

**COURSE DATA****Data Subject**

|                      |                                                 |
|----------------------|-------------------------------------------------|
| <b>Code</b>          | 43469                                           |
| <b>Name</b>          | New issues in the regulation of gene expression |
| <b>Cycle</b>         | Master's degree                                 |
| <b>ECTS Credits</b>  | 3.0                                             |
| <b>Academic year</b> | 2023 - 2024                                     |

**Study (s)**

| <b>Degree</b>                                                       | <b>Center</b>                  | <b>Acad. year</b> | <b>Period</b> |
|---------------------------------------------------------------------|--------------------------------|-------------------|---------------|
| 2210 - M.D. in Research in Molecular, Cellular and Genetics Biology | Faculty of Biological Sciences | 1                 | First term    |

**Subject-matter**

| <b>Degree</b>                                                       | <b>Subject-matter</b>                                | <b>Character</b> |
|---------------------------------------------------------------------|------------------------------------------------------|------------------|
| 2210 - M.D. in Research in Molecular, Cellular and Genetics Biology | 14 - New issues in the regulation of gene expression | Optional         |

**Coordination**

| <b>Name</b>                 | <b>Department</b>                       |
|-----------------------------|-----------------------------------------|
| ALEPUZ MARTINEZ, ELIA PAULA | 30 - Biochemistry and Molecular Biology |

**SUMMARY**

This course will address aspects of gene expression, in a broad sense. The teachers of the subject and visiting researchers will present and discuss with the students topics of their own research or those they consider particularly relevant, trying to reflect the current state of knowledge. Topics may include both signaling processes involving changes in gene expression and transcriptional and post-transcriptional mechanisms including their regulation.

**PREVIOUS KNOWLEDGE**



### Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

### Other requirements

Knowledge of Biochemistry and Molecular Biology.

## OUTCOMES

### 2210 - M.D. in Research in Molecular, Cellular and Genetics Biology

- Students should be able to integrate knowledge and address the complexity of making informed judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities associated with the application of their knowledge and judgments.
- Students should communicate conclusions and underlying knowledge clearly and unambiguously to both specialized and non-specialized audiences.
- Students should demonstrate self-directed learning skills for continued academic growth.
- Be able to access the information required (databases, scientific articles, etc.) and to interpret and use it sensibly.
- Students should possess and understand foundational knowledge that enables original thinking and research in the field.
- Be able to access to information tools in other areas of knowledge and use them properly.
- To be able to assess the need to complete the scientific, historical, language, informatics, literature, ethics, social and human background in general, attending conferences, courses or doing complementary activities, self-assessing the contribution of these activities towards a comprehensive development.

## LEARNING OUTCOMES

Know, understand, discuss and critique research on current issues related to the mechanisms of gene expression and regulation, particularly those of recent discovery and apparent increased interest in its novelty and intensity of research at the moment

## DESCRIPTION OF CONTENTS

### 1. Contents of the subject

The course will discuss various topics in the field of gene expression and regulation. The contents shall be elected by the teachers of the subject and guest researchers based on their line of investigation and / or novelty and relevance of the topic.



## WORKLOAD

| ACTIVITY         | Hours        | % To be attended |
|------------------|--------------|------------------|
| Theory classes   | 26,00        | 100              |
| Other activities | 4,00         | 100              |
| <b>TOTAL</b>     | <b>30,00</b> |                  |

## TEACHING METHODOLOGY

Each of the topics discussed during the course will be covered in two sessions of one hour. In the first session the teacher or guest researcher will introduce the subject to be treated. To do this, the teacher will summarize the current state of knowledge in the topic, pose a specific challenge to study and how this study has been addressed experimentally, either in his own laboratory or by other researchers. At the end of the first session will provide students with one or more research articles related to the topic. These items will be discussed at the second meeting devoted to the topic, analyzing both the methodology used, the results obtained and their contribution to the knowledge of the biological problem being analyzed.

## EVALUATION

It will be evaluated the student's participation in the discussion, and their responses to a short questionnaire that will arise at the end of the second session for each topic. The final grade will be the average of the marks obtained in each subject.

## REFERENCES

### Basic

- Se proporcionará para cada uno de los temas tratados por el profesor o investigador correspondiente.