Teaching Guide				
Identifying Data				2023/24
Subject (*)	Practicum (professional practice)		Code	614522018
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	SpanishGalicianEnglish			
Teaching method	Face-to-face			
Prerequisites				
Department	BioloxíaCiencias da Computación e Tecnoloxías da InformaciónEnxeñaría de ComputadoresFisioterapia, Medicina e Ciencias BiomédicasMatemáticas			
Coordinador		E-mail		
Lecturers	Alvarez Estevez, Diego Blanco García, Francisco Javier Cao Abad, Ricardo Darriba López, Diego Gonzalez Penedo, Manuel Guijarro Berdiñas, Berta M. Ladra González, Susana Ortega Hortas, Marcos Pereira Loureiro, Javier Puente Castro, Alejandro Rivadulla Fernandez, Juan Casto Silva Coira, Fernando Vila Taboada, Marta	E-mail	diego.alvareze@udc.es f.blanco1@udc.es ricardo.cao@udc.es diego.darriba@udc.es manuel.gpenedo@udc.es berta.guijarro@udc.es susana.ladra@udc.es m.ortega@udc.es javier.pereira@udc.es a.puentec@udc.es casto.rivadulla@udc.es fernando.silva@udc.es marta.vila.taboada@udc.es	
Web	www.master.bioinformatica.fic.udc.es/			
General description	Esta materia permite que o alumno poida adquirir as competencias da titulación a través de traballo en empresas ou institucións públicas. O seu obxetivo é completar a formación do mestrado con estancias nestas entidades colaboradoras nas que experimentar o desenvolvemento da actividad de investigación ou profesional nunha contorna productiva. Dende a Facultade de Informática establécense convenios con distintas empresas ou institucións para a realización destas prácticas curriculares. Na web do mestrado irase informando dos convenios ya establecidos, non sendo una lista pechada senon que está aberta a novas relación en función do interese das empresas o dos estudantes. Estas prácticas terán un titor académico asignado pola comisión académica e un titor da empresa designado pola propia empresa.			

Study programme competences / results	
Code	Study programme competences / results
A3	CE3 ? To analyze, design, develop, implement, verify and document efficient software solutions based on an adequate knowledge of the theories, models and techniques in the field of Bioinformatics
A6	CE6 - Ability to identify software tools and most relevant bioinformatics data sources, and acquire skill in their use
A7	CE7 - Ability to identify the applicability of the use of bioinformatics tools to clinical areas.
B1	CB6 - Own and understand knowledge that can provide a base or opportunity to be original in the development and/or application of ideas, often in a context of research
B2	CB7 - Students should know how to apply the acquired knowledge and ability to problem solving in new environments or little known within broad (or multidisciplinary) contexts related to their field of study
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

B4	CB9 - Students should know how to communicate their findings, knowledge and latest reasons underpinning them to specialized and non-specialized audiences in a clear and unambiguous way
B5	CB10 - Students should possess learning skills that allow them to continue studying in a way that will largely be self-directed or autonomous.
B8	CG3 - Be able to work in a team, especially of interdisciplinary nature
C3	CT3 - Use the basic tools of the information technology and communications (ICT) necessary for the exercise of their profession and lifelong learning
C5	CT5 - Understand the importance of entrepreneurial culture and know the means available to enterprising people
C6	CT6 - To assess critically the knowledge, technology and information available to solve the problems they face to.
C7	CT7 ? To maintain and establish strategies for scientific updating as a criterion for professional improvement.
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		
Have experience on research or professional activity within companies or public institutions in the field of bioinformatics and health informatics.	AJ3 AJ6 AJ7	BJ1 BJ2 BJ3 BJ4 BJ5 BJ8	CJ3 CJ5 CJ6 CJ7 CJ8

Contents	
Topic	Sub-topic
External internships in companies or public institutions in the field of bioinformatics.	Internships are carried out in companies and institutions in the field of bioinformatics and applied technology in the life and health sciences. The student will be supervised by a professional and an academic tutor. The student must submit a final report. The professional tutor must issue a report on the activities carried out. The final evaluation will be carried out by a committee of professors of the Master who will take into account the report submitted and the assessment of the professional tutor.

Planning				
Methodologies / tests	Competencies / Results	Teaching hours (in-person & virtual)	Student?s personal work hours	Total hours
ICT practicals	A3 A6 A7 B1 B2 B3 B4 B5 B8 C3 C5 C6 C7 C8	0	70	70
Personalized attention		5	0	5
(*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.				

Methodologies	
Methodologies	Description
ICT practicals	The internship will depend on the type of center where the work is carried out, which will also depend on the student's profile.

Personalized attention

Methodologies	Description
ICT practicals	The internship requires the assignment of a professional tutor and an academic tutor. The professional tutor will monitor the student's work and supervise the work report.

Assessment			
Methodologies	Competencies / Results	Description	Qualification
ICT practicals	A3 A6 A7 B1 B2 B3 B4 B5 B8 C3 C5 C6 C7 C8	The student will inform the academic tutor of the tasks being performed. At the end of the internship, the student will submit a report listing and explaining in detail the tasks performed, the technological environment used -tools, standards and methodologies-, avoiding issues that may be considered confidential. The professional supervisor will submit a report evaluating the student's activity confidentially to the subject coordinator. A committee of professors will evaluate the internship on the basis of the report submitted by the student and the report of the professional tutor.	100

Assessment comments

Sources of information	
Basic	As plantillas e procesos de petición de empresas realízase a través do campus virtual
Complementary	

Recommendations
Subjects that it is recommended to have taken before

Introduction to databases/614522002
Introduction to molecular biology/614522004
Genetics and molecular evolution/614522005
Genomics/614522006
Data structures and algorithmics for biological sequences/614522013
Advanced processing of biological sequences/614522020
New trends and applications in bioinformatics and biomedical engineering/614522021
Biomedical knowledge management /614522022
Design and management of research projects/614522023
Computational intelligence for high dimensional data/614522024
Biomechanical engineering, sensoring and telemedicine/614522014
Fundamentals of neuroscience/614522015
Neuroengineering and innovation in neuroscience/614522016
Health Information Systems/614522017
Advanced medical visualization/614522019
Computational intelligence for bioinformatics/614522012
Fundamentals of bioinformatics/614522008
Advanced statistical methods in bioinformatics/614522009
Analysis of biomedical images/614522010
High performance computing in bioinformatics/614522011
Introduction to programming/614522001
Probability. statistics and elements of biomathematics/614522007
Foundations of Artificial Intelligence/614522003
Subjects that are recommended to be taken simultaneously
Master thesis/614522025
Subjects that continue the syllabus
Other comments

(*)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.