

Descrição das unidades curriculares (Ficha de disciplina)

1. **Curricular Unit:** Free Option
2. **Curricular Unit code:** FO
3. **Faculty:** Instituto de Tecnologia Química e Biológica and/or others
4. **Department:** not applicable
5. **Course:** PhD in Biological and Chemical Sciences and Engineering
6. **Course level:** PhD
7. **Type of Curricular Unit:** Mandatory
8. **Year of study plan:** First through fourth years
9. **Semester:** From the 2nd semester onwards
10. **Number of credits:** 4 ECTS
11. **Coordinators:** in-house, Paula Alves, Adriano Henriques; also the responsables for the various curricular units selected by the student
12. **Number of hours/week:** it varies according to the specific curricular unit selected by the student

13. Objectives of the Curricular Unit

The main goal of this Curricular Unit is to allow the student to format his/her advanced 3rd cycle studies to specific needs and goals. This is accomplished in two ways. First, by following Curricular Units offered in-house, in other schools or research Institutes of the UNL, or in other Universities or Institutes in the country or abroad, with which the ITQB has cooperation protocols. Second, if a specific course is not available, by means of a specific proposal made by the student or a group of students to the Course Committee, for a course in the form of a tutorial or equivalent format, as long as it conforms to the number of ECTS specified above, and to the general goals of the 3rd cycle course. Typically, the competencies to be acquired will be directed to a specific need identified by the student, who will be able to complete and adjust his/her academic training according to a specific profile. Other important goals of this Curricular Unit are the development of competencies for the critical reading and appraisal of the scientific literature, as well as the learning of tools for science communication, specifically in the form of oral presentations and article writing.

14. Background requirements

First semester of the PhD course.

15. Contents of the Curricular Unit

The content and format of this Curricular Units is variable.

16. Bibliography

Typically, the bibliography will consist of recent scientific articles published in leading journals in the area. Textbooks may also be used as basic reference material.

17. Teaching methods

The teaching methods may range from formal lectures and practical sessions, to a tutorial format, centered on group discussions. In this case, the discussions will be based on articles published recently on leading journals in the area of study.

18. Evaluation

The evaluation methods will be those defined for the particular Curricular Unit chosen by the student. Evaluation may include an exam with a theoretical and a practical component, as well as presentations, reports, etc. For tutorials, the evaluation will be based mostly on the assessment of the students participation, critical reading of the literature, and capacity to cement the information.

19. Language

Typically, english.