# uc3m Universidad Carlos III de Madrid

## Logic and Argumentation

Academic Year: ( 2023 / 2024 ) Review date: 25-04-2023

Department assigned to the subject: Humanities: Philosophy, Language, Literature Theory Department

Coordinating teacher: RIVERO OBRA, MERCEDES

Type: Compulsory ECTS Credits: 6.0

Year: 3 Semester: 2

## **OBJECTIVES**

Ability to anlayze the argumentative structures of discourse

To master the basic logical structures

To examine the daily intuitions about concepts as knwledge, reason or rationality

#### **DESCRIPTION OF CONTENTS: PROGRAMME**

#### PART 1

(KNOWLEDGE AND REPRESENTATION)

- 1. Information and knowledge
- 2. Knowledge and scepticism
- 3. Introduction to epistemology: virtues
- 4. Testimony and social epistemology

## PART 2: REASONING AND ARGUMENTATION

- 1. Reasoning as exploitation of information and argumentation as reasoning that aims to convince (distinguishing disagreements and conflicts, controversies and polemics, common perspectives and conflicting worldviews (ideologies)).
- 2. Truth and meaning conditions (experience shows that students have great difficulty in distinguishing the two and that this is the source of many of the problems in understanding the conditional and the distinction between valid and correct reasoning).
- 3. Logical relations between representations (basic relations) (a brief immersion in truth functions, not so much technically as instrumentally correct. Basic introduction to the idea of the possible world created by the linguistic form of representation).
- 4. Conditionalisation of thought (this is a theoretical-practical introduction to the conditional as an essential form of thought. It has to be an essentially practical subject so that they grasp the distinction between the various forms of conditional, from the material to the relevant conditional with a brief introduction to counterfactuals).
- 5. Necessary and sufficient conditions (this is a primary version of modal uses in everyday language, not an introduction to modal logic. Above all it is a practical exercise. Focus a lot on the architecture of necessity from empirical necessity through conceptual necessity to logical necessity to conceptual necessity and specific fields related to practice).
- 6. Reasoning: correctness and validity (introduce the idea of reasoning as a capacity for efficient exploitation of information. This is where logic and epistemology mix. The difference between formal validity and epistemic correctness needs to be taught well).
- 7. Non-formal reasoning (introduction to the ideas of contextual assumptions, hidden premises, non-explicit steps, etc.). Above all, it is about being able to think about the analytical power of language in reasoning.
- 9. Concepts of action and emotion with regard to how to apply reasoning in our daily lives. Distinguishing reasoning in natural language. The connection of knowledge with each other and with the world.
- 10. Argumentation as a capacity for conviction due to the extraction of information (distinguish clearly between rhetoric as a capacity to mobilise feelings and argumentation as a capacity to mobilise reflection).
- 11. Correct argumentation (material conditions of argumentation, which are not only those of correct reasoning made explicit publicly, but also those of a communicative act sensitive to the conditions of reception).
- 12. Concept and types of fallacies (this is a complicated subject, since on the one hand we have to distinguish between rhetoric as a mobilisation of affects and reflexive fallacies. But then there is the problem of contextualism that invades the idea of fallacy. Working especially on the problem of the fallacy of authority).

- 13. The phases of critical thinking (decomposition, examination of sources, local and global consistency. This is basically a methodological theme, very much inspired by the intelligence manuals).
- 14. Rationality as analytical capacity: spheres of rationality (this is already conclusive, in order to raise issues of normativity).

#### ASSESSMENT SYSTEM

The evaluation of this subject will be continuous. It will be essential, therefore, to have passed all the parts. These will be the following:

- Class attendance, participation and text commentary in a practical way. Regular attendance will be positively valued, as well as relevant participation during the presentation of contents by the teacher. Students must actively participate in those practical sessions dedicated to the commentary of texts, viewing of audiovisual materials, etc. They must also hand in the practical work requested. This section will account for 10% of the final mark.
- Short essays: Students must submit an essay (2,5000 words) in response to a question posed by the teacher in relation to one of the texts to be commented on. Both the understanding of the text and the student's ability to synthesise some of the discussions that have arisen during the practical sessions will be assessed. This section will account for 30% of the final mark.
- Final paper: The student will have to hand in a final paper focused on one of the topics that have been exposed throughout the course. This work will be coordinated by the teacher. In order to facilitate this task, each student must propose a topic before the end of the first half of the term. The date of delivery of the final project will coincide with the date set for the final exam. Failure to achieve either of the two previous sections will make it impossible to hand in the final project. This section will account for 60% of the final mark.
- It is possible, as the course progresses, that the final paper may be replaced by an exam. This will be determined by the teacher at his or her discretion with respect to the course taught, always seeking to do what is best for the students.

% end-of-term-examination: 60 % of continuous assessment (assignments, laboratory, practicals...): 40