Universidad Zaragoza

Academic Year/course: 2023/24

25510 - Formal logic

Syllabus Information

Academic year: 2023/24
Subject: 25510 - Formal logic
Faculty / School: 103 - Facultad de Filosofía y Letras
Degree: 269 - Degree in Philosophy
        587 - Degree in Philosophy
ECTS: 6.0
Year: 2
Semester: First semester
Subject type: Compulsory
Module:

1. General information

The subject "Formal Logic" is part of the group of subjects belonging to the area of Logic and Philosophy of Science.

Its contents and learning activities have been designed in such a way that they serve as an introduction to the concepts and methodologies of the area's subjects, which within our study plan are the ones that have a more analytical nature. The student will develop understanding of issues of semantics, metalogic and philosophy of logic . The teaching will alternate between the specific aspects of the subject and the general contents of the area.

The approach and objectives of the subject are aligned with the following SDGs, so that it provides training and competence to contribute to some extent to their achievement: 4, Quality education; 5, Gender equality; 10, Reducing inequalities ; 11, Sustainable cities and communities; 12, Responsible production and consumption; 13, Climate action; 16,Peace, justice and strong institutions.

2. Learning results

The student will be able to produce logical models from a given set of formulas. In addition, they will know how to successfully prove a logical theorem from given premises by following the deduction rules of classical first-order logic. Possess adequate knowledge of the basic notions of semantics and metalogic (models, satisfaction, consistency, completeness, coherence) and philosophy of logic (truth carriers, theories of truth, descriptions, identity, etc.). Demonstrate knowledge of the notions of logical consequence, argument, deduction, proposition, predicate, syntax, semantics in their commentary on philosophical texts.

3. Syllabus

Topic 1. Formal semantics for statement logic.

Topic 2. Formal semantics for predicate logic.

Topic 3. Other logics: an introduction.

Topic 4. Notions of metalogic.

Topic 5. Topics in the philosophy of logic.

4. Academic activities

Face-to-face classes will have a duration of two hours. In them, the teacher will explain the most important concepts and theses. Students should complement the explanations with the recommended readings in the bibliography. The classes will mix two types of work: theoretical teaching and problem solving. In the theoretical teaching we will deal with the concepts and basic notions of the syllabus and in the problem solving we will deal with examining some solved problems of standard format, very similar to those that will appear in the written test.

5. Assessment system

First call:

Global assessment test (100% of the grade): Written exam on the theoretical material and the proposed solved exercises.   The acquisition of knowledge of formal logic and its philosophy, the ability to apply this knowledge to the solution of the logic problems proposed in the exam and the capacity of exposition and argumentation are evaluated.

Second call: Global evaluation test identical to the previous one