UNIVERSIDAD DE CASTILLA - LA MANCHA

GUÍA DOCENTE

1. General information

Course: ADVANCED CHEMISTRY LABORATORY
Code: 310583
Type: CORE COURSE
ECTS credits: 6
Degree: 2326 - MASTER DEGREE PROGRAMME IN CHEMICAL RESEARCH
Academic year: 2019-20
Center: 1 - FACULTY OF SCIENCE AND CHEMICAL TECHNOLOGY
Group(s): 20
Year: 1
Duration: First semester
Main language: Spanish
Second language: English
Use of additional languages:
English Friendly: Y
Web site:
Bilingual: N

Lecturer: **ANTONIO FERMIN ANTIÑOLO GARCIA** - Group(s): **20**

Building/Office	Department	Phone number	Email	Office hours
San Alberto Magno	QUÍMICA INORG., ORG., Y BIOQ.	3471	antonio.antinolo@uclm.es	Wednesday and Thursday from 16:30 to 17:30

Lecturer: **MARIA ANTONIA HERRERO CHAMORRO** - Group(s): **20**

Building/Office	Department	Phone number	Email	Office hours
Irica	QUÍMICA INORG., ORG., Y BIOQ.	926052556	mariaantonia.herrero@uclm.es	Tuesday, wednesday and thursday 11-13 h.

Lecturer: **ELENA JIMENEZ MARTINEZ** - Group(s): **20**

Building/Office	Department	Phone number	Email	Office hours
EDIFICIO MARIE CURIE, 2ª PLANTA	QUÍMICA FÍSICA	926052129	elena.jimenez@uclm.es	Monday, Tuesday and Wendsday: 13:30-14.30 16:00-17:00

Lecturer: **MARIA DEL PILAR MARTIN PORRERO** - Group(s): **20**

Building/Office	Department	Phone number	Email	Office hours
Marie Curie, 2ª planta	QUÍMICA FÍSICA	926052614	mariapilar.martin@uclm.es	Martes, miércoles a partir de las 3:30 p.m. a 5:30 p.m. y jueves y viernes desde las 12:30 p.m. a la 1:30 p.m.

Lecturer: **SONIA MERINO GUIJARRO** - Group(s): **20**

Building/Office	Department	Phone number	Email	Office hours
San Alberto Magno, 1ª planta	QUÍMICA INORG., ORG., Y BIOQ.	3495	sonia.merino@uclm.es	Monday: 16.30-19.30 Wednesday: 16.30-19.30

Lecturer: **ANGEL RIOS CASTRO** - Group(s): **20**

Building/Office	Department	Phone number	Email	Office hours
San Alberto Magno	Q. ANALÍTICA Y TGIA. ALIMENTOS	3405	angel.rios@uclm.es	Monday, Tuesday, and Wednesday from 11-13

Lecturer: **ANA SANCHEZ-MIGALLON BERMEJO** - Group(s): **20**

Building/Office	Department	Phone number	Email	Office hours
Edificio San Alberto Magno	QUÍMICA INORG., ORG., Y BIOQ.	+34926051941	ana.smigallon@uclm.es	Tuesday and Thursday from 12-14 h.

Lecturer: **ESTER VAZQUEZ FERNANDEZ-PACHECO** - Group(s): **20**

Building/Office	Department	Phone number	Email	Office hours
Marie Curie, 3ª planta	QUÍMICA INORG., ORG., Y BIOQ.	+34 926 05 21 57	ester.vazquez@uclm.es	Martes, Jueves 11-13 h.

Lecturer: **MARIA JESUS VILLASEÑOR LLERENA** - Group(s): **20**

Building/Office	Department	Phone number	Email	Office hours
Politécnico/A24	Q. ANALÍTICA Y TGIA. ALIMENTOS	926052673	mjesus.villasenor@uclm.es	It will be published in Moodle at the beginning of the course

2. Pre-Requisites

Not established

3. Justification in the curriculum, relation to other subjects and to the profession

The Advanced Matter Chemistry Lab is designed to initiate students in laboratory work at the research level. Advanced laboratory techniques, methods of analysis and structural identification more common in chemical research as well as advanced synthetic procedures will be used.

4. Degree competences achieved in this course

Course competences

Code	Description
E02	Relating the macroscopic and supramolecular properties with those of atoms, molecules and non-molecular chemical compounds.
E04	Knowing the usefulness of the methods of design, simulation and molecular calculations, as well as having skills in the handling of these methods.
E05	Knowing the usefulness of separation techniques, analysis and structural determination, their joint application in the resolution of research problems, as well as possessing skills in the use of such techniques.

E07	Knowing the principles of sustainable chemistry and safety standards for handling known chemicals
E08	Knowing the kinetics of chemical processes, including catalysis, reaction mechanisms and the methods and techniques used to determine them.
E09	Knowing the possibilities offered by new analytical methodologies in different fields of application, such as environmental analysis, pharmacological analysis, etc.
E10	Being able to address synthesis problems, including planning and development of preparation of compounds with new properties, methods of control of selectivity, especially the stereoselective methods.
E11	Knowing the main areas and topics of research and sustainable methodologies in Chemistry.
E12	Being able to plan and develop projects and experiments, as well as linking different scientific specialties (interdisciplinary character).
G01	Knowing the precision of the experimental data and its use for the planning of experimental research work.
G02	Having the necessary ability to perform advanced laboratory procedures and the use of instrumentation in synthetic and analytical work.
T04	Ability to use specific software for research in chemistry.
T05	Ability to obtain bibliographic information at the research level, including Internet resources (databases, specialized scientific bibliography, social networks, etc ...), as well as carry out a selection and classification of it.

5. Objectives or Learning Outcomes

Course learning outcomes

Description

Practically apply the scientific method.

Know expose research results orally.

To interpret the experimental results and design new experiments based on result (error) and testing.

Knowing how to handle scientific literature for the search and design of new experimental procedures.

Know how to write a laboratory diary according to research and quality criteria.

Knowing how to use advanced experimental procedures.

Knowing the utility and management of the main techniques of structural analysis and determination used in chemical research.

6. Units / Contents

No units added

7. Activities, Units/Modules and Methodology

No se ha introducido ninguna actividad de aprendizaje

8. Evaluation criteria and Grading System

Evaluation criteria not defined

9. Assignments, course calendar and important dates

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10. Bibliography and Sources

Author(s)	Title/Link	Publishing house	Citv	ISBN	Year	Description
No se ha introducido ningún elemento bibliográfico						