Universitat Autònoma de Barcelona

2018/2019

Educational Values of Science Inside and Outside the Classroom

Code: 102086
ECTS Credits: 6

Degree	Type	Year	Semester
2500798 Primary Education	OT	4	0

Contact

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Use of languages

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: Yes
Some groups entirely in Spanish: No

Teachers

Marta Fonolleda Riberaygua

Prerequisites

It is recomended to have passed the compulsory subjects about science education before doing this subject

Objectives and Contextualisation

identify scientific activity as a significant part of contemporary culture.

understand characteristic values of scientific activity.

think about the presence of scientific activity in the media

establish connections between the curriculum of primary education and the offer of science education activities w

Skills

- Design and regulate learning spaces in contexts of diversity that take into account gender equality, equity and respect for human rights and observe the values of public education.
- Design, plan and evaluate education and learning processes, both individually and in collaboration with other teachers and professionals at the centre.

- Develop the functions of tutoring and guidance of pupils and their families, attending to the pupils own needs. Understand that a teachers functions must be perfected and adapted in a lifelong manner to scientific, pedagogical and social changes.
- Foster reading and critical analysis of the texts in different scientific fields and cultural contents in the school curriculum.
- Generate innovative and competitive proposals in research and in professional activity.
- Know and apply information and communication technologies to classrooms.
- Know the curricular areas of Primary Education, the interdisciplinary relation between them, the evaluation criteria and the body of didactic knowledge regarding the respective procedures of education and learning.
- Reflect on classroom experiences in order to innovate and improve teaching work. Acquire skills and habits for autonomous and cooperative learning and promote it among pupils.
- Work in teams and with teams (in the same field or interdisciplinary).

Learning outcomes

1. Identifying aspects common to all the experimental sciences and examining them in depth.
2. Knowing how to communicate and present an argument in science lessons.
3. Planning for scientific learning situations in contexts outside of the school.
4. Promoting the use of explanatory models.
5. Relating science with its technological applications, with its social impact on the didactic situations pertaining to the school.

Content

The contents of the course are:

- scientific education to train citizens in contemporary society: how we approach at our social context? Which are the values of science in the present context? Anyone can do scientific activities? Where is science in my life?
- science in and out the classroom: shall we go out of school? How to establish links between the curriculum and museums activities? How can we program it?
- museums and science centers as learning spaces: Which are the characteristics of museums and science centers? Do they work with the same didactical models that we work in the school? do we know how to evaluate the quality of their activities?
- professionals of Science Centers: Which professional competences we need to work in Science Centers? What we can establish connections between science centers and school?

Methodology

The methodology of the course combines oral presentations and reflections using written and audiovisual docum

Activities

Title	Hours	ECTS	Learning outcomes
Type: Directed			
Lectures	12	0.48	1, 5
Reading forums	15	0.6	3

Sharing and discussion	8	0.32	3
Visits to institucions that offer scientific education activities	10	0.4	3, 4, 5, 2
Type: Supervised			
Tutoring	28	1.12	1, 3, 4, 5, 2
Type: Autonomous			
Independent learning	75	3	1, 5

Evaluation

The evaluation of the course includes both individual and group dimension. Individual evaluation consists of a written exam and a written reflection around the forums of the course. The group evaluation consists in designing a teaching unit which include a visite to a museum or Science Center.

Attendance is compulsory. Students must attend more than 80% of the lessons to be evaluated.

All evaluation activities must be submitted on time and there is no remedial exam.

Final grades will be notified via virtual campus, 15 days after. Then, a review will be considered.

Total or parcial copy of the examen or the written works will be a reason to fail the course.

Exam and written work grades must be more than 5/10 to be able to consider the average qualification

Evaluation activities

Title	Weighting	Hours	ECTS	Learning outcomes
Individual reflection work	30	0	0	1, 3, 4, 5, 2
Proposal of teaching unit about science education outside the classroom	40	0	0	1, 3, 4, 5
Written exam	30	2	0.08	1, 3, 4, 5, 2

Bibliography

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