Universidad Católica de Valencia San Vicente Mártir

COURSE GUIDE

Formal Logic

Prof. Álvaro Romero Moreno

Philosophy Degree
2nd Year

CLASSICAL TOPICS IN PHILOSOPHY OF SCIENCE

Preliminary remarks:

The teaching on this course is online. As specified in the Methodology section of this guide, it is interactive e-learning that is undertaken using audiovisual resources.

1.- COURSE DETAILS

Course Name	Formal Logic
ECTS Credits	6
Type of Learning	Basic
Calendar	2rd year- 1st semester
Module Name	Logic and Argumentation theory
Course Requirements	None
Lecturer	Álvaro Romero Moreno (alvaro.romero@ucv.es)

2.- BRIEF DESCRIPTION OF COURSE CONTENTS

- Concepts of logic and reasoning
- Brief history of logic
- Aristotelian logic. Categorical statements. Syllogisms. Venn diagrams
- Megaric-stoic logic
- Rudiments of Symbolic Logic
- Philosophy of logic. The problem of fallacies

3.- COURSE PROGRAM AND CALENDAR (2012-2013)

1. What is Logic? — September-October

1.1. What is not logic
1.2. What is not logic
1.3. What is the reasoning
1.4. What types of reasoning are there: deductive and inductive reasoning

2. For a history of logic — October

2.1. The Aristotelian logic or Predicate logic
2.2. The categorical statement. Venn diagrams for the categorical statement
2.3. The categorical statement. Venn diagrams for the determination of the validity of the categorical syllogism
2.4. The stoic logic or Statement logic
2.5. Boole, Frege, Rusell-Whitehead: the beginning of symbolic logic

3. Rudiments of Symbolic logic 3.1. Statement logic. Connectors. Rules of natural deduction 3.2. Predicate logic. Quantifiers. Rules of natural deduction 3.3. Accidental generalizations and laws of nature	November-December
4. Fallacies 4.1. What is a fallacy 4.2. Types of fallacies. Fallacies of relevance. Fallacies of poor induction. Fallacies of presupposition	January

4.- REFERENCES

4.1 Basic bibliography

4.1.1.	Dynamic text for the course produced by the teacher and current scientific articles.
4.1.2.:	Copi, I,M. (2007). *Introducción a la lógica* (3ª. Ed.). Buenos Aire: Universidad de Buenos Aires.
4.1.3.	Lukasiewicz, J. (1974). *Para una historia de la lógica de enunciados*. Valencia: Cuadernos Teorema.
4.1.4.	Garrido, M. (2005[4]). *Lógica simbólica*. Madrid, Tecnos
4.1.5.	Goldstein, L. (2008). *Lógica*. Valencia: Servei de Publicacions, Universitat de València.

4.2 Further reading

4.2.1.	Aristóteles (2004). Tratados de lógica (*Organon*). Editorial Porrua.
4.2.2.	Frege, G. (1972). *Conceptografía…* México: UNAM. https://www.ucm.es/data/cont/docs/481-2013-10-22-25-2013-10-09-Frege-Conceptografia.pdf

5. METHODOLOGY

This subject corresponds to 6 ECTS credits, which is equivalent to 150 hours of student's work. That total amount of hours is distributed into 60 hours of teaching (2.4 ECTS) and 90 hours of student's self-study (3.6 ECTS).

In this subject, the teaching process (2.4 ECTS) is based on the following teaching-learning methodology:

1) A **dinamic text,** designed by the professor.
2) **Videoconference**, through which theory lessons are given as well as guided tasks (training taks, text analysis, seminars, etc.) and collective tutorials. Videoconferencing must be always interactive and these sessions last 45 minutes.
3) Attending **Webinars** organised by the faculty and the head of the Department.
4) **Video-lessons** about the most relevant topics for the subject.
5) **Telematic activities through** UCVnet platform (such as taking part in debate forums, solving practical questionnaires etc.), with the lecturer's intervention to correct and provide some guidance to students.
6) **Assessment tests.**

Student's self-study (3.6 ECTS) is distributed in different activities:

- Asincronic re-view of the videoconferences.
- Preparing theory and practical lessons (*flipped classroom*).
- Course assignments.
- Studying and preparing the final assessment test.

6.- COMPETENCIES TO BE ACQUIRED BY THE STUDENT

(The figures refer to the officially approved (by ANECA) list of competencies of this Online Degree in Philosophy)

GENERAL COMPETENCIES [GC]

INSTRUMENTAL

1 Organization and planning
2 Basic computer skills
3 Problem-solving
5 Interpersonal skills
11 Ability to learn and teach

SPECIFIC COMPETENCES [SC]

18 To be able to relate different philosophical topics
23 To write philosophical essays and show evidence of analytical and synthetic skills
25 To be able to understand and evaluate philosophical arguments
26 To be able to construct philosophical arguments
31 Analyze the logic of languages and their various uses
39 I dentify and recognize rhetorical resources, implicit conventional knowledge, tacit assumptions, vagueness and superficiality
42 Achieve a rigorous knowledge of logical and metalogical concepts

7.- LEARNING OUTCOMES

RA_1. Basic knowledge of mathematical logic and its history, [**CG 1**, 11; y **CE** 20, 37, 42]
RA_2. Skills in handling basic logical techniques [**CG 2; y CE 20**]
RA_3. Understand the importance of logic for philosophical argumentation [**CG,5, 6; y CE 18, 31**]
RA_4. Identify sophisms, fallacies and badly constructed arguments [**CG 6; y CE 39**]
RA_5. Knowledge and use of the different types of arguments [**CG 11;** y **CE 25, 26**]

8.- ASSESSMENT

Students should self-assess following the development of each topic. There will be an assessment of the content of the theory and practical lectures, following the procedure set out for the Degree:

Assessment Tool	Type of Learning	Allocated Percentage
Attendance and participation in synchronic sessions	Online	10%
Submission of requested assignments and periodic evaluation through rapid tests	Online	40%
Final evaluation through practical and written assignments	Face-to-Face	50%