





**AIMS OF THE DEGREE COURSE**

Located midway between traditional engineering and information technology engineering, the general aim of the Degree in Multimedia Engineering is to produce professionals in the ICT Sector who are capable of leading new projects in the world of Multimedia, whether in the Leisure and Digital Entertainment sector or in management of content for dissemination across information networks.  
The course provides quality training based on "Project-led learning". This type of training is aimed at providing students with the skills necessary to create digital systems for the management of multimedia information, to provide technical support to multimedia projects in the field of culture, telecommunications, teaching or business, and to produce and provide support to the technical elements involved in the creation of images and sound related to "digital issues".



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**BRIEF STRUCTURE OF THE DEGREE COURSE**

Subjects in the Degree in Multimedia Engineering, each worth 6 European ECTS credits, are organised into semesters. Specifically, students are required to take 5 subjects each semester, to complete 30 credits per semester and 60 credits per year, for a total of 240 credits over four years. In order to make the course compatible with other activities, students are allowed to take a part-time course consisting of 30 credits per academic year.

**DISTRIBUTION OF CREDITS PER SUBJECT TYPE**

Subject type	Credits
Core	120
Compulsory	132
Optional	96
Final Project	12
<b>Total credits</b>	<b>240</b>

**GENERAL DESCRIPTION OF THE COURSE PROGRAMME**

Students are required to take the core block, worth 60 credits (6 of which are complementary credits, corresponding to the discipline of Statistics, part of the area of the Social Sciences), the common block, so-called because it is common to the two proposed 132-credit routes, and 36 optional credits forming the two different routes.

Route 01: Digital creation and entertainment

Route 02: Content Management

Moreover, during the final semester, students are required to undertake a Final Project, worth 12 credits. Prior to evaluation for the final project, the student must provide evidence of ability in a foreign language. Among other forms of accreditation, the minimum necessary requirement at the University of Alicante is to have obtained level B1 of the European Framework of Reference for Languages, and this requirement may be raised in the future.

The course programme has been designed to reflect the need to implement a project-based teaching methodology.

**Project Based Learning** refers to a teaching methodology where students learn concepts by means of carrying out projects or by solving problems designed and put to them by their teacher. Projects are appropriately designed if, in order to complete them successfully, students are obliged to acquire the concepts that the teacher wishes to transmit.

This teaching method will be applied from the 2<sup>nd</sup> Year onwards, mainly via a series of subjects taught in the first term, with a second subject providing continuity in the second term. The aim is to form teams from students in different years, with students performing different roles in common projects. Projects will be supervised and coordinated by 4<sup>th</sup> Year students taking the subject Multimedia Projects. 3<sup>rd</sup> Year students from Multimedia Systems Design will be entrusted with analysis and design, whilst 2<sup>nd</sup> Year Multimedia Systems students will be entrusted with programming.

These three subjects form the backbone of project development, and are preceded by those other subjects necessary to develop the responsibilities held by project participants. In the case of Multimedia Systems, students must have taken Programming I and Programming II, both in the 1<sup>st</sup> Year, in order to be entrusted with programming tasks. Likewise, Multimedia Systems Design is preceded by Multimedia Systems Analysis, taught in the second term of the 2<sup>nd</sup> Year. Accordingly, 3<sup>rd</sup> Year project students can take on both analysis and design.

Moreover, projects should be proposed by Multimedia Projects students. Accordingly, at the beginning of the year, their projects should already be underway, at least with regard to their specifications and initial design. This initial work should be carried out as part of the subjects Multimedia Systems Analysis and Multimedia Systems Design. In this way, 2<sup>nd</sup> and 3<sup>rd</sup> Year students will be working on projects proposed by 4<sup>th</sup> Year students, whilst at the same time preparing the projects they will direct when they take Multimedia Projects.

The task of working simultaneously on two different projects, one as creators/directors of their own projects and another as assistants on other students' projects, is aimed at helping them to learn how to build and execute their own projects successfully. This should increase students' sense of responsibility when working on third-party projects. In short, the aim of the project system is to simulate a professional environment within the degree course, wherein the success of third-party and own projects implies "promotion", just as in the professional and labour world.

Although the subjects mentioned above are essential to project execution, projects encompass content from all degree course subjects. Accordingly, in each subject from the 2<sup>nd</sup> Year onwards, 1.5 credits will correspond to group tutorials aimed at supporting project development.

**Implementation of project based learning during the early years of the degree course**

During the second and third years of the implementation of the course programme, while there are as yet no students in higher years to act as project directors and analysts, the teachers of the subjects not yet taught, along with the teachers of the subjects already underway and students themselves will undertake management and specification tasks in the first year, and management tasks in the second year.

Moreover, the content of subjects which are core to the project-based learning method has been designed to emphasise the need for integration and coordination with the other subjects. Accordingly, they include constant references to those subjects which are not yet taught in the early years.

**OPTIONAL SUBJECTS AND ROUTES**

Students are required to take 36 optional ECTS credits, from either of two routes:

Route 01: Digital creation and entertainment

Route 02: Content Management

In order for the route to be recognised, students must take at least four optional subjects (24 credits) from the same route. The 36 credits corresponding to the optional subjects which make up the routes include the possibility of students taking 12 credits in English language (English I and English II) or work experience (Work Experience I and Work Experience II).

	SUBJECT	TYPE	ECTS	SEMESTER YEAR 4
ROUTE 1: DIGITAL CREATION AND ENTERTAINMENT	VIDEO-GAMES I	OP	6	1
	DIGITAL POST-PRODUCTION	CP	6	2
	SOUND DESIGN TECHNIQUES	CP	6	2
	VIDEO-GAMES II	OP	6	3
	VIRTUAL REALITY	OP	6	3
ROUTE 2: CONTENT MANAGEMENT	DISSEMINATION AND MULTIMEDIA SYSTEMS	CP	6	2
	E-LEARNING	CP	6	2
	INTERNET-BASED MULTIMEDIA SERVICES	CP	6	2
	ADVANCED MULTIMEDIA SYSTEMS	CP	6	3
	BUSINESS AND MULTIMEDIA	CP	6	3
WORK EXPERIENCE	WORK EXPERIENCE I	CP	6	2
	WORK EXPERIENCE II	CP	6	3
ENGLISH	ENGLISH I	CP	6	2
	ENGLISH II	CP	6	3

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**LANGUAGE REQUIREMENT IN A FOREIGN LANGUAGE**

Students who study an undergraduate degree at the University of Alicante must complete a minimum level of B1 in a foreign language in order to obtain the diploma.

The required language level is in accordance with the Common European Framework of Reference for Languages.

The language accreditation requirement can be obtained previously or at any time during university studies. However, the language requirement will be necessary in order to be able to access the final year project.

The different ways of obtaining such language requirement can be consulted in the additional information in this section.

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**LANGUAGE TEACHING COMPETENCE CERTIFICATE**

Students who wish to have an official recognition, attesting when they finish their studies are recommended to access the teaching competence certificate (previous studies in foreign languages).

This certificate can be obtained by taking specific courses in your university studies or by taking the BA teaching competence courses in Valencian, Catalan, French and English.

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**FINAL YEAR PROJECT (TFG)**

All the official undergraduate degrees must be completed by preparing and defending a final year project, which must be done in the final phase of the studies and be aimed at the assessment of competences associated to the degree.

The final year project must be an original, independent and personal work. The elaboration of it may be individual or collaborative. Each student will prepare the project under the supervision of a tutor, allowing students to share the acquired learning content in an integrated way, as well as the acquired competences associated to the undergraduate degree.

In order to register in the final year project, students must comply with the requirements established in the "Regulations for graduation studies for students registered in undergraduate degrees at the University of Alicante". Among the requirements established to be able to register in the final year project, a minimum of 198 credits must be passed in undergraduate degrees with a total of 240 credits, and a minimum of 228 credits in undergraduate degrees with a total of 300 credits or more.

In order for the final year project to be assessed, a B1 level of a foreign language (B1 is recommended) must be confirmed.

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**PROFESSIONAL PROFILES**

The multimedia engineer is the professional responsible for leading multimedia product development projects, aimed primarily at two main sectors:

1- **The digital leisure sector:** The digital leisure sector can be defined as the production infrastructure which has emerged around the construction of videogames and related variations such as those deemed "serious games" or those devoted to entertainment and/or to learning.

Moreover, the digital leisure sector also includes the synthetic image production industry, working in cinema, special effects or television.

The multimedia engineer will possess the skills necessary to analyse and specify the needs of creative professionals in these sectors, and convert such needs into products and multimedia systems.

2- **The production and dissemination of enriched digital content sector:** the multimedia engineer is equipped to develop products related to the creation, management and diffusion of enriched digital contents through telecommunication networks. Thus, the multimedia engineer possesses skills related to the creation of content management systems for digital libraries, digital news and, in general, new information dissemination systems, including those related to distance learning using new technology.

**Professions for which graduates are qualified:** Multimedia Engineer; Multimedia Programmer; Multimedia Network Designer; web Designer; Human-Machine Interface Designer; multimedia Architect; Internet/Intranet, audio and video Technician; web information Specialist; web content Strategist; web content Programmer; web Producer; creative web Specialist; web art Specialist; web Graphic Designer; videogame Designer; digital special effects Technician.



IMPLEMENTATION

Academic Year	Implementation of the Degree Course in Multimedia Engineering
2010-2011	1 <sup>st</sup> Year
2011-2012	2 <sup>nd</sup> Year
2012-2013	3 <sup>rd</sup> Year
2013-2014	4 <sup>th</sup> Year

**EQUIVALENCE PROCEDURE**

The proposed degree will not be replacing any previously offered degree at the University of Alicante. Therefore, since the Degree in Computer Engineering constitutes the closest discipline to Multimedia Engineering, it is envisaged that an equivalence system will be established in order to offer continuity of studies for those students currently taking the Degree in Computer Engineering who wish to continue their studies on the Degree in Multimedia Engineering. This is warranted due to significant similarities in the basic contents of both degree courses.







