UNIVERSIDAD DE LA RIOJA

INSTRUMENTAL AND EXPERIMENTAL METHODS IN CHEMISTRY AND BIOTECHNOLOGY
2016-2017

Master Degree:	CHEMISTRY AND BIOTECHNOLOGY		760M
Course title:	Instrumental and experimental methods in Chemistry and Biotechnology		5111
Year/Semester:	1/1S	ECTS Credits:	4

DEPARTMENT

Department of Chemistry					
Address:	Madre de Dios, 53				
City:	Logroño	Province:	La Rioja	Postal code:	26006
Phone number:	+34 941 299 607		Email address:	dpto.dq@unirioja.es	

ENGLISH-FRIENDLY FACULTY

Name:	Busto Sancirián, Jesús Héctor		
Phone number:	+34 941 299 668	Email address:	hector.busto@unirioja.es
Office:	1104	Building:	Faculty of Sciences and Technology

Name:	Tena Vázquez de la Torre, Teresa		
Phone number:	+34 941 299 648	Email address:	maria-teresa.tena@unirioja.es
Office:	1110	Building:	Faculty of Sciences and Technology

Name:	Olmos Pérez, Elena		
Phone number:	+34 941 299 648	Email address:	m-elena.olmos@unirioja.es
Office:	1212	Building:	Faculty of Sciences and Technology

CONTENTS

The course “Instrumental and experimental methods in Chemistry and Biotechnology” aims to serve as a basis for more advanced courses within the Master, focusing on a practical vision of the different tools that both professionals and researchers may require in the fields of Chemistry and Biotechnology.

Unit 1. Diffraction methods
Unit 2. X-ray crystallography
Unit 3. Spectroscopy
Unit 4. Mass spectrometry
Unit 5. Gas Chromatography
Unit 6. Liquid Chromatography
Unit 7. Capillary Electrophoresis
Unit 8. Magnetic Resonance
Unit 9. Molecular Recognition
Unit 10. Microscopy

REFERENCES

Title
Crystallography: An introduction
The basics of crystallography and diffraction
Basic crystallograph
Practical Gas Chromatography: A Comprehensive Reference
Bioanalytical Chemistry
Mass spectrometry. A textbook
Chemical Biology Applications and Techniques

EVALUATION SYSTEM

Power point and oral presentation (10%, recoverable)

Final exam (60%, recoverable)

Portfolio (20%, unrecoverable)

Direct observation techniques (10%, unrecoverable)