Universidad Zaragoza

Year : 2020/21

60432 - Sicentific and technical communication skills

Syllabus Information

Academic Year: 2020/21
Subject: 60432 - Sicentific and technical communication skills
Faculty / School: 100 - Facultad de Ciencias
Degree: 541 - Master's in Geology: Techniques and Applications
624 - 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

CG2 - To exchange and discuss information from different sources (written, oral, numerical, graphical).

CB9 - To have the knowledge to communicate conclusions, and the reasons that sustain them, to specialized and non-specialized audiences in a clear and unambiguous way.

CT1 - To use the English language to obtain information and to transfer it.

CT3 - To use ICTs critically as a work tool.

CE6 - To be able to communicate geological research and professional results, as well as to understand the work of other specialists.

CE7 - To acquire communicative capabilities in specific environments: preparation of research articles, writing up of technical reports, design of oral presentations and posters for conferences.

2.2.Learning goals

The student, after completing the course, will be able to:

- Search, select and process scientific information from bibliographic (and other) resources.
- Use and apply the correct written and oral communication standards in Science, know the internal quality control criteria and revision.
- Organise and prepare the results of a geological work, both in Spanish and English, using the appropriate format for each goal: scientific articles or presentations, technical reports, outreach, etc.

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:

1. CONTINUOUS ASSESSMENT

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 software, 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 Geogaceta.

b.2) Oral presentation (in either Spanish or English) 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 %

2. FINAL ASSESSMENT

For those students that did not pass the course by continuous assessment, and for those that did not follow the course face to face, a final examination consisting in the following parts will be carried out:

a) Written report. A four-page paper written using the style guide of the journal Geogaceta, including an abstract in English, a summary in Spanish, the body of the text (in Spanish or English), at least four figures and a list of bibliographic references. The figures should include maps, photos taken in the field (alternatively, photos of rock samples taken in the lab), and computer-generated line drawings. Together with the paper, a two-page report summarising the criteria followed for the selection of the paper's topic and a description of the process of information search, preparation and writing.

b) Oral presentation (either in Spanish or in English) of the written paper in a maximum time of 15 minutes using Powerpoint or similar presentation software. The talk will be followed by questions to which the student should give suitable answers.

Evaluation criteria

- Written report: 70%
- Oral presentation: 30%

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 *Geogaceta* journal, and as an oral exposition 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, 2, 3, 4, 5 and 7 involve short practical, written or graphical assignments for students.
- Topics 2, 5 and 12 also include oral presentations.
- After sessions corresponding to topics 1-12, 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.

The teaching and assessment activities will be carried out on-site (face-to-face) unless, due to the exceptional health situation, the provisions issued by the competent authorities and by the University of Zaragoza provide for them to be carried out off-site (telematically), except for field practices.

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 expression in English. 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. Oral expression in English. Style of oral communication. Brief oral presentation.

Topic 6. Organizing and writing a scientific paper. 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. Communication within the scientific community. Social construction of Science. Ways for communication: papers, scientific meetings. Control and evaluation mechanisms; peer reviewing.

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. Audiovisual communication. Case analyses.

4.4.Course planning and calendar

The 12 topics are developed through 21-22 theoretical-practical sessions, lasting 2.5 hours, during the semester.

Assignments a.1 to a.7 are carried out in parallel with the development of in parallel with the development of the course topics, and submitted, as a general rule, before the previous day to the next session.

The final project is submitted once topics 1-12 are taught, before Christmas break.

The oral presentation of the project takes place in the third week of january.

Key dates:

- First week of October: Beggining of lectures and sessions.
- Third week of December: End of ordinary teaching sessions.
- Mid January: Delivery of the final, written work.
- Third 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