Universidad Zaragoza

Year : 2019/20

60432 - Sicentific and technical communication skills

Syllabus Information

Academic Year: 2019/20
Subject: 60432 - Sicentific and technical communication skills
Faculty / School: 100 - Facultad de Ciencias
Degree: 541 - Master's in Geology: Techniques and Applications
ECTS: 6.0
Year: 1
Semester: First semester
Subject Type: Compulsory
Module: ---

1.General information

1.1.Aims of the course

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

The present subject, by its instrumental and transversal character, aims to develop diverse and different abilities in the students. Some of them will surely be already partly acquired, as the students are supposed to have fulfilled a University degree. Therefore, such basic skills as dealing with bibliographic information; oral, written and graphic expression, as well as basic knowledge of English, are intended to be developed more in detail. The mainly practical character of the course requires active participation of the student in all programmed activities.

2.Learning goals

2.1.Competences

2.2.Learning goals

1. Abilities for searching, selecting and processing scientific information from bibliographic (and other) resources.

2. Abilities to select, understand, and summarize scientific information about a certain, chosen topic.

3. Development of oral and written expression abilities on different scientific contents.

4. Abilities to shape, synthesize, and adapt relevant graphic and audio-visual information relevant for the communication of scientific contents on a certain scientific topic.

5. Practical knowledge of communication mechanisms inside the scientific community.

6. Abilities to elaborate and write a scientific work.

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

The student should demonstrate that he/she has reached the previewed learning results by means of the following evaluation activities:

a) PARTIAL PRACTICAL WORKS:

a.1) Selection and processing of bibliographic information on a freely selected topic. Elaboration of a selected reference list.

a.2) Elaboration of a script, or a conceptual framework (?conceptual map?) of the selected topic. Brief oral presentation (in Spanish).

a.3) Lecturing and underlining of a selected English paper. Redaction of a brief critical comment (in Spanish).

a.4) Writing a preliminary Abstract (in English) of the personal work.

a.5) Brief oral presentation of the personal work.

a.6) Preparation and updating, by means of adequate informatic tools, of a plate including both pictures and line drawings that could be included in the personal work.

b) PERSONAL SCIENTIFIC WORK:

b.1) Final written work (in English). Four-page manuscript in the format of the template of the Journal Geotemas.

b.2) Oral presentation (in either Spanish or Engish) of the final work, with graphical support on screen.

EVALUATION CRITERIA:

- Partial practical work (activities a.1 to a.6): 30 %
- Final written work (activity b.1): 50 %
- Final oral presentation (activity b.2): 20 %

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

The methodology followed in this course is oriented towards practical learning and development of a series of technical abilities and skills. A wide range of teaching and learning tasks are implemented, such as a series of theoretical-practical two-and-a-half-hour sessions and assignments. The practical part will be almost exclusively devoted to the students' autonomous work, shaping a series of assignments leading to a final project. This project will be presented both as a written contribution in the shape of the template of the journal *Geotemas*, and orally, in a seminar session in front of the other students and teachers.

4.2.Learning tasks

The course includes 12 topics, each of them developed through one or two theoretical-practical two-and-a-half-hour sessions, in which the students will try to improve the acquired skills.

- Topics 1 to 7 involve short practical, written assignments for students.
- Topics 2 and 5 also include oral presentations.
- After sessions corresponding to topics 1-11, the students should submit the written version of their project.
- The project will be presented orally (in either Spanish or English) in a sharing session at the end of the semester.

4.3.Syllabus

The course will address the following topics:

Topic 1. Introduction: Communication abilities in the scientific community. Practical analyses of some selected cases. Selection and use of documentary (bibliographic and other) sources. Searching and handling strategies. Dealing with bibliographic references.

Topic 2. Structuring the information. Syntheses and Abstracts; conceptual maps. Oral expression (in Spanish).

Topic 3. Written expression in Spanish. Style and structure of scientific writing: lexical, orthography, punctuation, syntaxis and structure of a scientific text. Writing exercises and correction of the most common errors.

Topic 4. Written and oral expression in English (I). Style and structure of scientific writing: lexical, orthography, punctuation, syntaxis and structure of a scientific text. Writing exercises and correction of the most common errors.
Topic 5. Written and oral expression in English (II). Style of oral communication. Brief oral presentation.

Topic 6. Organizing and writing a scientific paper in English. Title, key-words, abstract, description, interpretation, discussion, conclussions, graphics, bibliography. Case analyses.

Topic 7. Graphic expression (I). The graphic style in Geology: maps, stratigraphic successions, legends, field drawings, Informatics tools for the treatment of images and photographs. Case analyses.

Topic 8. Graphic expression (II). Drawings in Geology. Informatics tools for scientific drawings. Case analyses.

Topic 9. Graphic expression (III). Informatics tools for the graphic support of oral presentations. Case analyses.

Topic 10. Social structure of Science: communication in the scientific community. Papers and scientific meetings. Control and evaluation mechanisms; peer reviewing. The scientific controversies.

Topic 11. Organizing and shaping a technical report. Some particular cases of reports for mining and construction projects. Reports on environmental and heritage impact. Case analyses.

Topic 12. Scientific communication in culture. Scientific and social spread of science. The case of geological heritage. Case analyses.

4.4.Course planning and calendar

The 12 topics are developed through 20-22 theoretical-practical sessions, lasting 2.5 hours, during the semester.

Assignments a.1 to a.6 are made during weeks 2nd, 3th, 4th and 7th, and submitted, as a general rule, before the previous day to the next session.

Topic 2 includes an oral presentation.
The final project is submitted once topics 1-11 are taught, before Christmas break.
The oral presentation of the project takes place in the second week of january.

Key dates:
- First week of October: Beggining of lectures and sessions.
- Second, third, fourth and seveth week: Delivery of (parcial) practical works.
- Third week of December: End of ordinary teaching sessions.
- Third week of December: Delivery of the final, written work.
- Second week of January: Oral presentation of the final work.

4.5.Bibliography and recommended resources

http://biblos.unizar.es/br/br_citas.php?codigo=60432&year=2019