| Teaching Guide | | | | |
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| Identifying Data | | | | 2024/25 |
| Subject (*) | Biomedical knowledge management | | Code | 614522022 |
| Study programme | Mestrado Universitario en Bioinformática para Ciencias da Saúde | | | |
| Descriptors | | | | |
| Cycle | Period | Year | Type | Credits |
| Official Master's Degree | 1st four-month period | Second | Optional | 3 |
| Language | SpanishEnglish | | | |
| Teaching method | Hybrid | | | |
| Prerequisites | | | | |
| Department | Ciencias da Computación e Tecnoloxías da InformaciónComputación | | | |
| Coordinador | Pérez Vila, Miguel Anxo | E-mail | anxo.pvila@udc.es | |
| Lecturers | Pérez Vila, Miguel Anxo | E-mail | anxo.pvila@udc.es | |
| Web | http://www.dc.fi.udc.es/~parapar/ | | | |
| General description | In this course, we will explore the theoretical concepts of information management, as well as the software and tools for obtaining, extracting, labelling, visualising and exploiting biomedical knowledge. We will explore the syntactic and semantic modelling of information, methods of obtaining and collecting information, methods of integration, extraction and terminological labelling, standards for semantic representation of biomedical information, and techniques for analysis and visualisation of knowledge | | | |

| Study programme competences / results | |
|---|---|
| Code | Study programme competences / results |
| A6 | CE6 - Ability to identify software tools and most relevant bioinformatics data sources, and acquire skill in their use |
| B3 | CB8 - Students to be able to integrate knowledge and deal with the complexity of making judgements from information that could be incomplete or limited, including reflections on the social and ethical responsibilities linked to the application of their skills and judgments |
| B6 | CG1 -Search for and select the useful information needed to solve complex problems, driving fluently bibliographical sources for the field |
| C3 | CT3 - Use the basic tools of the information technology and communications (ICT) necessary for the exercise of their profession and lifelong learning |
| C8 | CT8 - Rating the importance that has the research, innovation and technological development in the socio-economic and cultural progress of society |

| Learning outcomes | | | |
|---|---|---|---|
| Learning outcomes | Study programme competences / results | | |
| Coñecer comprender e analizar os distintos modelos de xestión e explotación de coñecemento na área da de investigación biomédica, para a súa implementación e uso eficiente. | AJ6 | BJ6 | CJ3 |
| Coñecer comprender e analizar as plataformas e ferramentas software para a implementación de técnicas que xestionen e exploten información biomédica. | AJ6 | BJ3<br>BJ6 | |
| Planear e deseñar avaliacións de métodos, técnicas e sistemas existentes e capacidade de análise os resultados das devanditas avaliacións. | | BJ3<br>BJ6 | CJ3<br>CJ8 |
| Coñecer, comprender e aplicar correctamente os condicionantes éticos, de privacidade e confidencialidade dos datos e coñecemento tratado. | | | CJ8 |

| Contents | |
|---|---|
| Topic | Sub-topic |
| Introduction | - |
| Standards for biomedical information | - |
| Resources for biomedical information | - |
| Exploitation of biomedical information | - |

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|---|---|
| Ethical and legal aspects | - |

| Planning | | | | |
|---|---|---|---|---|
| Methodologies / tests | Competencies / Results | Teaching hours (in-person & virtual) | Student?s personal work hours | Total hours |
| Laboratory practice | C3 C8 | 8 | 22 | 30 |
| Supervised projects | B3 B6 | 2 | 9 | 11 |
| Mixed objective/subjective test | A6 B3 B6 C3 C8 | 0 | 1 | 1 |
| Guest lecture / keynote speech | A6 B3 | 11 | 22 | 33 |
| Personalized attention | | 0 | | 0 |
| (*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students. | | | | |

| Methodologies | |
|---|---|
| Methodologies | Description |
| Laboratory practice | Use of standards, resources and methods of exploitation to solve problems |
| Supervised projects | Tutored work proposed by the teacher and developed by students either in groups or individually. |
| Mixed objective/subjective test | The mastery of theoretical and operative knowledge of the subject will be evaluated. |
| Guest lecture / keynote speech | Lessons about the contents of the subject by encouraging student participation |

| Personalized attention | |
|---|---|
| Methodologies | Description |
| Laboratory practice<br>Supervised projects | The teacher will advise the particular problems of each student taking into account their degree of effort and participation during the lessons<br>The individual work of the students will be evaluated.<br>Values of equality will be promoted following current recommendations. |

| Assessment | | | |
|---|---|---|---|
| Methodologies | Competencies / Results | Description | **Qualification** |
| Mixed objective/subjective test | A6 B3 B6 C3 C8 | Questions about acquired knowledge.<br>Questions that involve reasoning based on the knowledge acquired to solve practical problems of real interest. It is mandatory to reach 40% of the grade to pass the subject | 40 |
| Laboratory practice | C3 C8 | Correction and completeness of the practices proposed for the proper use of the explained tools. It is mandatory to reach 40% of the grade to pass the subject | 40 |
| Supervised projects | B3 B6 | Follow up of the work and evaluation on the result achieved and individual participation of the students in the classes. It is mandatory to reach 40% of the grade to pass the subject | 20 |

| Assessment comments |
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For the second opportunity and not ordinary exams, both practice and theory will be evaluated in the mixed exam. If the minimum grade in the different tests is not reached, the maximum grade of the student will be 4.5. For part-time students, the grading scale and continuous assessment are the same as for other students. If plagiarism is detected the student will not pass the subject.
- The fraudulent performance of tests or evaluation activities, once verified, will directly imply the qualification of fail in the call in which it is committed: the student will be graded with "suspense" (numerical note 0) in the corresponding call of the academic year, whether the commission of the foul occurs on the first opportunity or on the second. To do this, her rating will be modified in the first opportunity report, if necessary.

| Sources of information | |
|---|---|
| Basic | - Pease, Cooper & Gururajn (2010). Biomedical Knowledge Management. |
| Complementary | |

| Recommendations |
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| Subjects that it is recommended to have taken before |
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| Subjects that are recommended to be taken simultaneously |
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| Subjects that continue the syllabus |
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| Other comments |
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**(*)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.**