



## IDENTIFYING DATA

### Numerical methods in quantum computing

Subject	Numerical methods in quantum computing		
Code	V05M198V01208		
Study programme	(*)Máster Universitario en Ciencia e Tecnoloxías de Información Cuántica		
Descriptors ECTS Credits	Choose	Year	Quadmester
3	Optional	1st	2nd
Teaching language			
Department			
Coordinator			
Lecturers	Fernández Veiga, Manuel		
E-mail			
Web	<a href="http://guiadocente.udc.es/guia_docent/index.php?centre=614&amp;ensenyament=614551&amp;assignatura=614551025&amp;any_academic=2023_24&amp;any_academic=2023_24">http://guiadocente.udc.es/guia_docent/index.php?centre=614&amp;ensenyament=614551&amp;assignatura=614551025&amp;any_academic=2023_24&amp;any_academic=2023_24</a>		
General description			

## Training and Learning Results

Code	
A9	Know and know how to apply advanced aspects of quantum computing: quantum learning, efficient quantum architecture, mode of operation of two quantum accelerators, high-performance computing, quantum systems based on rules and applications to numerical calculation.
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.
B14	To have knowledge of sets of problems in which quantum computing at its current stage of development can offer an advantage over classical computing: chemistry, biology, optimization, logistics, finance, etc.
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 A14 A14 A14 A14 A9 A10 B4 B14 C1 C2 C18 C3 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**

---