



Teaching Guide

| Teaching Guide | | | | |
|--------------------------|---|-------|------------|--|
| Identifying Data | | | | 2019/20 |
| Subject (*) | Projects Workshop | | Code | 614473109 |
| Study programme | Mestrado Universitario en Computación de Altas Prestacións / High Performance Computing (Mod. Presencial) | | | |
| Descriptors | | | | |
| Cycle | Period | Year | Type | Credits |
| Official Master's Degree | 2nd four-month period | First | Obligatory | 3 |
| Language | Spanish | | | |
| Teaching method | Face-to-face | | | |
| Prerequisites | | | | |
| Department | Departamento profesorado másterEnxeñaría de Computadores | | | |
| Coordinator | Gonzalez Gomez, Patricia | | E-mail | patricia.gonzalez@udc.es |
| Lecturers | Fernández Rivera, Francisco García Loureiro, Antonio Jesús Gonzalez Gomez, Patricia López Taboada, Guillermo Sanjurjo Amado, Jose Rodrigo | | E-mail | patricia.gonzalez@udc.es guillermo.lopez.taboada@udc.es jose.sanjurjo@udc.es |
| Web | aula.cesga.es | | | |
| General description | The aim of this course is to provide the student with the fundamental bases to carry out successfully a research or industrial project in the area of high performance computing. Different tools are introduced to facilitate the developing of the project as well as different examples of projects. | | | |

Study programme competences

| Code | Study programme competences |
|------|--|
| A8 | CE8 - Be able to apply the acquired knowledge, capabilities and aptitudes to the profesional environment, planning, managing and evaluating project in the high performance computing field |
| B1 | CB6 - Possess and understand the knowledge that give a baseline or opportunity to be original in the development and/or application of ideas, often in a research environment |
| B3 | CB8 - The students have to be able to integrate knowledge and face the complexity to make judgments from information, despite being partial and limited, includes reflexions about the social and ethical responsibilities linked to the application of their judgements and knowledge |
| B5 | CB10 - The students have to possess learning skills that allows them to continue to study in a mainly self-driven or autonomous manner |
| B6 | CG1 - Be able to search and select useful information to solve complex problems, using the bibliographic sources of the field |
| B7 | CG2 - Elaborate adequately and originally written essays or motivated reasonings, write planings, work projects, scientific papers and formulate reasonable hypothesis |
| B9 | CG4 - Be able to plan and do research, development and innovation tasks in high performance computing related environments |
| B10 | CG5 - Be able to work in teams, specially multidisciplinary, and do a proper time and people management and decision taking |
| C1 | CT1 - Use the basic technologies of the information and computing technology field required for the professional development and the long-life learning |
| C2 | CT2 - Estimulate the capacity to work in transdisciplinary and interdisciplinary teams to offer proposals that contribute to the contribute to the economical, social and political sustainable development |
| C3 | CT3 - Be able to manage time and resources: develop plannings, prioritize activities, identify criticism, establish and meet deadlines |
| C4 | CT4 - Value the importance of research, innovation and the technological development in the socioeconomical and cultural advance of the society |
| C5 | CT5 - Understand the importance of the enterpeneurship culture and know the resources available for entrepreneurs |

Learning outcomes

| Learning outcomes | Study programme competences |
|-------------------|-----------------------------|
|-------------------|-----------------------------|



| | | | |
|--|-----|--|---------------------------------|
| The student will know the fundamental bases to carry out successfully a research or industrial project in the area of high performance computing | AJ8 | BJ1 BJ3 BJ5 BJ6 BJ7 BJ9 BJ10 | CJ1 CJ2 CJ3 CJ4 CJ5 |
| The student will know different tools that facilitate the development of both research and industrial projects | AJ8 | BJ7 BJ10 | CJ1 CJ2 CJ3 |

| Contents | |
|--|-----------|
| Topic | Sub-topic |
| HPC Research projects | |
| Results' dissemination. Bibliographic studies. | |
| Colaborative tools | |
| Management of HPC projects | |
| Industrial Workshops | |
| HPC business | |

| Planning | | | | |
|---|--------------------------------|----------------------|-------------------------------|-------------|
| Methodologies / tests | Competencies | Ordinary class hours | Student's personal work hours | Total hours |
| Supervised projects | A8 B3 B5 B6 B7 B9 B10 C1 C3 | 1 | 54 | 55 |
| Seminar | B1 B3 B5 C2 C4 C5 | 8 | 0 | 8 |
| Guest lecture / keynote speech | A8 B1 B3 B5 C2 C4 C5 | 11 | 0 | 11 |
| Personalized attention | | 1 | 0 | 1 |
| (*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students. | | | | |

| Methodologies | |
|--------------------------------|---|
| Methodologies | Description |
| Supervised projects | supervised projects performed individually or in group. |
| Seminar | Talks and workshops given by relevant professionals in the field of research in HPC or in the industry. |
| Guest lecture / keynote speech | Lectures by the faculty assigned to the subject. |

| Personalized attention | |
|--------------------------------|---|
| Methodologies | Description |
| Guest lecture / keynote speech | The faculty will give the lectures and will attend the doubts that may arise on the part of the students. |
| Supervised projects | During the supervised projects, the teachers will monitor the student's work. |

| Assessment | | | |
|--------------------------------|-------------------------|--|---------------|
| Methodologies | Competencies | Description | Qualification |
| Guest lecture / keynote speech | A8 B1 B3 B5 C2 C4 C5 | During the face-to-face classes, the teachers will monitor the active participation of the students. | 10 |



| | | | |
|---------------------|--------------------------------|---|----|
| Supervised projects | A8 B3 B5 B6 B7 B9 B10 C1 C3 | Submission and defense of academically supervised projects. | 90 |
|---------------------|--------------------------------|---|----|

Assessment comments

First opportunity (ordinary - May): Evaluation of the academically directed works: 90% of the final mark· Follow-up continued active participation: 10% of the final mark
Second opportunity (extraordinary - July):· Evaluation of the academically directed works: it will be necessary to present the academically directed works that the students have not presented in the ordinary call, and will go back to present, after the timely modifications indicated by the professors, those that had not received a necessary minimum qualification to pass. 90% of the final mark· Follow-up continued active participation: the student will keep the mark obtained in this section in the ordinary call, since for the extraordinary call no new activities will be scheduled. 10% of the final mark it will consider "no sited" all the student that have not delivered any of the works and have not participated in the proposed activities.

Part-time: given that the degree has a on-line modality, in the case of students who, in a justified way, have impediments to attendance in person, they will be evaluated with the criteria of the on-line modality .

During the evaluation, the lecturers can request the students to identify themselves by asking the passport.

Sources of information

| | |
|----------------------|---|
| Basic | <ul style="list-style-type: none"> - A. H. Hofmann (). Scientific writing and communication. Oxford University Press - Eric Ries (). The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses. Crown Publishing Group - Alexander Osterwalder and Yves Pigneur (). Business Model Generation. John Wiley and Sons |
| Complementary | |

Recommendations

Subjects that it is recommended to have taken before

Subjects that are recommended to be taken simultaneously

Subjects that continue the syllabus

Other comments

Knowledge of English, both spoken and written, is essential since many of the bibliography and external conferences can be in English.

(*)The teaching guide is the document in which the URV publishes the information about all its courses. It is a public document and cannot be modified. Only in exceptional cases can it be revised by the competent agent or duly revised so that it is in line with current legislation.