

GRADO EN QUÍMICA

DATOS DE LA ASIGNATURA

ASIGNATURA	INTRODUCTION TO RESEARCH METHODS	SUBJECT	INTRODUCTION TO RESEARCH METHODS
CÓDIGO	757509315		
MÓDULO	COMPLEMENTARIO	MATERIA	Q. INORGÁNICA
CURSO	4 ^º	CUATRIMESTRE	2 ^º
DEPARTAMENTO	QUÍMICA PROFESOR JOSÉ CARLOS VÍLCHEZ MARTÍN	ÁREA DE CONOCIMIENTO	QUÍMICA INORGÁNICA
CARÁCTER	OPTATIVA	CAMPUS VIRTUAL	MOODLE

DISTRIBUCIÓN DE CRÉDITOS

	TOTAL	TEÓRICOS GRUPO GRANDE	TEÓRICOS GRUPO REDUCIDO	PRÁCTICAS DE INFORMÁTICA	PRÁCTICAS DE LABORATORIO	PRÁCTICAS DE CAMPO
ECTS	3	1.89	1.11	0	0	0

DATOS DEL PROFESORADO

COORDINADOR

NOMBRE JOSÉ MARÍA MUÑOZ MOLINA

DEPARTAMENTO QUÍMICA PROFESOR JOSÉ CARLOS VÍLCHEZ MARTÍN

ÁREA DE CONOCIMIENTO QUÍMICA INORGÁNICA

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CAMPUS VIRTUAL MOODLE

DESCRIPCIÓN GENERAL DE LA ASIGNATURA

DESCRIPCIÓN GENERAL

This optional subject is offered in the fourth year of the chemistry degree. The course provides practical skills needed to establish the current state of the art of a topic, identify research needs, conduct library and information search, develop research proposals and communicate effectively scientific results. The subject is useful for students who want to enter the field of research, learn the use of management tools for scientific documentation, and improve writing and speaking communications skills.

ABSTRACT

This optional subject is offered in the fourth year of the degree. The course provides practical skills needed to establish the current state of the art of a topic, identify research needs, conduct library and information search, develop research proposals and communicate effectively scientific results. The subject is useful for students who want to enter the field of research, learn the use of management tools for scientific documentation and improve writing and speaking communications skills.

OBJETIVOS: RESULTADOS DEL APRENDIZAJE

The general objective is to provide tools for the development of research activities. After completing this course, students will be able to:

- Access resources and services available through Campus Library Services.
- Manage and search online databases using keywords, subjects, and advanced options.
- Identify key terms and develop a search strategy.
- Extract information and summarize scientific articles.
- Know vocabulary and writing, publishing and public presentation of scientific papers.
- Correctly cite resources.
- Design and write proposals for research projects.
- Efficiently communicate research results to a specialized audience.

REPERCUSIÓN EN EL PERFIL PROFESIONAL

As mentioned before, the foundations of research in chemistry stand on the different lessons included herein. Thus, any potential job directly related with the chemical field will undoubtedly be affected by this knowledge.

RECOMENDACIONES AL ALUMNADO

The only prerequisite is the user-level management of information and communications technologies, which will be used repeatedly throughout the semester in a variety of activities.

COMPETENCIAS

COMPETENCIAS BÁSICAS

COMPETENCIAS GENERALES

COMPETENCIAS TRANSVERSALES

COMPETENCIAS ESPECÍFICAS

TEMARIO Y DESCRIPCIÓN DE LOS CONTENIDOS

TEORÍA

Lecture 1. The Research Method. Concepts of research method. Definitions. Some methods of knowledge. Research techniques. Stages of the scientific method. Establishment of the hypotheses. Hypothesis test. Results analysis. Conclusions.

Lecture 2. Sources of Information. Literature. Information sources. Books. Monographs. Magazines. Technical reports. Thesis. Database. References. Information search.

Lecture 3. Information Management. Reference Managers. Desktop and web versions. How to add information and cite references. Profile and workgroup.

Lecture 4. Research Design. Setting research goals. Work plan design. Research planification and laboratory notebook.

Lecture 5. Diffusion of scientific results. Scientific conferences. Scientific articles, patent, etc. Scope and impact of the results.

Lecture 6. The scientific article. What is a scientific article?. Types of scientific articles. Structure of scientific article. Phases and rules for the development of a scientific article. Review and publication process. Quality criteria.

Lecture 7. Misconduct. Examples of misconduct. Ethical guidelines. Practical cases.

PRÁCTICAS DE LABORATORIO

Not applicable

PRÁCTICAS DE INFORMÁTICA

Not applicable

PRÁCTICAS DE CAMPO

Not applicable

METODOLOGÍA DOCENTE

Grupo grande

- Clases presenciales relativas a los contenidos teóricos y prácticas (problemas) de la asignatura, utilizando recursos didácticos tales como transparencias, presentaciones informatizadas y videos.
- Realización de presentaciones por los estudiantes de aspectos relativos al temario de la asignatura.
- Test y resolución de cuestiones teórico-prácticas.
- Discusión de artículos científicos.
- Cualquier actividad dirigida que ayude a la adquisición de conocimientos, habilidades y destrezas.
- Seguimiento de otras tareas que se les asignen.
- Resolución de dudas.
- Empleo de páginas Web como apoyo a la docencia de la materia.

CRONOGRAMA ORIENTATIVO I

SEMANAS (S):	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15
GRUPO GRANDE															
GRUPO REDUCIDO															
PRÁCTICAS DE LABORATORIO															
PRÁCTICAS DE INFORMÁTICA															
PRÁCTICAS DE CAMPO															

EVALUACIÓN DE LA ASIGNATURA

PRIMERA EVALUACIÓN ORDINARIA (FEBRERO/JUNIO)

EVALUACIÓN CONTINUA

The knowledge acquired in each unit will be evaluated by the different activities of the subject: the theoretical exam and the academic activities, which help to make a continuous evaluation of the student.

-Attendance/Participation and exercises (20%). Students are expected to attend all lectures. Students are expected to discuss and participate in class activities and discussions. The assignments will consist of the resolution of exercises related with the issues studied during the course.

-Oral Presentation (40%). Each student will give an oral presentation in conference format for science subject-matters. The goal will be to communicate research results to a specialized audience.

-Written exam (40%). One final exam that consist of ten questions about the issues studied during the course. The final mark will be an average between the aforementioned three parts. It is mandatory a minimum final mark of 5 points out of 10 to pass the subject.

EVALUACIÓN FINAL

Students who choose this option will perform:

- Oral Communication (50%); the students will give a presentation in conference format for science subject-matters. The goal will be to communicate research results to a specialized audience.

- Written exam (50%); One final exam that consist of ten questions about the issues studied during the course. The final mark will be an average between the aforementioned 2 parts. It is mandatory a minimum final mark of 5 points out of 10 to pass the subject.

¿Contempla una evaluación parcial?

NO

SEGUNDA EVALUACIÓN ORDINARIA

The knowledge acquired in each unit will be evaluated as follows:

- Oral Communication (50%); the students will give a presentation in conference format for science subject-matters. The goal will be to communicate research results to a specialized audience.

- Written exam (50%); One final exam that consist of ten questions about the issues studied during the course. The final mark will be an average between the aforementioned 2 parts. It is mandatory a minimum final mark of 5 points out of 10 to pass the subject.

TERCERA EVALUACIÓN ORDINARIA Y OTRAS EVALUACIONES

Both continuous and final evaluation systems will be available in the ordinary call III and the criteria of the ordinary call II will be applied.

OTROS CRITERIOS DE EVALUACIÓN

¿Contempla la posibilidad de subir nota una vez realizadas las pruebas?

NO

Requisitos para la concesión de matrícula de honor

The final mark must be equal or higher than 9.5 points.

REFERENCIAS

BÁSICAS

Hugh G. Gauch Jr. Scientific Method in Practice, Cambridge University Press; 1st edition (2002), ISBN : 9780521017084.

Stephen S. Carey, A Beginner's Guide to Scientific Method, Wadsworth Publishing; 3 edition (2003), ISBN : 9780534584504.

Bright Wilson Jr. An Introduction to Scientific Research, Dover Publications; Rev. Sub. edition, ISBN : 9780486665450.



GUÍA DOCENTE

Curso 2021/2022



ESPECÍFICAS

Michael J. Katz, From Research to Manuscript: A Guide to Scientific-Writing, Springer; 2nd ed. (2009), ISBN : 9781402094668.