

**COURSE DATA****Data Subject**

Code	33864
Name	Information Technology II
Cycle	Grade
ECTS Credits	6.0
Academic year	2023 - 2024

Study (s)

Degree	Center	Acad. year	Period
1007 - Degree in Information and Documentation	Faculty of Geography and History	1	Second term

Subject-matter

Degree	Subject-matter	Character
1007 - Degree in Information and Documentation	16 - Information technology	Basic Training

Coordination

Name	Department
DURA MARTINEZ, ESTHER	240 - Computer Science

SUMMARY

This course follows the course in Information Technology already taken by students in the first semester. The main goal of this course is to focus on the foundations of computer systems from the perspective of file structure and supports, with special attention to electronic documents and digital editing, web publishing through markup languages, the logics of information retrieval, as well as the tools and advanced services on the Web. It is therefore intended that students will acquire knowledge and skills that can be used in personal and professional practice in their future as graduates in Information and Documentation.



PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

Other requirements

It is recommended to have attended Informatica I.

COMPETENCES (RD 1393/2007) // LEARNING OUTCOMES (RD 822/2021)

1007 - Degree in Information and Documentation

- Capacity to write analytical reports and summaries with regard to management and organisation of information.
- Demonstrate organisational and planning skills.
- Have oral and written communication skills in one's own language.
- Have computer skills related to the field of study.
- Have skills for information management.
- Have problem-solving skills.
- Have decision-making capacity.
- Be able to work in a team and to integrate into multidisciplinary teams.
- Be able to apply critical reasoning to the analysis and assessment of alternatives.
- Be able to learn independently.
- Be able to adapt to changes in the environment.
- Be able to undertake improvements and propose innovations.
- Show creativity.

LEARNING OUTCOMES (RD 1393/2007) // NO CONTENT (RD 822/2021)

To know the characteristics of the most common supports to store data, different ways to access them and the different types of file organization.

To know and identify the most important elements that make possible the generation of an electronic document.

To know the basics of markup languages and acquire the ability to create a hypertext document using the XHTML markup language and the CSS style language.



To obtain an overview of the services and applications of the Advanced Web aimed at cooperative work between individuals or groups whose purpose is communication, information exchange, administration or creation of content.

To identify different strategies for the search of information on the internet as well as the fundamentals of the resources offered by search engine based on directories and other tools of interest.

DESCRIPTION OF CONTENTS

1. Electronic documents and digital publishing

- Digital Library.
- Generation of digital documents.
- File formats: documents and images.

2. Web publishing: markup languages

- Markup language introduction.
- Markup languages: HTML and XHTML.
- Style language: CSS.

3. Logic of Information retrieval

- Basics of search engines and Information Retrieval. Search strategies.

4. Advanced Web

- Services, applications of the web 1.0 and web 2.0: definitions and features.
- The Library 2.0.
- Semantic Web: definition and features.

5. Media and file structures

- Media types and access time.
- Files: definitios and concepts.
- Files organization.

**WORKLOAD**

ACTIVITY	Hours	% To be attended
Theory classes	45,00	100
Laboratory practices	15,00	100
Development of group work	10,00	0
Development of individual work	12,00	0
Study and independent work	13,00	0
Readings supplementary material	1,00	0
Preparation of evaluation activities	24,00	0
Preparing lectures	26,00	0
Preparation of practical classes and problem	3,00	0
Resolution of online questionnaires	1,00	0
TOTAL	150,00	

TEACHING METHODOLOGY**PRESENTIAL CLASSES:**

Classes will be based on active learning where an activity that requires the participation of students will be introduced every 20/25 minutes, so that: 1) they can immediately put into practice the contents they have just seen; 2) Regain the level of attention to the next exhibition block.

PREPARATION OF THEORETICAL CLASSES:

The students will have to prepare the content of the theoretical class, following the planning of the subject. For this they will make use of the bibliography suggested by the lecturer as well as of materials provided by this in an eventual way or other given orientations.

Students will be proposed activities that must be done at home individually or in groups and that will sometimes be necessary for the realization of the next theoretical session. These activities may be evaluated before the class begins or during the class as well as during tutorial hours.

Likewise, the previous preparation of these activities at home, will allow to apply certain techniques such as the puzzle or other more informal cooperative learning techniques.

PREPARATION OF PRACTICAL WORK:

In order to better assimilate the contents of the theoretical classes, practical sessions will take place. Attendance at practical sessions is mandatory and will be verified by the lecturer. Those students who, due to work reasons, can not attend should contact the lab assistant before the start of the activity. The results of these activities must be presented to the teacher in a staggered manner throughout the course and in the terms established by the teacher. Students will perform / prepare part of these activities at home. Attendance at practices is mandatory.



PERFORMANCE OF TEAMWORK:

Throughout the course a set of medium-sized problems will be considered that must be solved in teams of 3 to 6 people. In the process of evaluation of team work, both the joint note of the group and the individual note of each member will be scored.

TUTORIALS:

a) Scheduled tutorials:

There will be a few hours of scheduled tutoring where students will work in small groups on some of the concepts that present greater complexity and that have already been exposed in the theoretical class. They will be provided with a series of activities / problems that will be solved with the help of the teacher.

b) Non-scheduled tutorials:

Will establish a few hours of tutoring per week, which students can attend to clarify concepts or questions that have arisen during the completion of individual or group work

COMPLEMENTARY ACTIVITIES:

A seminar will be held that will deal in detail with some of the topics discussed throughout the course.

EVALUATION

The evaluation of the subject in first call will follow a continuous evaluation scheme in which the following aspects will be considered:

- **Written tests:** There will be a single final written test of a theoretical-practical nature. The minimum grade that the student must achieve to pass the subject both in the first and second calls will be 5 points out of 10. The grade obtained in this test will represent 50% of the final grade.
- **Preparation of theoretical classes:** The activities and problems that arise in the context of the theoretical classes will count 15% of the final grade. All the works are of obligatory realization for the evaluation of the subject in the first call. These works are not recoverable in second call.
- **Practical work:** The grade obtained in this section will represent 25% of the final grade. All practical assignments are compulsory. The minimum mark that the student must achieve in this section, both in the first and second calls, is 5 points out of 10 to be able to average with the rest of the sections. If they are suspended in the first call, they will be delivered and exhibited again in the second call according to the terms indicated by the professor of practices. The practices that are delivered in the second call will vary with respect to the first call.
- **Attendance at practices is mandatory.** In each practice session, the teacher will evaluate the work done by the student in it through an oral defense. This will be part of the evaluation of the practice in addition to the content of the practice that the teacher will also evaluate.
- **The practice will be delivered at the end of the last session of the same (example: if a practice is composed of two sessions, the practice will be delivered at the end of the last session, that is, session two)**
- **Teamwork:** In the evaluation process of teamwork, both the group's joint mark and the individual mark of each member will be graded. The grade obtained in this section will represent 10% of the final grade. All supervised team work is mandatory for the evaluation of the subject in the first call.



These works are not recoverable in the second call.

- The composition of the final grade will be applied, in summary, as:

- EXAM 50%
- Preparation of theoretical lectures 15,00%
- Practical Work 25,00%
- Team Work 10,00%
- TOTAL 100 %

This evaluation is based on the premise that teaching at the Universitat de València is, by definition, in-class. In this sense, students should bear in mind that attendance, both theoretical and practical, is essential for proper monitoring of the contents of the subject. The student must also bear in mind the possibility of a part-time enrollment, except in the case of 1st graders, when it is not possible to attend all the subjects that make up a complete course (60 credits). However, the possibility will be established, in cases that are adequately justified and for those students who request it, the possibility of being evaluated without having to attend all or part of the classes. In these cases the student should proceed as follows:

- At the beginning of the course, the teacher / s responsible for the subject must be informed about the incident for which it is impossible for them to attend the class, which must be adequately justified in a documentary way.
- The responsible teacher, in view of this information will decide the possibility of evaluation without total or partial assistance to the classes of the subject.

Students who are in this situation, must submit, to be evaluated, all work required by the teacher (not necessarily identical to those required during the course) as well as may be called to defend orally before the teacher, and they will perform a test of acquired knowledge. The weight of the works in the final grade will be 50% and that of the knowledge test the remaining 50%.

REFERENCES

Basic

- Gestión Digital del la Información: De bits a bibliotecas digitales y la Web. R. Peña, R.Baeza, J. Rodríguez, Ed. RA-MA 2002.
- La biblioteca digital. E. García Camarero, L. A. García, Ed. Arco/Libros, 2001.
- Fundamentos de programación Web con HTML, XHTML y CSS. J. Duckett, Ed. Anaya Multimedia, 2008.
- XHTML y CSS Los nuevos estándares del código fuente. Luc Van Lancker, Segunda Edición, Eni Ediciones, 2009.
- Los documentos electrónicos, qué son y cómo se tratan. Jordi Serra Serra, Ediciones Trea, 2008.
- La fotografía digital en los archivos, qué es y cómo se trata. David Iglesias Franch, Ediciones Trea, 2008.



- Los mejores trucos para Internet. F. Charte Ojeda, Ed. Anaya 2009.

Additional

- The Oxford Guide to Library Research. T. Mann, Ed. Oxford University Press, 2007.
- Fundamentos de Informática. B. Virgos, McGraw-Hill/Interamericana de España, S.A, 2008.
- Lenguajes de Marcas para la gestión de recursos digitales. E. Brub, Ed. Trea, 2008.
- Tendencias en Documentación Digital. J. Tramullas, Ed. Trea, 2006.
- <http://librosweb.es/libro/xhtml/>