



IDENTIFYING DATA

Quantum computing tools

Subject	Quantum computing tools		
Code	V05M198V01106		
Study programme	(*)Máster Universitario en Ciencia e Tecnoloxías de Información Cuántica		
Descriptors ECTS Credits	Choose	Year	Quadmester
3	Optional	1st	1st
Teaching language			
Department			
Coordinator			
Lecturers	Fernández Veiga, Manuel		
E-mail			
Web	http://guiadocente.udc.es/guia_docent/index.php?centre=614&ensenyament=614551&assignatura=614551006&any_academic=2023_24&any_academic=2023_24		
General description			

Training and Learning Results

Code	
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.
A7	Acquire and know how to apply the basic principles of quantum computing: analyze, understand and implement quantum algorithms, master the appropriate computer languages as well as understand the paradigm of two quantum circuits.
A10	Know scenarios of practical application of quantum computing in problems of scientific, technological and financial interest. Identify domains that exhibit quantum advantage. Know the institutions and companies that are actors in quantum computing, acquiring a perspective of the agenda that is reasonable to expect in the coming years.
B4	To have knowledge of quantum computing, algorithms, circuits, its programming in different languages and accessible platforms.
B6	To acquire knowledge about physical systems capable of implementing information processing in quantum degrees of freedom.
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
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New

A14
A14
A14
A3
A14
A14
A7
A10
B4
B6
C1
C2
C18
C3
C18
C18
D18
D18
D18
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