

Degree	Type	Year
4318299 Computer Vision	OB	0

## Contact

Name: Maria Isabel Vanrell Martorell

Email: maria.vanrell@uab.cat

## Teachers

David Merino Arranz

## Teaching groups languages

You can view this information at the [end](#) of this document.

## Prerequisites

Degree in Engineering, Maths, Physics or similar

## Objectives and Contextualisation

Module Coordinator: David Merino

The course as a part of the master in Computer Vision deals with the non vision-based goals, the aim are to go through a large set of transversal skills that are indispensable for a researcher and/or a professional. Focusing essentially in two competences: Research Dissemination and Technology Transfer.

The introduction to research dissemination seeks to introduce students to the process of dissemination of results. This process will be divided into two areas:

- The oral presentations made, with quality standards at the level of formal content, oral and through correct use of nonverbal language.
- The writing of scientific papers for publication in journals and conference proceedings. This process covers both the academic writing style, the acquisition of competences in the use of writing tools for scientific dissemination (LaTeX), and the knowledge of the publication pipeline

Finally we will deal with some important issues regarding ethical issues in research and plagiarism

In Research and Technology transfer management, we introduce the students to the proper use of the tools at its disposal to carry out the research process in computer vision. The use of planning tools, location of meaningful information, literature review and statistical analysis of data. In addition, the module also provides

content associated with technology transfer of research results to society. It introduces various forms of entrepreneurship, the development of business plans, financing, and the range of options available for the protection of research results.

## Learning Outcomes

1. CA05 (Competence) Plan the execution, evaluation and dissemination and transfer of a project of vision.
2. KA17 (Knowledge) Recognise the human, economic, legal and ethical dimensions of systems of vision and their application.
3. KA18 (Knowledge) Select the best tools and strategies for constructing a state of the art for a problem of vision.
4. SA07 (Skill) Apply data analysis and performance evaluation techniques for different problems.
5. SA15 (Skill) Prepare a report that describes, justifies and illustrates the development of a project of vision.
6. SA17 (Skill) Prepare oral presentations that allow debate of the results of a project of vision.
7. SA19 (Skill) Identify the options available for commercialising a project of vision and draw up a business plan.

## Content

The course will be divided in 5 different topics:

1. Project Planifications and Development
  1. Project Planning
  2. Data Analysis
  3. Ethics in Research: Debate
2. Writing Scientific texts in Latex
  1. Introduction to Latex: edition of basic text
  2. Advanced Latex: Standard text edition
  3. Writing scientific texts: simplifying a scientific document
  4. Writing Scientific Texts: introduction to computer vision (Module 1)
  5. Writing of Scientific Texts: machine learning techniques for computer vision (Module 3 or Module 4)
  6. Literature review and composition of the state-of-the-art
3. Oral presentation
  1. Oral Presentation: "Introduce yourself"
  2. Oral Presentation: "Machine learning for computer vision"
4. Research management and dissemination
  1. Publishing Research Results: quiz test
  2. Entrepreneurship
  3. Public Funding of Research Projects
  4. Intellectual property, patents, copyright and trademarks

## Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
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Type: Supervised

Ethics in Research	8	0.32	CA05, KA17, KA18, SA07, SA15, SA17, SA19
Oral presentations	34	1.36	CA05, KA17, KA18, SA07, SA15, SA17, SA19
Project Planning	4	0.16	CA05, KA17, KA18, SA07, SA15, SA17, SA19
Writing Scientific Texts	33	1.32	CA05, KA17, KA18, SA07, SA15, SA17, SA19
Type: Autonomous			
Data analysis	10	0.4	CA05, KA17, KA18, SA07, SA15, SA17, SA19
Research Transfer Methods	45	1.8	CA05, KA17, KA18, SA07, SA15, SA17, SA19

The teaching methodology will be based in the continuous assessment of a set of activities that will be provided in the virtual campus. This is an activity based online course, where the student fix his own pace and decides a proper schedule of the tasks. There are only specific deadlines for delivering the activities. Essentially the student will be provided with:

- A set of learning resources: video lectures, pdf documents and examples.
- Specific delivery instructions for each activity.

The student is supposed to visualize the video lectures and resources, and ask any doubt in the forum boards of the course. The active participation in the forum, asking questions, answering questions from other students and posting opinions in the open debates is highly recommended in the course.

The student will have academic tutors that will answer your questions in the forum boards, and they will guide him through the learning process. Many of the activities delivered will be corrected and appropriate feedback will be provided.

The nature of this course is very challenging, and one of the key competences in the module is the delivering of successful oral presentations. Students should prepare an appropriate environment to record themselves delivering oral presentations. The basic methodology of the course is learning practicing.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

## Assessment

### Continous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
OP1: Oral Presentation (Introduce yourself)	10%	8	0.32	CA05, KA17, KA18, SA07, SA15, SA17, SA19
OP2: Oral Presentation (C3 Project)	20%	16	0.64	CA05, KA17, KA18, SA07, SA15, SA17, SA19
PP&D1: Project Planning	3%	2	0.08	CA05, KA17, KA18, SA07, SA15, SA17, SA19
PP&D2: Data Analysis Exercises	3%	8	0.32	CA05, KA17, KA18, SA07, SA15, SA17, SA19

PP&D3: Ethics in Research: Debate	4%	4	0.16	CA05, KA17, KA18, SA07, SA15, SA17, SA19
RM&D1: Publishing Research Results(Quiz+Summary)	2%	5	0.2	CA05, KA17, KA18, SA07, SA15, SA17, SA19
RM&D2: Enterpreneurship ( Elevator pitch+Business Plan&Model+ Presentation)	20%	15	0.6	CA05, KA17, KA18, SA07, SA15, SA17, SA19
RM&D3: Public Funding (Quiz+Summary)	6%	5	0.2	CA05, KA17, KA18, SA07, SA15, SA17, SA19
RM&D4: Intellectual Property (Quiz)	2%	5	0.2	CA05, KA17, KA18, SA07, SA15, SA17, SA19
WST1: Writing Scientific Texts (Essay)	10%	8	0.32	CA05, KA17, KA18, SA07, SA15, SA17, SA19
WST2: Bibliographical Review (Essay)	20%	15	0.6	CA05, KA17, KA18, SA07, SA15, SA17, SA19

The final Mark in this course will be computed by the following weighted formula on the whole evaluation activities:

Final Mark = Project Planning x 0.03 + Data Analysis x 0.03 + Ethics x 0.04 +

Writing (Essay) x 0.1 + Writing (Biblio-Review) x 0.2 +

Oral Presentation (Into-Yourself) x 0.1 + Oral Presentation (Project C3) x 0.2 +

Publishing Research Results x 0.02 + Enterpreneurship x 0.2 + Public Funding x 0.06 + Intellectual Property x 0.02

## Bibliography

The materials located in space Classroom resources will help further the goals of the course.

The tutors will use the Message Board, which is classroom space communication, and will provide documents and other information to complement previous and explanatory videos on specific topics.

## Software

None

## Language list

Information on the teaching languages can be checked on the CONTENTS section of the guide.