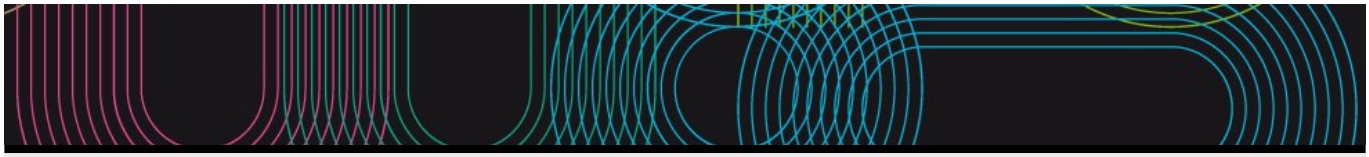
Universidade Vigo

Subject Guide 2023 / 2024



IDENTIFYING DATA				
Quantum mechanics II				
Subject	Quantum mechanics II			
Code	V05M198V01102			
Study programme	(*)Máster Universitario en Ciencia e tecnoloxías de información cuántica			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	3	Mandatory	1st	1st
Teaching language				
Department				
Coordinator				
Lecturers				
E-mail				
Web	http://www.usc.gal/gl/estudos/masteres/ciencias/master-universitario-ciencia-tecnoloxias-informacion-cuantica/20232024/mecanica-cuantica-ii-19342-18435-2-103723			
General description				

Training and Learning Results	
Code	
A1	Understand the domain, concepts, methods and basic techniques of quantum mechanics: mathematical formalism, postulates, operators, matrices, Bloch sphere, photonic states.
A2	Know and acquire competence in experimental techniques for the processing of quantum information: interactions, measurements, oscillations, interference, communication systems, ...
A3	Understanding and knowledge of the fundamentals of Quantum Information Theory, as well as two basic aspects of two four types of quantum technologies: computing, communications, metrology, simulation.
B2	To acquire knowledge about quantum systems with many degrees of freedom as a means of storing and processing information.
B10	Knowledge about new solid-state quantum materials, their physical and topological properties.
C1	To analyze and break down a complex concept, examine each part and see how they fit together
C2	To classify and identify types or groups, showing how each category is different from the others
C3	To compare and contrast and point out similarities and differences between two or more topics or concepts

Expected results from this subject	
Expected results from this subject	Training and Learning Results
New	A14 A1 A14 A2 A3 A14 B2 B10 C1 C18 C2 C3 C18 C18 C18 D18 D18

Contents

Topic

Planning			
	Class hours	Hours outside the classroom	Total hours

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies	
	Description

Personalized assistance

Assessment		
Description	Qualification	Training and Learning Results

Other comments on the Evaluation

Sources of information

Basic Bibliography

Complementary Bibliography

Recommendations