



## IDENTIFYING DATA

### Quantum materials

|                     |   |          |      |
|---------------------|---|----------|------|
| Subject             | Quantum materials   |          |      |
| Code                | V05M198V01205   |          |      |
| Study programme     | (*)Máster Universitario en Ciencia e Tecnoloxías de Información Cuántica  |          |      |
| Descriptors         | ECTS Credits  | Choose   | Year |
|                     | 3   | Optional | 1st  |
| Teaching language   | Quadmester  |          |      |
| Department          | 2nd   |          |      |
| Coordinator         |   |          |      |
| Lecturers           | Fernández Veiga, Manuel   |          |      |
| E-mail              |   |          |      |
| Web                 | <a href="http://www.usc.gal/gl/estudos/masteres/ciencias/master-universitario-ciencia-tecnoloxias-informacion-cuantica/20232024/materiais-cuanticos-19345-18438-3-103745">http://www.usc.gal/gl/estudos/masteres/ciencias/master-universitario-ciencia-tecnoloxias-informacion-cuantica/20232024/materiais-cuanticos-19345-18438-3-103745</a> |          |      |
| General description |   |          |      |

## Training and Learning Results

|      |  |
|------|--|
| Code |  |
| A4   | Know and be able to apply the physical theories inherent to the understanding of systems for quantum information processing, including quantum thermodynamics as well as advanced aspects of magnetism and quantum mechanics.        |
| A5   | Know and understand the nature of the physical platforms for the processing of quantum information in solid state systems: superconducting systems, cryoscience and quantum materials, including or studying two topological states. |
| B6   | To acquire knowledge about physical systems capable of implementing information processing in quantum degrees of freedom.  |
| 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                                | A4                            |
|                                    | A5                            |
|                                    | B6                            |
|                                    | B10                           |
|                                    | C1                            |
|                                    | C2                            |
|                                    | C3                            |

## 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 |
|-------------|
|-------------|

|   |               |                               |
|---|---------------|-------------------------------|
| <b>Personalized assistance</b>          |               |                               |
| <b>Assessment</b>                       |               |                               |
| Description                             | Qualification | Training and Learning Results |
| <b>Other comments on the Evaluation</b> |               |                               |
| <b>Sources of information</b>           |               |                               |
| <b>Basic Bibliography</b>               |               |                               |
| <b>Complementary Bibliography</b>       |               |                               |
| <b>Recommendations</b>                  |               |                               |