



Universidad
**Católica de
Valencia**
San Vicente Mártir



Course Guide Formal Logic

COURSE GUIDE
FORMAL LOGIC
2nd Year

Academic Year 2025-2026



Course of the Subject: FORMAL LOGIC

		ECTS
SUBJECT: Fomal Logic		6
Module: Logic and Argumentation theory		12
Type: Basic	CURSO: 2 nd Semester: 1 st	
Lecturer(s): Dr. Romero Moreno, Álvaro	Department:	
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MODULE ORGANIZATION

FORMAL LOGIC		ECTS 6		
Duration and location within the study plan: It is part of the "Logic and Theory of Argumentation" module, which contains one subject and two scheduled subjects (one in the second year, Formal Logic in the 1st semester, and another in the third year, Rhetotics and Theory of Argumentation in the 1st semester). , which consists of 12 ECTS.				
Subject Matter and Subjects				
Subject Matter	ECTS	Subject	ECTS	Year/ semester
Logic and Argumentation theory	6	Formal Logic	6	2/1
	6	Rhetoric and theory of argumentation	6	3/1



BASIC AND GENERALCOMPETENCIES	Weighting			
	1	2	3	4
1. Organization and planning			X	
2. Basic computer skills			X	
3. Problem-solving				X
5. Interpersonal skills	X			
11. Ability to learn and teach		X		

SPECIFIC COMPETENCIES	Weighting			
	1	2	3	4
18. To be able to relate different philosophical topics		X		
23. To write philosophical essays and show evidence of analytical and synthetic skills	X			
25. To be able to understand and evaluate philosophical arguments			X	
26. To be able to construct philosophical arguments			X	
31. Analyze the logic of languages and their various uses				X
39. I identify and recognize rhetorical resources, implicit conventional knowledge, tacit assumptions, vagueness and superficiality			X	
42. Achieve a rigorous knowledge of logical and metalogical concepts				X

LEARNING OUTCOMES	COMPETENCIES
RA1. Basic knowledge of mathematical logic and its history	CG: 1, 11 CE: 23, 39, 42
RA2. Skills in handling basic logical techniques	CG: 2 CE: 23
RA3. Understand the importance of logic for philosophical argumentation	CG: 5 CE: 18, 31
RA4. Identify sophisms, fallacies and badly constructed arguments	CG: 3 CE: 39
RA5. Knowledge and use of the different types of arguments	CG: 11 CE: 25, 26



LEARNING ACTIVITIES THROUGH SYNCHRONOUS COMMUNICATION			
ACTIVITY	Teaching-Learning Methodology	Relation to Learning Outcomes	ECTS ¹
VIRTUAL SESSION	Presentation of the content by the teacher, analysis of competencies, explanation and demonstration of skills, abilities and knowledge in the virtual classroom.	RA: 1, 3	0,7
PRACTICAL SESSION	Group work sessions through chat moderated by the teacher. Case studies, both true and fictitious, for the construction of knowledge through the interaction and activity of the student, critical analysis of values and social commitment.	RA: 2, 4, 5	0,3
SEMINAR AND VIDEO-CONFERENCE	Monographic sessions throughout the course, oriented to current aspects and applications of the subject.	RA: 1, 4, 5	0,2
VIRTUAL EVALUATION	Set of written or oral tests, used in the initial, formative or summative evaluation of the student.	RA: 2, 3, 4, 5	0,1
TOTAL			1,30

LEARNING ACTIVITIES THROUGH ASYNCHRONOUS COMMUNICATION			
ACTIVITY	Teaching-Learning Methodology	Relation to Learning Outcomes	ECTS
INDIVIDUAL ACTIVITIES	Preparation of the final evaluation: student study, individual preparation of readings, essays, problem solving, assignments, reports, etc. for discussion or delivery in electronic format.	RA: 1, 2, 4, 5	2,3
INDIVIDUAL TUTORSHIP	Individual attention for monitoring and guidance of the learning process, carried out by a tutor with the aim of reviewing and discussing the materials and topics, seminars, readings, carrying out assignments, etc.	RA: 2, 4, 5	0,1

¹ La asignatura y/o materia se organiza en **DOCENCIA VIRTUAL** y en TRABAJO AUTÓNOMO DEL ALUMNO, con un porcentaje estimado en ECTS. Una adecuada distribución es la siguiente: **40%** para las Actividades Formativas **DOCENCIA (60 horas)** y **60%** para las de Trabajo Autónomo tutorizado (90 horas) para **una asignatura de 6 créditos**.



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CONTINUOUS EVALUATION ACTIVITIES	<p>Group work: group preparation of readings, essays, problem solving, seminars, papers, reports, etc. for discussion or delivery.</p> <p>Discussion forums: participation and contributions to discussion forums related to the subject, moderated by the professor of the subject.</p> <p>Resolution of problems, comments, reports to deliver in installments throughout the course, making videos individually or cooperatively, answering questionnaires.</p>	RA: 2, 3, 4, 5	2,3
	TOTAL		4,70

IMPORTANT NOTE: The use of any type of AI for the completion of course tasks and activities, nor for assessment tests, is not allowed.

EVALUATION SYSTEM FOR THE ACQUISITION OF COMPETENCIES AND GRADING SYSTEM		
Evaluation Instrument	EVALUATED LEARNING OUTCOMES	Granted percentage
1	Attendance and participation in synchronous communication activities	10%
2	Carrying out deliverable activities	40%
4	Final Evaluation	50%

CONTENTS DESCRIPTION	COMPETENCIES
<ul style="list-style-type: none"> • 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 	<p>CG: 1, 2, 3, 11 CE: 25, 26, 31, 29, 42</p>



BIBLIOGRAPHY

- Dynamic presentations of the subject generated by the professor of the subject.
- Copi, I.M. (2007). Introducción a la lógica (3ª. Ed.). Buenos Aire: Universidad de Buenos Aires.
- Lukasiewicz, J. (1974). Para una historia de la lógica de enunciados. Valencia: Cuadernos Teorema.
- Garrido, M. (2004). Lógica simbólica. Madrid, Tecnos.
- Goldstein, L. (2008). Lógica. Valencia: Servei de Publicacions, Universitat de València.

Further reading:

- Aristóteles (2004). Tratados de lógica (Organon). Editorial Porrúa.
- Frege, G. (1972). Conceptografía. México: UNAM.
<https://www.ucm.es/data/cont/docs/481-2013-10-22-25-2013-10-09-FregeConceptografia.pdf>

TEMPORAL ORGANIZATION OF LEARNING

	CONTENT BLOCK/DIDACTIC UNIT	NR. OF SESSIONS
1. What is Logic?	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
2. For a history of logic	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	5
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	7
4. Fallacies	4.1. What is a fallacy 4.2. Types of fallacies. Fallacies of relevance. Fallacies of poor induction. Fallacies of presupposition	1