ○ Collaborative forums: Student forums and News forum. ○ Turnitin assessment and feedback tool. All unit outlines are reviewed prior to the offering of the unit to take account of student and lecturer feedback.

STUDENT WORKLOAD

Face-to-face on-site

Timetabled hours per semester:	39 hours
Personal study hours per semester:	111 hours
Total	150 hours

External/Online

Timetabled hours per semester:	39 hours
Personal study hours per semester:	111 hours
Total	150 hours

Students requiring additional English language support are expected to undertake an additional one hour per week.

**PREREQUISITES /
COREQUISITES /
RESTRICTIONS**

Nil

RATIONALE

Logic is the art of reasoning well. It deals with statements (i.e. particular kinds of sentences—those which can be said to be true or false without contradiction) and their relationships to one another. The study of logic is foundational for other units in the curriculum— such as geometry—as well as for higher-order thinking and critical reading in general. Logic helps students to achieve a key objective of liberal education: learning how to think critically.

This unit helps students to discern and apply order in sentences and arguments and to define terms, recognize basic types of statements, argue both with syllogisms and with ordinary language, and identify informal fallacies. (It also introduces them to the limits of logic, the role of presuppositions and the myth of neutrality in human knowing, which are concepts they will address in more depth later in the course.) Students will read selected works by Plato and Aristotle in an attempt to utilize their ways of arguing to advance the truth. To progress on the path of wisdom, students will engage with the basics of propositional and predicate logic in a mathematical setting and will study syntax, semantics, logical properties of and relations between sentences, natural deduction, and mathematical induction. Furthermore, to refine their ability to use language in the pursuit of truth, student learn to produce formal proofs and analyse arguments for validity and soundness.

CONTENT

Readings need to be completed before the class session for which they are assigned.

- 1 Introduction
- 2 Understanding and its Products
 READ: Kreeft - I: Sections 1-4 (pp.35-46); II: Sections 1-4 (pp. 47-67)
 Wilson & Wilson - Fallacies 1-8 (pp.3-43)
 PREPARE FOR CLASS: Find a Fallacy (Fallacies 1-8)
 TAKE-HOME QUIZ: Due on Friday (2%)
- 3 Material Fallacies
 READ: Kreeft - III: Section 1 (pp. 68-71); IV: Sections 1-4 (pp. 123-137)
 Wilson & Wilson - Fallacies 9-17 (pp. 45-93)
 PREPARE FOR CLASS: Find a Fallacy (Fallacies 9-17)
 TAKE-HOME QUIZ: Due on Friday (2%)
- 4 Judging and its Products
 READ: Kreeft - V: Section 1 (pp. 138-143); Sections 3-7 (pp. 145-165)
 Wilson & Wilson - Falacies 18-22 (pp. 97-122)
 PREPARE FOR CLASS: Find a Fallacy (Fallacies 18-22)
 TAKE-HOME QUIZ: Due on Friday (2%)
- 5 Changing Propositions
 READ: Kreeft - VI: Section 1-4 (pp. 166-172); VII: Sections 1-2 (pp. 173-179)
 Wilson & Wilson - Falacies 23-28 (pp. 123-156)
 PREPARE FOR CLASS: Find a Fallacy (Fallacies 23-28)
 TAKE-HOME QUIZ: Due on Friday (2%)
- 6 Reasoning and its Products
 READ: Kreeft - VIII: Section 1-5(pp. 186-199); IX: Sections 1-4 (pp. 200-210)

Wilson & Wilson - Fallacies 29-34 (pp. 159-190)
 PREPARE FOR CLASS: Find a Fallacy (Fallacies 29-34)
 TAKE-HOME QUIZ: Due on Friday (2%)

- 7 Syllogisms & Introduction to Debate
 READ: Kreeft - X: Section 1 (pp. 215-219); Sections 5 (pp. 232-236); XI: Sections 1-3 (pp.237-257); XV: Section 3 (pp. 348-350)
 Wilson & Wilson - Fallacies 35-40 (pp. 191-225) IN-CLASS QUIZ 4
 PREPARE FOR CLASS: Find a Fallacy (Fallacies 35-40)
 LOGIC MAPS: Due on Friday (2%)
- 8 Complex Syllogisms & Debate Prep
 READ: Kreeft - XII (pp. 264-288)
 Wilson & Wilson - Fallacies 41-45 (pp. 229-257)
 EXTRA READING: Plato - *Apology*
 READ IN CLASS: Plato - *Crito*
 PREPARE FOR CLASS: Find a Fallacy (Fallacies 41-45)
 TAKE-HOME QUIZ: Due on Friday (2%)
- 9 Compound Syllogisms & Debate Prep
 READ: Kreeft - XIII: Sections 1-2 (pp. 289-296); 4-6 (pp. 301-312)
 Wilson & Wilson - Fallacies 46-50 (pp. 259-290)
 PREPARE FOR CLASS: Find a Fallacy (Fallacies 46-50)
 CRITO LOGIC MAP: Due on Friday (2%)
- 10 Induction & Practice Debate
 READ: Kreeft - XIV: Sections 1-7 (pp. 313-335)
 PREPARE FOR CLASS: Debate Prep
 TAKE-HOME QUIZ: Due on Friday (2%)
 PRACTICE DEBATE (10%)
- 11 Practical Applications & Debate
 READ: Kreeft - XV: Section 1 (pp. 342-344); Sections 4-5 (pp. 350-357)
 PREPARE FOR CLASS: Debate Prep
 TAKE-HOME QUIZ: Due on Friday (2%)
 FORMAL DEBATE (30%)
- 12 Revision & Exercises
- 13 Final Exam (40%)

LEARNING OUTCOMES

On completion of this unit, students should be able to:

- 1 Identify technical knowledge of the definitions and rules of Aristotelian and symbolic logic, leading to an understanding of correct forms of reasoning;
- 2 Acquire the ability to break the language of arguments down into symbolic form;
- 3 Develop the capacity to judge what is spoken and written to determine its validity;
- 4 Grasp and use the rules of logic to examine and, if need be, correct the logical structure of an argument;
- 5 Apply the study of logic to philosophy and theology;
- 6 Apply knowledge of order in sentences and arguments to express themselves soundly as they write, discuss and debate; and

- 7 Communicate at an appropriate tertiary standard: with special attention to design elements, grammars, usage, logical relations, style, referencing and presentation.

ASSESSMENT TASKS

A grade of at least 50% overall is required to pass this unit. Students must submit a reasonable attempt at all assessment items.

TASK 1: Take Home Quiz

Word Length/Duration: 10 Quizzes of 10-20 multiple choice, true/false and short answer questions.
 Weighting: 20% (2% per quiz)
 Learning Outcomes: 1-7
 Assessed: Weeks 2-12

On two occasions during the semester, students will be asked to create a logic map in place of the usual quiz format.

TASK 2: Debate

Word Length/Duration: 2 Debates of approximately 1 hour duration (dependant on class size)
 Weighting: 40% (Practice Debate 10%, Formal Debate 30%)
 Learning Outcomes: 1-7
 Assessed: Week 11, Week 12

Debates will be prepared as a group activity and assessed individually with scores based on each student's presentation. Debates will be recorded to assist with assessment and feedback.

TASK 3: Final Exam

Word Length/Duration: 3 hours (3 extended response questions, approximately 500 words per question)
 Weighting: 40%
 Learning Outcomes: 1-7
 Assessed: Week 14

Identify and evaluate the overall logical validity and effectiveness of the arguments in the provided excerpts. In your evaluation identify: 1) A logic map of the argument(s) within the excerpt, 2) Any logical fallacies that have been committed (and their names/definitions) and 3) Construct a response to the arguments (either affirming or objecting to the author's position).

ASSESSMENT ALIGNMENT

Assessment Task	Learning Outcome	Content	Graduate Attributes
Task 1	1-7	1-12	1-6
Task 2	1-7	1-12	1-6
Task 3	1-7	1-13	1-6

ASSESSMENT ELABORATION

Task 1: Take Home Quiz

Task: In weeks 2-11 of the semester students will complete a quiz/logic mapping exercise. Each week's assignment will be based on the material from class on the Tuesday and due on the Friday of the same week. Feedback will be provided during the following class and the results of the quiz/logic mapping exercise used to track student learning and address gaps in understanding as the semester progresses.

Quizzes will be comprised of 10-20 multiple choice, true/false and short answer questions. The logic maps will be based on a recorded debate or an excerpt of written material, with one of the logic maps focused on preparing arguments for the debate sessions.

Each activity will be worth 2% of the final grade, with a total of 20% accrued across the 10 weeks.

Task 2: Debate

Task: There will be two assessed debates in weeks 11 and 12 of the semester. The first debate will be a practice debate, worth 10% of the final grade, the second debate will be a formal debate, worth 30% of the final grade. Both debates will address the same question, allowing students to address feedback on presentation styles and logical arguments between the two debates.

Students will prepare for the debate in groups (group numbers will vary dependant on class size) but will be assessed individually based on their own presentations.

Debates will be recorded to assist with assessment and feedback. Students will be asked to invite family, friends, teachers and fellow students to attend the formal debate as spectators.

Task 3: Final Exam

Task: In the final class of the semester students will complete a written exam. Students will have the entire 3 hours of class to complete their exam and may leave at any time once they have handed in their papers.

The final exam will be comprised of three questions, with an anticipated 500 words per answer. Students will be given three excerpts of writing taken from recognised works and asked to identify and evaluate the overall logical validity and effectiveness of the arguments in each of the provided excerpts. Each response should contain: 1) A logic map of the argument(s) within the excerpt, 2) Any logical fallacies that have been committed (and their names/definitions) and 3) Construct a response to the arguments (either affirming or objecting to the author's position).

SPECIALIST FACILITIES OR EQUIPMENT

Nil.

PRESCRIBED TEXTS

Note: Students are expected to purchase or have access to the prescribed text(s).

Kreeft, Peter. *Socratic Logic: A Logic Text Using Socratic Method, Platonic Questions, and Aristotelian Principles*. Edition 3.1. South Bend, IN: St. Augustine's Press, 2010

Wilson, Douglas and N. D. Wilson. *The Amazing Dr. Ransom's Bestiary of Adorable Fallacies*. Moscow, ID: Canon Press, 2015.

RECOMMENDED READINGS

BOOKS

Introductory Logic: The Fundamentals of Thinking Well. Student edition. Moscow, ID: Canon Press, 2014.

Introductory Logic: The Fundamentals of Thinking Well. Teacher edition. Moscow, ID: Canon Press, 2014.

Intermediate Logic: Mastering Propositional Arguments. Student edition. Moscow, ID: Canon Press, 2014.

Intermediate Logic: Mastering Propositional Arguments. Teacher edition. Moscow, ID: Canon Press, 2014.

Watts, Isaac. Logic, or the Rights Use of Reason in the Inquiry After Truth. Soli Deo Gloria Publications, 1997.

McInerny, D. Q. Being Logical: A Guide to Good Thinking, New York: Random House, 2005.

Kreeft, Peter. The Best Things In Life: A contemporary Socrates looks at power, pleasure, truth & the good life. Downers Grove: IVP Books, 1984.

Restall, Greg. Logic: An introduction. Routledge, 2006.

Priest, Graham. Logic: A Very Short Introduction. Oxford: Oxford University Press, 2017.

Novaes, Catarina Dutilh, and Stephen Read. The Cambridge Companion to Medieval Logic. Cambridge: Cambridge University Press, 2016.

OTHER

In addition to the resources above, students should have access to a Bible, preferably the NRSV.

UNIT REVIEW

SEMESTER	FEEDBACK AND RESPONSE

RUBRIC

TASK 1 TAKE-HOME QUIZ

Task #1 Assessment Rubric				STUDENT NAME:	
CRITERIA	High Distinction	Distinction	Credit	Pass	Fail
Provide evidence of understanding in the form of a summary	<ul style="list-style-type: none"> Accurate use of relevant rules of logic 	<ul style="list-style-type: none"> Mostly accurate use of relevant rules of logic 	<ul style="list-style-type: none"> Broadly use of the relevant rules of logic 	<ul style="list-style-type: none"> Use of the relevant rules of logic with some gaps evident in knowledge 	<ul style="list-style-type: none"> Most of the examples and answers display incorrect use of the rules of logic
Identify logical fallacies and problems	<ul style="list-style-type: none"> Astute and insightful analysis demonstrating accurate and knowledgeable understanding 	<ul style="list-style-type: none"> Insightful analysis demonstrating knowledgeable understanding 	<ul style="list-style-type: none"> Broad analysis demonstrating knowledgeable understanding 	<ul style="list-style-type: none"> Generalised analysis demonstrating some understanding 	<ul style="list-style-type: none"> Inappropriate or absent analysis demonstrating little or inappropriate understanding
Apply knowledge from classes and readings	<ul style="list-style-type: none"> Apply principles accurately and insightfully 	<ul style="list-style-type: none"> Apply principles in a mostly accurate manner with developed insight 	<ul style="list-style-type: none"> Apply principles in a broadly accurate manner with some insight 	<ul style="list-style-type: none"> Apply principles with some significant gaps and adequate insight 	<ul style="list-style-type: none"> Inappropriate or limited application of principles and little insight

COMMENT



RUBRIC

TASK 2 DEBATE

CRITERIA	High Distinction	Distinction	Credit	Pass	Fail
Engagement with the question	An informed, balanced, and insightful engagement with the question, with exceptionally judicious use of the rules of logic	An apt engagement with the question, with judicious use of the rules of logic	An accurate engagement with the question, with appropriate use of the rules of logic	A mostly accurate engagement of the question, with some use of the rules of logic	An inaccurate and misconstrued engagement with the question, with little or use of the rules of logic.
Argument	Insightful and well-reasoned responses to counterarguments	Well-reasoned and logically structured responses to counterarguments.	A sound response to counter arguments.	A mostly sound response to counterarguments	An inaccurate or incoherent responses to counterarguments
Communication	Consistently clear and controlled rhetorical style with minimal grammatical and logical errors.	Clear and controlled rhetorical style with mostly accurate use of grammatical and logic.	Mostly clear rhetorical style with some grammatical and logical problem areas.	Adequate but limited rhetorical style, some inaccurate logical sentences, some grammatical problem areas.	Inadequate rhetorical style, poor use of logic, and systemic grammatical problems.

COMMENT



RUBRIC

TASK 4 EXAM

CRITERIA	High Distinction	Distinction	Credit	Pass	Fail
Provide evidence of understanding in the form of a summary	Accurate use of relevant rules of logic	Mostly accurate use of relevant rules of logic	Broadly use of the relevant rules of logic	Use of the relevant rules of logic with some gaps evident in knowledge	Most of the examples and answers display incorrect use of the rules of logic
Identify logical fallacies and problems	Astute and insightful analysis demonstrating accurate and knowledgeable understanding	Insightful analysis demonstrating knowledgeable understanding	Broad analysis demonstrating knowledgeable understanding	Generalised analysis demonstrating some understanding	Inappropriate or absent analysis demonstrating little or inappropriate understanding
Apply knowledge from classes and readings	Apply principles accurately and insightfully	Apply principles in a mostly accurate manner with developed insight	Apply principles in a broadly accurate manner with some insight	Apply principles with some significant gaps and adequate insight	Inappropriate or limited application of principles and little insight
Communication	Consistently clear and controlled prose style with precise word choice and very minimal grammatical errors. Flawless referencing (Chicago or APA).	Clear and controlled prose style with accurate word choice and a mostly accurate use of grammar. Nearly flawless referencing (Chicago or APA).	Mostly clear prose style with mostly sound word choice and some grammatical problem areas. Basic referencing information provided.	Adequate but limited prose style, some inaccurate word choice, some grammatical problem areas. Basic referencing information provided.	Inadequate prose style, poor word choice, systemic grammatical problems. No referencing provided.

COMMENT

