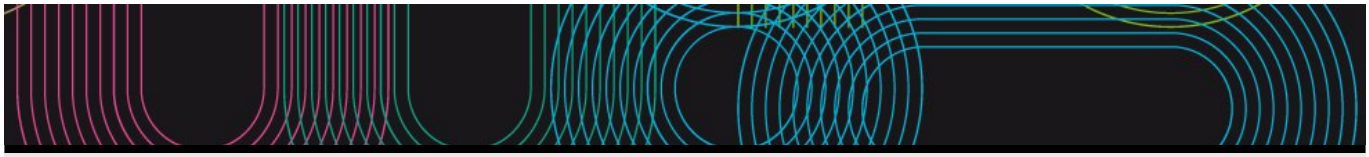

IDENTIFYING DATA				
IT tools and communication in chemistry				
Subject	IT tools and communication in chemistry			
Code	V11G200V01401			
Study programme	(*)Grao en Química			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	6	Mandatory	2nd	2nd
Teaching language	English			
Department				
Coordinator	Correa Duarte, Miguel Ángel			
Lecturers	Correa Duarte, Miguel Ángel Pérez Juste, Jorge Silva López, Carlos			
E-mail	macorrea@uvigo.es			
Web				
General description	The course aims to familiarize students with the use of chemical information sources (scientifical and technical in general) with emphasis on its use through the Internet, as well as with the use of all types of software tools for statistical calculations and chemical modeling . Attention is also paid to the acquisition of important communication skills (writing scientific and technical documents, academic, web design, etc).			

Competencies	
Code	
C22	Process and perform computational calculations with chemical information and chemical data
C23	Present oral and written scientific material and scientific arguments to a specialized audience
D1	Communicate orally and in writing in at least one of the official languages of the University
D2	Communicate at a basic level in English in the field of chemistry
D3	Learn independently
D4	Search and manage information from different sources
D5	Use information and communication technologies and manage basic computer tools
D6	Use mathematics, including error analysis, estimates of orders of magnitude, correct use of units and data representations
D7	Apply theoretical knowledge in practice
D8	Teamwork
D9	Work independently
D10	Work at a national and international context
D14	Analyze and synthesize information and draw conclusions
D15	Evaluate critically and constructively the environment and oneself
D16	Develop an ethical commitment
D18	Generate new ideas and show initiative

Learning outcomes		
Expected results from this subject		Training and Learning Results
To know the different sources of scientific and technical information	C23	D1 D2 D4 D5 D9 D14 D16

To understand the basics of running a Science library and know how to perform an advanced use of its services		D2 D4 D5 D8 D9 D14
To classify scientific journals based on their theme or objective	C23	D1 D2 D3 D5 D8 D9 D10 D15 D18
To know the basic characteristics of other sources: technical reports, conference proceedings, patents, dissertations, government publications, standards, videos, dictionaries, encyclopedias, directories, databases and """"handbooks"""".	C23	D1 D2 D5 D8 D10 D16
To know the basic characteristics of other sources: technical reports, conference proceedings, patents, dissertations, government publications, standards, videos, dictionaries, encyclopedias, directories, databases and """"handbooks"""".	C23	D1 D2 D5 D8 D10 D16
To know the structure and function of an abstracting or indexing service	C23	D1 D2 D5 D8 D10 D16
To know how to use statistical program packages to perform data fitting, graphical and other kinds of statistical analysis	C22	D3 D5 D6 D7 D9 D14 D16

Contents

Topic	
The scietific literature: general aspects.	Structure and classification of the literature. General rules of a literature search. Function, organization and use of a scientific library.
Information Sources	Books. Journals. Technical reports. Conference Proceedings. Patents. Thesis. Government Publications. Standards. Videos. Dictionaries. Directories Encyclopedias Databases

Using Internet	Basic Internet services. Remote connection and file transfer utilities. Search engines. Electronic lists and subscription services. Other services. Structure, function and design of web pages.
Indexing and abstracting services	Identification of a scientific paper. The ISI Web of Knowledge (WOK). The Chemical Abstract Service (CAS) and the Scifinder. Other abstracting services. Handbooks.
Bibliographic Managers	Classification of bibliographic references: general principles. Use of popular software packages: Refworks and Endnote as examples.
Preparation of a scientific, technical or academic document	Parts of a scientific document. References, tables and figures : general principles. Use of computer templates. General aspects of the scientific style and the use of English. How to write: CVs, progress reports, grant requests and other academic documents.

Planning

	Class hours	Hours outside the classroom	Total hours
Master Session	14	28	42
Practice in computer rooms	26	52	78
Troubleshooting and / or exercises	2	22	24
Long answer tests and development	1.5	4.5	6

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

Methodologies

	Description
Master Session	The theoretical aspects of the subject are presented
Practice in computer rooms	Computer lab exercises: literature searches, use of bibliographic managers, use of statistical packages, report writing.
Troubleshooting and / or exercises	Report or article writing in English language. Simple exercises with modelling software

Personalized attention

Methodologies	Description
Practice in computer rooms	The student is helped by providing adequate guidelines. Since all lectures are given in the computer room, the student will be helped mostly there in a practical and effective way.
Troubleshooting and / or exercises	The student is helped by providing adequate guidelines. Since all lectures are given in the computer room, the student will be helped mostly there in a practical and effective way.

Assessment

	Description	Qualification	Training and Learning Results

Practice in computer rooms	Typically, literature searches	20	C22 C23	D1 D2 D3 D4 D5 D9 D15 D16
Troubleshooting and / or exercises	Tipically, database searches and use of utilities of modelling software.	40	C22 C23	D1 D2 D3 D4 D5 D8 D10 D14 D15 D18
Long answer tests and development	Written exam consisting of short questions.	40		D1 D2 D14 D15

Other comments on the Evaluation

Attendance at practical lectures (seminars) is compulsory. The student will be given a rating (0-10) as long as he/she has attended 3 or more seminar sessions, has delivered at least two reports on the exercises or practices proposed by the teacher or has done a written exam.

If the student fails in the first call he/she will be asked to improve some of the exercises or perform new ones provided by the teacher. In addition he/she will have to undergo a more thorough exam, which will weight 50% of the final grade.

Sources of information

Douville, J.A., **The literature of chemistry**, 1st,

Kaplan, S.M., **The English-Spanish Spanish-English dictionary of chemistry**, 2ª,

Day, R.A.; Gastel, B., **How to write and publish a scientific paper**, 7ª,

Recommendations

Subjects that are recommended to be taken simultaneously

Numerical methods in chemistry/V11G200V01402
Physical chemistry II/V11G200V01403
Inorganic chemistry I/V11G200V01404

Subjects that it is recommended to have taken before

Physics: Physics I/V11G200V01102
Physics: Physics II/V11G200V01201
Chemistry: Chemistry I/V11G200V01105
Chemistry: Chemistry II/V11G200V01204