UNIVERSITAT POLITÈCNICA
DE CATALUNYA
BARCELONATECH

Course guide
340373 - LOAL-I2O43 - Logic and Algebra

Last modified: 17/05/2023

Unit in charge:	Vilanova i la Geltrú School of Engineering
Teaching unit:	749 - MAT - Department of Mathematics.

Degree: BACHELOR'S DEGREE IN INFORMATICS ENGINEERING (Syllabus 2018). (Compulsory subject).

Academic year: 2023　**ECTS Credits:** 7.5　**Languages:** Catalan, Spanish

LECTURER

Coordinating lecturer: Julio Fernández González

Others: Immaculada Massana Hugas
Carles Batlle Arnau
Ester Simó Mezquita

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
1. CEFB3. Ability to understand and to have a good command of discrete, logical, algorithmically mathematics and computing complexity and its application to automatical treatment of information by means of computational systems and its application to solve engineering problems.

Transversal:
3. SELF-DIRECTED LEARNING. Detecting gaps in one's knowledge and overcoming them through critical self-appraisal. Choosing the best path for broadening one's knowledge.
4. EFFECTIVE USE OF INFORMATI0N RESOURCES - Level 1. Identifying information needs. Using collections, premises and services that are available for designing and executing simple searches that are suited to the topic.
2. SELF-DIRECTED LEARNING - Level 1. Completing set tasks within established deadlines. Working with recommended information sources according to the guidelines set by lecturers.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

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STUDY LOAD

Type	Hours	Percentage
Hours large group	60,0	32.00
Hours small group	15,0	8.00
Self study	112,5	60.00

Total learning time: 187.5 h

CONTENTS

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Description:
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Full-or-part-time: 79h 30m
Theory classes: 18h
Laboratory classes: 12h
Self study : 49h 30m

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Description:
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Full-or-part-time: 27h
Theory classes: 10h
Self study : 17h

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Description:
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Full-or-part-time: 47h
Theory classes: 18h
Self study : 29h

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Description:
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Full-or-part-time: 27h
Theory classes: 10h
Self study : 17h

GRADING SYSTEM

BIBLIOGRAPHY

Basic:
- Barrière Figeroa, Eulàlia; Claverol Aguas, Mercè. Introducció a la lògica [on line]. Barcelona: Edicions UPC, 2006 [Consultation: 25/03/2022]. Available on: https://upcommons.upc.edu/handle/2099.3/36696. ISBN 9788498801613.
- Antoine, Ramon; Camps, Rosa; Moncasi, Jaume. Introducció a l'àlgebra abstracta. Amb elements de matemàtica discreta. Universitat Autònoma de Barcelona, Servei de Publicacions, 2007. ISBN 9788449025150.

Complementary:
- Lipschutz, Seymour; Lipson, Marc. Matemáticas discretas [on line]. (México [etc.]: McGraw-Hill, 2009 [Consultation: 16/02/2024].