Course Title	Logic	Instructor(s)	Thomas J. Spiegel
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Class Style	Lecture	Office Hours	-
Track	International Liberal Arts	Mode of Instruction	Teaching
Credits	2	Allocated Year	1
Active Learning	Category 1 (3) Category 4 (1,3, 9, 10)	Compulsory or Elective	Elective
Course Overview	This course offers an introduction into logic. Logic is the discipline concerned with the rules of thinking, particularly the rules of how to infer one statement from a set of another statements. Logic as a discipline is almost as old as philosophy itself, with Aristotle as the first to systematize certain rules of inference. Logic has been viewed as an entirely formal endeavour until some time ago, similar to how mathematics uses formula to abstract from real-world entities. This course will be a mixture of formal and informal logic in which the focus is on learning how to apply lessons from the discipline of logic to philosophical and scientific reason on the one hand and to ordinary contexts of speech and argument.		
Course Objectives	The aim of this course is to teach students basics of logic. This mainly includes some basics of formalization of natural language as well as elements of critical thinking and real-world argumentation. Students will learn about the history and nature of logic with the goal to be able to apply what they have learned to other fields of study and their everyday life. In this sense, this course also serves as a propaedeuticum for liberal arts education.		
Prerequisite			

Course Schedule

No	Contents	Homework
1	History of Logic I We will start with a historical overview of the history of logic from the Presocratic thinkers to Stoicism.	Homework (moodle)
2	History of Logic II We continue the historical overlook going from medieval philosophy to Frege and Russell (20th century).	Homework (moodle)
3	Fundamental Concepts I This is the first systematic introduction to the idea of logic, considering specifically the fundamental concept of what logic is.	Homework (moodle)
4	Fundamental Concepts II Students will learn the fundamental logical concepts such as validity, soundness and inference.	Homework (moodle)
5	Formalization I We will further focus on principles of propositional logic.	Homework (moodle)
6	Formalization II This lecture introduces the idea of truth tables as a tool on how to deduce propositions.	Homework (moodle)
7	Formalization III: This lecture introduces students to the way on how to formalize ordinary language into predicate logic.	Homework (moodle)
8	Formalization IV: This lecture further deepens the students' knowledge on predicate logic. Midterm class evaluation	
9	Midterm Exam	
10	Problems of Formalization This lecture introduces some fundamental issues of the idea that	Homework (moodle)

		logic is formal.	
	11	Topos I: Reductio ad absurdum The lectures on different topoi focus on the most important patterns of argumentation that are relevant for real-world reasoning. Reductio ad absurdum is arguably the most important of such inference patterns.	Homework (moodle)
	12	Topos II: Self-Application Arguments Self-application arguments are an important litmus test for the self-consistency of ideas and serve an important role particularly in philosophy.	Homework (moodle)
	13	Topos III: Inference to the best Explanation Inferences to the best explanation permeate our cognitive lives. They are also particularly common in the natural sciences.	Homework (moodle)
	14	Repetition and Practice I: We go over the preceding material as preparation for the final exam. Students are asked to prepare questions and problems to discuss in advance.	Homework (moodle)
	15	Repetition and Practice: We go over the preceding material as preparation for the final exam. Students are asked to prepare questions and problems to discuss in advance.	
Grading	Final Exam: 30% Midterm Exam: 30% Homework: 20% Active Participation: 20%		
Textbooks	-		
References	-		
NOTES	- Homework will be assigned at the end of class. - Homework needs to be turned in 24 hours before the next class. - Depending on the way the term develops, this syllabus may be amended. - Late submissions will generally not be accepted, unless there is a good reason. - Students are expected to be punctual and attend all lessons. Students who are late for class or leave early may be marked as absent. If you have a good reason to leave early or come late (e.g., an accident on the way to class), communicate with me. If you cannot participate in class, for example because you are ill, please submit an official document (e.g., a doctor's note) within 7 days; otherwise you will be marked as absent. - If you miss three or more classes unexcused, you may be asked to withdraw from the class or be failed the class		