

Titulación	Tipo	Curso
Visión por Computador	TFE	1

Contacto

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Idiomas de los grupos

Puede consultar esta información al [final](#) del documento.

Prerrequisitos

Un grado en Ingeniería, Matemáticas, Física o similar.

Objetivos y contextualización

Coordinators: Ramon Baldrich and Maria Vanrell (for UAB), Xavier Baró (for UB), Ismael Altamirano (for UOC), Josep Ramon Casas (for UPC), Coloma Ballester (for UPF)

The main goal of this module is the development of a project where students should apply the knowledge acquired in the previous modules and their own skills and abilities to solve a practical problem in Computer Vision. For students willing to pursue a PhD program after completion of the master, the master thesis should be the first stage of their PhD thesis. To this end, students must be able to analyse the problem, pose an initial hypothesis to solve it, design an appropriate methodology to validate this hypothesis and draw relevant conclusions from their work. As a result, students must write a final report and pass a public defence before an evaluation committee where they should show their ability to communicate in a clear way their work. The expected total workload of this module thesis is about 300 hours.

Resultados de aprendizaje

1. CA04 (Competencia) Desarrollar todos los componentes de un sistema de visión en el contexto del trabajo final de máster.
2. CA05 (Competencia) Planificar el desarrollo, la evaluación, la diseminación y la transferencia de un proyecto de visión.
3. KA07 (Conocimiento) Identificar los componentes a todos los niveles que se deben solucionar en el contexto del trabajo final de máster.
4. KA11 (Conocimiento) Seleccionar los mejores algoritmos y experimentos para resolver y entrenar los componentes de un sistema en el contexto del trabajo final de máster.
5. KA15 (Conocimiento) Proporcionar la mejor modelización matemática que solucione cada una de las partes del sistema de visión que se desarrolla en el contexto del trabajo final de máster.
6. KA19 (Conocimiento) Saber construir un estado del arte y citar toda la bibliografía relacionada para un problema de visión en todos sus niveles.
7. SA16 (Habilidad) Preparar un documento científico que describa con toda profundidad de análisis e ilustración los resultados del desarrollo de un proyecto de visión.
8. SA18 (Habilidad) Defender los resultados del proyecto final de máster en una presentación oral frente a un comité evaluador.

Contenido

The Master dissertation is an individual academic work, consisting of 3 well differentiated parts, which are:

- the realization of the project,
- the writing of the technical report, and
- the public presentation and defense of the project, which will take place at the end of the first semester of the second.

The aim of the Project realization is the student to apply the steps of the scientific method.

All the information about these steps are given at the C8 moodle room in the Campus Virtual (cv.uab.cat), there you can find:

- Calendar divided in three steps:
 - Project proposals (October-March) are visible as soon as they arrive and are validated by the M9 coordinators. You are welcome to start discussing with the academic supervisors the proposals that interest you. Take note that a good number of proposals enter the system late and will only be visible by the end of March. Project proposals can be seen at:
Academic Project Proposals <[here](#)>
Company Project Proposals <[here](#)>

We recommend you to take your time to take a decision, specially we suggest to wait for having started all the remaining courses (C5 and C6) in order to have a global overview about what topic you do prefer.

- Selection period (April) during the selection period the students should discuss with academic supervisors and select a project. The students will have to select their preferred project using the Webpage of the Master, we will give you specific information about how to perform the assignment process, since you need to receive a confirmation of the assigned project.

Master project development (May to July or September) carries 300 hours of work, starting with the elaboration of the state of the art of your topic and agreeing with your supervisor on a time plan in advance to ensure that you will complete your project on time.

- Defense of the thesis (July or September) requires to deliver a report of your work and being evaluated by a committee of 3 members

Actividades formativas y Metodología

Título	Horas	ECTS	Resultados de aprendizaje
Tipo: Supervisadas			
Meetings with the supervisor	28	1,12	CA04, CA05, KA07, KA11, KA15, KA19, SA16, SA18, CA04
Tipo: Autónomas			
Autonomous work	156	6,24	CA04, CA05, KA07, KA11, KA15, KA19, SA16, SA18, CA04

Each student will have to select a project, it can be an academic project proposed by the academic staff, or can be a project proposed by a company.

Students can also propose their own project proposal. In any case an academic supervisor will be assigned from any of the 4 university departments involved in the master.

The supervisor will guide the student in a personalized manner in the completion of the project. The academic selects and provides guidance around the objectives of the project, supervises and resolves doubts.

A series of activities will be carried out (deliveries and meetings) that allow to control the follow-up of the work carried out by the student. Students should contact their tutor to arrange the meetings they will hold throughout the course.

Nota: se reservarán 15 minutos de una clase dentro del calendario establecido por el centro o por la titulación para que el alumnado rellene las encuestas de evaluación de la actuación del profesorado y de evaluación de la asignatura o módulo.

Evaluación

Actividades de evaluación continuada

Título	Peso	Horas	ECTS	Resultados de aprendizaje
Master thesis	0.5	30	1,2	CA04, CA05, KA07, KA11, KA15, KA19, SA16
Meetings with the supervisor	0.25	10	0,4	CA04, CA05, KA07, KA11, KA15, KA19, SA16, SA18
Oral presentation and thesis defence	0.25	1	0,04	CA04, CA05, KA07, KA11, KA15, KA19, SA18

The final mark for this module will be computed with the following formula:

Final Mark = 0.25 x Supervisor Mark + 0.75 x Committee Mark

where,

Supervisor Mark: is the result of applying a three stage rubric to the document of the thesis proposal. The project advisor will evaluate the student before the presentation, and provide the evaluation scores to the Master Thesis committee.

Committee Mark: is the average mark provided by the three members of the evaluation committee. The committee members will receive the Master Thesis document at least 7 days before the public presentation. After each presentation the three members will discuss privately the evaluation of the written reports and the presentations.

Bibliografía

Specific bibliography will depend on individual projects and will be suggested by the academic in charge

Software

Specific software depends on the individual project topic

Grupos e idiomas de la asignatura

La información proporcionada es provisional hasta el 30 de noviembre de 2025. A partir de esta fecha, podrá consultar el idioma de cada grupo a través de este [enlace](#). Para acceder a la información, será necesario introducir el CÓDIGO de la asignatura