UNIVERSIDAD DE CASTILLA - LA MANCHA

GUÍA DOCENTE

1. General information

Course: MATERIALS IN ORGANIC CHEMISTRY
Code: 310591
Type: ELECTIVE
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: C2
Main language: Spanish
Second language: English
Use of additional languages:
English Friendly: Y
Web site:
Bilingual: N

Lecturer: **ANTONIO DE LA HOZ AYUSO** - Group(s): **20**

Building/Office	Department	Phone number	Email	Office hours
San Alberto Magno	QUÍMICA INORG., ORG., Y BIOQ.	926295411	antonio.hoz@uclm.es	Lunes,Martes y Jueves 10 a 12 h

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: **MARIA DEL PILAR PRIETO NUÑEZ-POLO** - Group(s): **20**

Building/Office	Department	Phone number	Email	Office hours
San Alberto Magno	QUÍMICA INORG., ORG., Y BIOQ.	+34926052615	mariapilar.prieto@uclm.es	Martes, Jueves 11-13 h.

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.

2. Pre-Requisites

Not established

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

Not established

4. Degree competences achieved in this course

Course competences

Code	Description
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.
E12	Being able to plan and develop projects and experiments, as well as linking different scientific specialties (interdisciplinary character).
G02	Having the necessary ability to perform advanced laboratory procedures and the use of instrumentation in synthetic and analytical work.
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.
T06	Being able to develop professionally through continuous training.

5. Objectives or Learning Outcomes

Course learning outcomes

Description

Knowing the main organic polymers, structure, preparation and properties.

Knowing the properties of organic compounds as molecular materials.

Know how to establish structure-property relationships.

Know how to select and apply the most appropriate characterization technique for each type of structural analysis.

Being able to analyze the information provided by a particular technique in order to deduce the structure of the derivative under study and know how to select and apply the technique most suitable for each type of structural analysis characterization.

Additional outcomes

6. Units / Contents

Unit 1:

Unit 2:

Unit 3:

Unit 4:

Unit 5:

Unit 6:
Unit 7:
Unit 8:
Unit 9:
Unit 10:
Unit 11:
Unit 12:
Unit 13:
Unit 14:
Unit 15:
Unit 16:
Unit 17:
Unit 18:
Unit 19:
Unit 20:

7. Activities, Units/Modules and Methodology

Training Activity	Methodology	Related Competences (only degrees before RD 822/2021)	ECTS	Hours	As	Com	R	Description
Class Attendance (theory) [ON-SITE]	Lectures	E10 E12 G02 T05 T06	1.2	30	N	-	-	
Problem solving and/or case studies [ON-SITE]	Problem solving and exercises	E10	0.4	10	Y	N	Y	
Study and Exam Preparation [OFF-SITE]	Self-study	T06	3.2	80	N	-	-	
Writing of reports or projects [OFF-SITE]	Assessment tests	E12 T05	0.4	10	Y	N	Y	
Study and Exam Preparation [OFF-SITE]	Assessment tests		0.72	18	N	-	-	
Final test [ON-SITE]	Self-study		0.08	2	Y	N	Y	
		Total:	**6**	**150**				
		Total credits of in-class work: 1.68						**Total class time hours: 42**
		Total credits of out of class work: 4.32						**Total hours of out of class work: 108**

As: Assessable training activity
Com: Training activity of compulsory overcoming
R: Rescheduling training activity

8. Evaluation criteria and Grading System

Evaluation criteria not defined

9. Assignments, course calendar and important dates

Not related to the syllabus/contents	
Hours	**hours**

10. Bibliography and Sources

Author(s)	Title/Link	Publishing house	Citv	ISBN	Year	Description
G. de la Torre, L. Sánchez, N. Martín	Compuestos orgánicos con propiedades ópticas no lineales: hacia las nuevas tecnologías fotónica y fotoelectrónica					
J. L. Delgado, M. A. Herranz, N. Martín	Nanoestructuras de carbono: un nuevo desafío científico					
J. L. Segura	Dispositivos orgánicos electroluminiscentes. Una nueva tecnología				1999	
M. A. Llorente Uceta, A. Horta Zubiaga	Técnicas de Caracterización de Polímeros	UNED			1991	
M. S. Rodríguez Morgade, G. de la Torre, T. Torres	Las ftalocianinas y sus singulares propiedades electrónicas				2003	
N. Martín	Fullerenos: moléculas de carbono con propiedades excepcionales					
N. Martín, J. L. Segura, R. Gómez	Células solares de plástico: un reto para los nuevos materiales orgánicos del siglo XXI				2001	
P. Vázquez, T. Torres, N. Martín, eds.	Los materiales moleculares en España en el umbral del siglo XXI	UAM Ediciones			2001	
C. E. Carraher, Jr.	Introduction to Polymer Chemistry	CRC Press			2010	
S.F. Mahmoud	Electromagnetic Waveguides. Theory and Applications	IET			1991	

C. Sánchez Renamayor (coord..), I. Esteban Pacios, I. Fernández de Piérola, A. Horta Zubiaga, E. Morales Luján, V. Moreno Montes, A. Pérez Dorado	Laboratorio de macromoléculas y Técnicas de Caracterización de Polímeros	UNED	2000
R. J. Young, P. A. Lovell	Introduction to Polymers	CRC Press	2011
J.W. Steed J.L. Atwood	Supramolecular Chemistry	Wiley	2000
W. F. Smith, J. Hashemi	Fundamentos de la ciencia e ingeniería de materiales	McGraw Hill	2014
J.M. Lehn	Supramolecular Chemistry	Wiley-VCH	1995