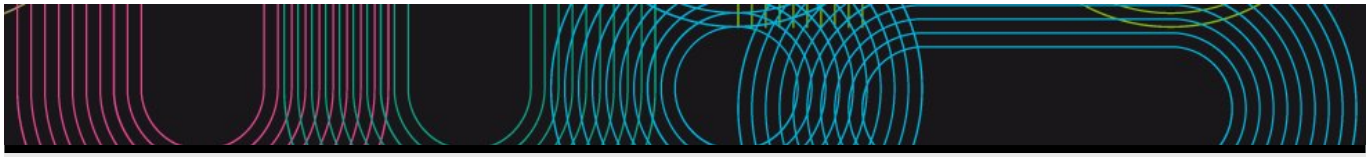

IDENTIFYING DATA				
Final Year Dissertation				
Subject	Final Year Dissertation			
Code	V11G201V01991			
Study programme	Grado en Química			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	18	Mandatory	4th	2nd
Teaching language	#EnglishFriendly Spanish Galician English			
Department				
Coordinator	Peña Gallego, María de los Ángeles			
Lecturers	Peña Gallego, María de los Ángeles			
E-mail	mpena@uvigo.es			
Web	http://quimica.uvigo.es/traballo-fin-de-grao.html			
General description	According to the memory of the Degree in Chemistry of the University of Vigo, the End of Degree project is a mandatory subject of 18 credits ECTS in the second term of the fourth course. The objective of the subject is to offer the students the opportunity to apply the knowledges, skills and competences adquired during the Degree studies. The TFG is an original work that each student will do individually under the supervision of one or two tutors. TFG subjects can correspond to experimental and/or theoretical works and/or of bibliographic reviews on subjects related with the contains in the Degree in Chemistry. The final stage of the TFG will consist in a written report and its public presentation. English Friendly subject: International students may request from the teachers: a) materials and bibliographic references in English, b) tutoring sessions in English, c) exams and assessments in English.			

Training and Learning Results	
Code	
A1	Students can apply their knowledge and understanding in a manner that indicates a professional approach to their work or vocation, and have competences typically demonstrated through devising and sustaining arguments and solving problems within their field of study
A2	Students have demonstrated knowledge and understanding in a field of study that builds upon their general secondary education, and is typically at a level that, whilst supported by advanced textbooks, includes some aspects that will be informed by knowledge of the forefront of their field of study
A3	Students have the ability to gather and interpret relevant data (usually within their field of study) to inform judgments that include reflection on relevant social, scientific or ethical issues
A4	Students can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences
A5	Students have developed those learning skills that are necessary for them to continue to undertake further study with a high degree of autonomy
B1	Ability for auronomous learning
B2	Organization and planning capacity
B3	Ability to manage information
B4	Ability for analysis and synthesis
B5	Ability to adapt to new situations and to make decisions
C1	Ability to know and understand essential facts, concepts, principles and theories related to Chemistry
C2	Use correctly chemical terminology, nomenclature, conversions and units
C3	Recognize and analyze chemical, qualitative and quantitative problems, proposing strategies to solve them through the evaluation, interpretation and synthesis of data and chemical information
C4	Use computer tools properly to obtain information, process data, perform computational calculations and calculate matter properties
C5	Present material and scientific arguments in oral and written form to a specialized audience
C6	Know the basics and tools for resolution of analytical problems and characterization of chemical substances

C7	Distinguish the main types of chemical reactions and their characteristics
C8	Know the characteristic properties of the elements and their compounds, including the relations between groups and their variations in the periodic table
C9	Know the structural aspects of chemical elements and their compounds, including stereochemistry
C10	Know the characteristics of the different states of matter and the theories used to describe them
C11	Know the principles of Thermodynamics and its applications in Chemistry
C12	Know the kinetics of chemical change, including catalysis and reaction mechanisms
C13	Know the principles and applications of electrochemistry
C14	To know the principles of quantum mechanics and its application in the description of the structure and properties of atoms and molecules
C15	Know the main techniques of structural research, including spectroscopy
C16	Know the relationship between macroscopic properties and properties of individual atoms and molecules, including macromolecules (natural and synthetic), polymers, colloids, crystals and other materials
C17	Know the nature and behavior of functional groups in organic molecules
C18	Know the properties of aliphatic, aromatic, heterocyclic and organometallic compounds
C19	Know the main synthesic routes in organic chemistry, including the interconversions of functional groups and the formation of carbon-carbon and carbon-heteroatom bonds
C20	Know the structure and reactivity of the main classes of biomolecules and the chemistry of important biological processes
C21	Know mathematical concepts based on previous ones and be able to use them in the different contexts of Chemistry
C22	Know and apply the foundations of Physics necessary to understand the theoretical and practical aspects of Chemistry that need it
C23	Know the principles and procedures of chemical engineering
C24	Know the properties and applications of materials
C25	Safely handle chemical substances, considering their physical and chemical properties, evaluating the risks associated with their use and laboratory procedures and including their environmental repercussions
C26	Perform correctly usual procedures in the laboratory, including the use of standard chemical instrumentation for synthetic and analytical work
C27	Demonstrate the ability to observe, monitor and measure chemical processes, by systematically and reliably recording them and presenting reports of the work done
C28	Interpret data derived from laboratory observations and measurements in terms of their meaning and relate them to the appropriate theory
C29	Demonstrate ability for numerical calculations and interpretation of experimental data, with correct use of units and estimation of uncertainty
C30	Ability to understand, interpret and adapt the advances in the field of Analytical Chemistry
C31	Know the control processes applied in the analytical laboratories to achieve their correct management and ensure the quality of the results
C32	Acquire basic knowledge on enviromental control and evaluation and agro-food security
C33	Know the metrology of chemical processes, including quality management
C34	Select and use different procedures for obtaining and characterizing nanomaterials and know their potential in the development of new applications
C35	Acquire theoretical and experimental knowledge in advanced aspects of Physical Chemistry
C36	Know the basics and be able to use different quantum mechanical methods to be applied to systems of chemical interest
C37	Acquire basic knowledge of programming and be able to use appropriate computer packages to solve problems of chemical interest
C38	Relate the structural bases of organometallic compounds with their physical, spectroscopic and chemical properties
C39	Select the appropriate techniques and procedures for problems of structural elucidation, synthesis, isolation and purification of organometallic compounds
C40	Acquire knowledge about the variety of roles played by metal ions in Biology. Know the biomolecules that contain metal ions
C41	Evaluate health risk, and environmental and socioeconomic impact of chemical substances
C42	Know synthetic strategies to obtain stereoselectively compounds with biological activity
C43	Know the chemical compounds with therapeutic application
C44	Know the main methods for the study of organic reactions mechanisms
C45	Apply chemical and chemical engineering knowledge to industrial processes
C46	Know the principles and procedures of environmental technology applied to the industry
C47	Know the principles and procedures of industrial health and safety
C48	Be able to determine the behavior of a material
C49	Acquire sufficient knowledge, skills and abilities for the practice of immunochemistry in different fields
C50	Know the concepts of company, institutional and legal framework of companies, and organization and management of companies
D1	Ability to solve problems
D2	Capacity for teamwork
D3	Ability to communicate in both oral and written form in Spanish and / or Galician and / or English

D4	Incorporate criteria of sustainability and environmental commitment into the professional exercise. Acquire skills in the equitable, responsible and efficient use of resources
D5	Ability to develop their professional activity based on respect for fundamental rights and equal opportunities, within the framework of professional ethics and ethical commitment
D6	Ability to understand the meaning and application of the gender perspective in different areas of knowledge and professional practice with the aim of achieving a more just and equal society

Expected results from this subject

Expected results from this subject	Training and Learning Results			
New	A1	B1	C1	D1
	A2	B2	C2	D2
	A3	B3	C3	D3
	A4	B4	C4	D4
	A5	B5	C5	D5
			C6	D6
			C7	
			C8	
			C9	
			C10	
			C11	
			C12	
			C13	
			C14	
			C15	
			C16	
			C17	
			C18	
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			C43	
			C44	
			C45	
			C46	
			C47	
			C48	
			C49	
			C50	

Contents

Topic
(*)Dado o seu carácter especial, a materia non ten contidos propios.

Planning

	Class hours	Hours outside the classroom	Total hours
Mentored work	160	256	416
Presentation	0.5	33.5	34

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies

	Description
Mentored work	Individual work that each student will make of autonomous form under the supervision of one or two tutors. The allocation of the subject of work will do in accordance with the Rule of the TFG of the Faculty of Chemistry.

Personalized assistance

Methodologies	Description
Mentored work	

Assessment

	Description	Qualification	Training and Learning Results

Mentored work	30	A1	B1	C1	D1
		A2	B2	C2	D2
		A3	B3	C3	D3
		A4	B4	C4	D4
		A5	B5	C5	D5
				C6	D6
				C7	
				C8	
				C9	
				C10	
				C11	
				C12	
				C13	
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				C44	
				C45	
				C46	
				C47	
				C48	
				C49	
				C50	

Presentation	70	A1 A2 A3 A4 A5	B1 B2 B3 B4 B5	C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C32 C33 C34 C35 C36 C37 C38 C39 C40 C41 C42 C43 C44 C45 C46 C47 C48 C49 C50	D1 D2 D3 D4 D5 D6

Other comments on the Evaluation

TFG is ruled by the norms approved in the Junta de Facultad and published in the web page web of the faculty.
The TFG Commission will do public, with sufficient advance, the criteria of evaluation that will use the tutor and the jury.
The TFG Commission will do public, with sufficient advance, the conditions for the written report and the public defences.
All the information generated by the TFG Commission will be included in the platform Tem@ and/or in the web page of the faculty.

Sources of information

Basic Bibliography

Complementary Bibliography

Recommendations