

**1. General information****Course:** FINAL YEAR PROJECT (FYP).**Type:** PROJECT**Degree:** 407 - DEGREE PROGRAMME IN COMPUTER SCIENCE ENGINEERING**Center:** 108 - SCHOOL OF COMPUTER SCIENCE OF C. REAL**Year:** 4**Main language:** Spanish**Use of additional languages:****Web site:****Code:** 42358**ECTS credits:** 12**Academic year:** 2020-21**Group(s):** 20**Duration:** SD**Second language:** English**English Friendly:** N**Bilingual:** Y**2. Pre-Requisites**

The TFG must be defended and evaluated once it is proven that the student has passed all the remaining subjects of the study plan and has, therefore, all the necessary credits to obtain the degree, except those corresponding to the TFG itself.

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

The End of Degree Project (TFG) is the first professional work that students do during their training at the University College of Computer Science. In this work, carried out in the final phase of their studies, the student must make use of the knowledge acquired in the subjects studied. The TFG will be carried out on a subject related to the competences of the Specific Technology module that the student has studied and its realization is an essential requirement for the obtaining of the Graduate Degree in Computer Engineering.

The aim of the TFG is that the student prepares a personal work where he applies his knowledge, experiences, skills and creativity and originality to the solution of real problems. The TFG will provide solutions in the different themes of computer engineering, and special emphasis will be placed on the engineering or methodological approach to their realization. It may contain prototypes, theoretical models, algorithms, specifications, analysis and designs of both software and hardware components, but in all cases will have a remarkable part of implementation.

Teaching use of other languages:

The realization and the defense will be able to be realized in English, at the request of the student and director. The requirement of accrediting level B1, may be replaced by passing a TFG conducted and defended in English. In any case, the report will have a summary in Spanish and English. If the student chooses English as the language of the TFG, the summary, introduction and conclusions must be made in Spanish and English.

To obtain the mention of bilingual degree, it is necessary to have passed a minimum of 40% of the load in credits of the degree studies in English. This is 96 ECTS (40% of 240 ECTS) or, what is the same, a minimum of 16 subjects or 14 subjects plus the TFG. Therefore, if a TFG is to be taken in a bilingual format so that it is recorded in the European Supplement to the degree that the student receives at the end of the degree studies, it must be taken COMPLETELY in English. This implies the application, the report and the defence of the TFG in the English language.

In any case, if the 96 ECTS have already been passed, the choice of the language in which the TFG is developed and defended may follow the general specifications for any TFG.

**4. Degree competences achieved in this course****Course competences**

Code	Description
CO19	Original work to be developed individually to submit and present in front of an academic tribunal, consisting of a project of professional orientation in the field of specific technologies of Computer Engineering. In this project the student must summarise and integrate all the skills acquired along the modules in the degree.
INS01	Analysis, synthesis, and assessment skills.
INS02	Organising and planning skills.
INS03	Ability to manage information and data.
INS04	Problem solving skills by the application of engineering techniques.
INS05	Argumentative skills to logically justify and explain decisions and opinions.
PER03	Ability to work in an international context.
PER04	Interpersonal relationship skills.
SIS01	Critical thinking.
SIS02	Ethical commitments.
SIS03	Autonomous learning.
SIS05	Creativity.
SIS08	Initiative and entrepreneurial abilities.
SIS09	Care for quality.
SIS10	Awareness of environmental issues.
UCLM01	Command of a second language at a B1 level within the Common European Framework of Reference for Languages
UCLM02	Ability to use Information and Communication Technologies.
UCLM03	Accurate speaking and writing skills.
UCLM04	Professional ethics.

## 5. Objectives or Learning Outcomes

### Course learning outcomes

Description

The ability to defend all proposed solutions using logical and coherent argumentation.

The ability to select the most appropriate software and hardware tools and to employ these correctly.

The ability to clearly establish working hypotheses and to argue their validity based on the student's previously obtained results and/or on those of third parties.

Ability to assess resources and limitations, both personal and those pertaining to one's working environment, in the realization of a realistic work planning.

An ability to explain the search strategy adopted to obtain all information that is used, and to demonstrate that the most important information sources in the field of study were adequately consulted.

Ability to give clear reasoning for the different alternatives that were considered, when establishing how best to deal with the problem that was initially raised.

The ability to solve problems using initiative and creativity.

### Additional outcomes

## 6. Units / Contents

No units added

## 7. Activities, Units/Modules and Methodology

Training Activity	Methodology	Related Competences (only degrees before RD 822/2021)	ECTS	Hours	As	Com	Description
Individual tutoring sessions [ON-SITE]	Guided or supervised work	INS05 PER04 UCLM03 UCLM04	1	25	N	-	
Writing of reports or projects [OFF-SITE]	project-based learning	CO19 INS01 INS02 INS03 INS04 INS05 PER03 SIS01 SIS02 SIS03 SIS05 SIS08 SIS09 SIS10 UCLM01 UCLM02 UCLM03 UCLM04	10.32	258	Y	N	
Study and Exam Preparation [OFF-SITE]	Self-study	CO19 INS01 INS02 INS05 PER04 SIS01 SIS02 SIS05 SIS09 UCLM03 UCLM04	0.48	12	Y	N	
Final test [ON-SITE]	Assessment tests	CO19 INS01 INS02 INS05 PER03 PER04 SIS01 SIS02 SIS05 SIS08 SIS09 UCLM02 UCLM03 UCLM04	0.2	5	Y	Y	
<b>Total:</b>			<b>12</b>	<b>300</b>			
<b>Total credits of in-class work: 1.2</b>			<b>Total class time hours: 30</b>				
<b>Total credits of out of class work: 10.8</b>			<b>Total hours of out of class work: 270</b>				

As: Assessable training activity

Com: Training activity of compulsory overcoming (It will be essential to overcome both continuous and non-continuous assessment).

## 8. Evaluation criteria and Grading System

Evaluation System	Continuous assessment	Non-continuous evaluation*	Description
Other methods of assessment	10.00%	10.00%	Evaluation of reports, works and/or problems. Evaluation of the tutor. The report issued by the tutor, related to the development of the work, will be valued.
Final test	40.00%	40.00%	Global assessment of the evaluation commission. The work will be evaluated globally, considering the methodological aspects and the results obtained.
Other methods of assessment	20.00%	20.00%	Evaluation of reports, works and/or problems. Work memory. The evaluation committee will evaluate the report, considering aspects of structure, organization, content, writing, etc.
Oral presentations assessment	30.00%	30.00%	Presentation and defense of the work. The evaluation committee will evaluate the oral presentation, considering the quality of the material prepared, the ability to present it, the effectiveness of the answers to the questions asked, etc.
<b>Total:</b>	<b>100.00%</b>	<b>100.00%</b>	

According to art. 4 of the UCLM Student Evaluation Regulations, it must be provided to students who cannot regularly attend face-to-face training activities the passing of the subject, having the right (art. 12.2) to be globally graded, in 2 annual calls per subject, an ordinary and an extraordinary one (evaluating 100% of the competences).

### Evaluation criteria for the final exam:

#### Continuous assessment:

Each Assessment Tribunal may propose the granting of the mention of "Matrícula de Honor" to the TFG it has assessed and which has obtained a grade equal to Outstanding (10.0). In these cases, the performance and defense of the TFG in English or the performance and defense of the objectives and conclusions chapters in this language, will have special relevance in the selection process that grants the mention of "Matrícula de Honor".

To this end, the School Board, or where appropriate, the Delegate Commission, will select those End of Degree Projects to which it will award the mention of "Matrícula de Honor" from among those that obtained a grade equal to 10.

**Non-continuous evaluation:**

The same characteristics as continuous evaluation.

**Specifications for the resit/retake exam:**

The same characteristics as the "convocatoria ordinaria".

**Specifications for the second resit / retake exam:**

The same characteristics as the "convocatoria ordinaria".

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
Comisión Académica ESI	NORMATIVA SOBRE LA ELABORACIÓN Y DEFENSA DEL TRABAJO FIN DE GRADO DE LA ESCUELA SUPERIOR DE INFORMÁTICA DE CIUDAD REAL <a href="https://esi.uclm.es/categories/trabajo-fin-de-grado">https://esi.uclm.es/categories/trabajo-fin-de-grado</a>					