ANX-PR/CL/001-01

LEARNING GUIDE

SUBJECT

203000036 - Proffesional Development And Technology Transfer

DEGREE PROGRAMME

20BC - Master Universitario En Biologia Computacional

ACADEMIC YEAR & SEMESTER

2025/26 - Semester 2

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Learning guide

1. Description

1.1. Subject details

Name of the subject	203000036 - Proffesional Development And Technology Transfer
No of credits	3 ECTS
Type	Optional/elective
Academic year ot the programme	First year
Semester of tuition	Semester 2
Tuition period	February-June
Tuition languages	English
Degree programme	20BC - Master Universitario en Biologia Computacional
Centre	20 - Etsi Agronómica, Aliment. Y Biosistemas
Academic year	2025-26

2. Faculty

2.1. Faculty members with subject teaching role

Name and surname	Office/Room	Email	Tutoring hours *
Javier Bajo Perez	Dep IA ETSII	javier.bajo@upm.es	M - 12:00 - 14:00 W - 12:00 - 14:00
Antonio Molina Fernandez (Subject coordinator)	Lab234 del CBGP	antonio.molina@upm.es	M - 12:00 - 14:00 Th - 12:00 - 14:00

* The tutoring schedule is indicative and subject to possible changes. Please check tutoring times with the faculty member in charge.

3. Prior knowledge recommended to take the subject

3.1. Recommended (passed) subjects

The subject - recommended (passed), are not defined.

3.2. Other recommended learning outcomes

- No son necesarios conocimientos previos

4. Skills and learning outcomes *

4.1. Skills to be learned

CE06 - Identificar las necesidades bioinformáticas de los centros de investigación y las empresas del sector de la biotecnología y la biomedicina.

CG06 - Que los estudiantes posean las habilidades de aprendizaje que les permitan continuar estudiando de un modo que habrá de ser en gran medida autodirigido o autónomo para adaptarse a la rápida evolución prevista en el área de la Biología Computacional.

CT02 - Capacidad para aplicar el método científico para la resolución de problemas de forma efectiva y creativa.

CT03 - Tener compromiso bioético y profesional y respeto por la sostenibilidad ambiental.

4.2. Learning outcomes

RA55 - Adquirir habilidades profesionales de comunicación escrita y oral

RA54 - Adquirir conocimientos sobre el análisis y publicación de Big Data y la ética asociada

RA53 - Adquirir conocimiento sobre la inversión en I+D+i, incluyendo aspectos relacionados con solicitud y gestión de proyectos

* The Learning Guides should reflect the Skills and Learning Outcomes in the same way as indicated in the Degree Verification Memory. For this reason, they have not been translated into English and appear in Spanish.

5. Brief description of the subject and syllabus

5.1. Brief description of the subject

The aim of this subject is to provide to the students knowledge about the Computational Biology/Big Data profesional market and to train the students in the skills required for their professional career development.

Among the themes to be studied in this topic are the following:

1. Professional Career and Career track skills: Preparation of Professional profile and CV, and development of professional skills.

2. R&D projects: Writing, preparation and application of projects for competitive calls.

3. Management of R&D projects (type of projects, national and international calls, and consortium projects).

4. Innovation concepts and knowledge transfer

5. Intellectual property protection

6. Public presentations of innovation projects and results.

7. Profesional ethics and Data Protection

5.2. Syllabus

1. Professional Career and Career track skills: Preparation of Professional Profile and CV and development of professional skills.

2. R&D Project: Writing and preparation of grants for application to competitive calls

3. Management of R&D projects

4. Innovation concepts and knowledge transfer

5. Intellectual property protection and Professional Ethics

6. Profesional ethics and Data Protection.

7. Public presentations of projects and innovations

6. Schedule

6.1. Subject schedule*

Week	Type 1 activities	Type 2 activities	Distant / On-line	Assessment activities
1	**Course Introduction and students presentation** Duration: 02:00 Cooperative activities			
2	**Topic 1. Professional Career and Career track skills: Preparation of Professional profile and CV, and development of professional skills.** Duration: 02:00 Lecture			
3	**Topic 1. Professional Career and Career track skills: Preparation of Professional profile and CV, and development of professional skills.** Duration: 02:00 Lecture			
4	**Topic 1. Professional Development Career and Career Skills: Presentation of Professional profile** Duration: 01:45 Cooperative activities			**Professional Profile and CV preparation (Actividad Evaluación progresiva)** Individual presentation Progressive assessment Presential Duration: 00:15
5	**Topic 2. R&D projects: Writing, preparation and application of projects for competitive calls** Duration: 02:00 Lecture			
6	**Topic 2. R&D projects: Writing, preparation and application of projects for competitive calls** Duration: 02:00 Lecture			
7	**Seminars of Invited Speakers (Professional Carrier): Head of HR on Career track skills and HR selection** Duration: 01:30 Additional activities **Seminars of Invited Speakers (Professional Carrier): Head of HR on Career track skills and HR selection** Duration: 01:30 Additional activities			

8	**Topic 3. Scientific writing and public presentations of projects and results** Duration: 01:00 Lecture **Topic 3. Management of R&D projects (type of projects, national and international calls, and consortium projects)** Duration: 00:45 Lecture			**Class participation and innovation/professional growth (Actividad de Evaluación Progresva)** Other assessment Progressive assessment Presential Duration: 00:15
9	**Topic 4. Market: R&D Centers and enterprise of the Computational area: Analysisng the market and the needs in Computational Biology** Duration: 02:00 Cooperative activities			
10	**Tema 5. Concepts of Innovation** Duration: 02:00 Lecture			
11	**Tema 5. Innovation Hubs on Computational Biology: presentation** Duration: 01:00 Lecture		**Topic 5. Seminar of innovation: Actua UPM program** Duration: 01:00 Additional activities	**Innovation Hubs on Computational Biology: presentation** Individual presentation Progressive assessment Presential Duration: 00:15
12	**Topic 6. Intelectual Property and Profesional ethics** Duration: 02:00 Lecture			
13	**Topic 7. Profesional Ethics and personal data regulation** Duration: 02:00 Additional activities			
14	**Innovation Presentation Project of Students:** Duration: 02:00 Cooperative activities			
15	**Innovation Presentation Project of Students:** Duration: 02:00 Cooperative activities			
16	**Innovation Presentation Project of Students** Duration: 01:30 Cooperative activities			**Innovation Project Presentation (Actividad de Evaluación Progresiva)** Individual presentation Progressive assessment Presential Duration: 00:30
17				**Evaluación Continua (Actividad de Evaluación Global)** Written test Global examination Presential Duration: 02:00

Depending on the programme study plan, total values will be calculated according to the ECTS credit unit as 26/27 hours of student face-to-face contact and independent study time.

7. Activities and assessment criteria

7.1. Assessment activities

7.1.1. Assessment

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
4	Professional Profile and CV preparation (Actividad Evaluación progresiva)	Individual presentation	Face-to-face	00:15	25%	5 / 10	CG06 CE06
8	Class participation and innovation/professional growth (Actividad de Evaluación Progresva)	Other assessment	Face-to-face	00:15	20%	4 / 10	CG06
11	Innovation Hubs on Computational Biology: presentation	Individual presentation	Face-to-face	00:15	15%	5 / 10	CE06
16	Innovation Project Presentation (Actividad de Evaluación Progresiva)	Individual presentation	Face-to-face	00:30	40%	5 / 10	CE06 CT02 CT03

7.1.2. Global examination

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
17	Evaluación Continua (Actividad de Evaluación Global)	Written test	Face-to-face	02:00	100%	5 / 10	CG06 CE06 CT02 CT03

7.1.3. Referred (re-sit) examination

Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
Examen (Actividad de Evaluación Global)	Written test	Face-to-face	01:00	100%	5 / 10	CG06 CE06 CT02 CT03

7.2. Assessment criteria

The participation in class and motivation will be also considered for final evaluation in progressive evaluation.

8. Teaching resources

8.1. Teaching resources for the subject

Name	Type	Notes
Topic Presentations (pdf Moodle)	Web resource	Presentations in the Subject web page in Moodle
National and international Reports and Legal Text	Web resource	Profesional Development Career Reports

9. Other information

9.1. Other information about the subject

This Subject will contribute to the following ODS:

Salud y bienestar

Industria, innovación e infraestructura

Reducción de las desigualdades

Ciudades y comunidades sostenibles

Producción y consumo responsables

Alianzas para lograr los objetivos