

Academic Year/course: 2022/23

63245 - Innovation and Classroom Research in Physics and Chemistry

Syllabus Information

Academic Year: 2022/23

Subject: 63245 - Innovation and Classroom Research in Physics and Chemistry

Faculty / School: 107 - Facultad de Educación

Degree: 584 -

596 -

ECTS: 4.0

Year: 1

Semester: Second semester

Subject Type: Optional

Module:

1. General information

2. Learning goals

3. Assessment (1st and 2nd call)

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

The learning process that has been designed for this subject is based first on the argued discussion of basic theoretical aspects on innovation and research in Physics and Chemistry to later design and analyze proposals made by the students. Both the script of the topics covered and the specific materials for the follow-up of the subject will be made available to the students through the subject's website in the digital teaching ring of the University of Zaragoza.

4.2. Learning tasks

The program offered to the student to help him achieve the expected results comprises the following activities.

The sessions will be in person and will consist of the following activities:

- o Introductory lectures, by the teacher, on innovation and research in Physics and Chemistry I and its impact on the teaching-learning process.
 - o Analysis and debate of proposals and concrete experiences on lines of innovation and research
 - o Reading and discussion of research and innovation articles in Science Didactics.
 - o Development of personal learning portfolio
 - o Exhibitions by students
 - o Designs of innovation and research projects in the teaching of Physics and Chemistry.
 - o The organization of conferences or seminars with invited speakers that facilitate the acquisition of
- Hours distribution:

| | | Presence (%) |
|-----------------------------|----|--------------|
| Master Classes | 16 | 100 |
| Case and problem resolution | 24 | 100 |
| Own Study | 40 | 0 |
| Own work | 16 | 10 |
| Evaluation test | 4 | 100 |

4.3. Syllabus

All activities are related to the following contents:

- Innovation and research in Didactics of Physics and Chemistry and its impact on the teaching
- Criteria and methods for evaluating the teaching and learning process of students.
- Development and analysis of teaching innovation and evaluation proposals.
- Exhibition and debate of said proposals.

4.4. Course planning and calendar

The calendar of sessions and presentation of works will be communicated in the ADD at the beginning of the academic year.

The approach, methodology and evaluation of this guide is prepared to be the same in any teaching

4.5. Bibliography and recommended resources

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=63245&Identificador=C71851>