

DEGREE IN MULTIMEDIA ENGINEERING (2021-22)

Código: C205	Fecha de aprobación: 22/03/2012	Precio: 19,27 1st-registration credits
Créditos: 240	Título: Undergraduate 3-5 years (ECTS)	

RAMA

Engineering and Architecture

PLAN

DEGREE IN MULTIMEDIA ENGINEERING

TIPO DE ENSEÑANZA

Face-to-face

CENTROS DONDE SE IMPARTE

Polytechnic School

ESTUDIO IMPARTIDO CONJUNTAMENTE CON

Solo se imparte en esta universidad

FECHAS DE EXAMEN

[Acceda al listado de fechas de examen para esta titulación.](#)

PLAN DE ESTUDIOS OFERTADO EN EL CURSO 2021-22

Leyenda: No ofertada Sin docencia

FIRST YEAR

CORE SUBJECTS				48 créditos
Curso	Título	Créditos	Subject	
1	CORE	6	21000 - FUNDAMENTALS OF PHYSICS	
1	CORE	6	21001 - PROGRAMMING I	
1	CORE	6	21002 - FUNDAMENTALS OF GRAPHIC DESIGN	
1	CORE	6	21003 - MATHEMATICS I	
1	CORE	6	21004 - BUSINESS ADMINISTRATION	
1	CORE	6	21005 - FUNDAMENTALS OF COMPUTERS	
1	CORE	6	21006 - MATHEMATICS II	
1	CORE	6	21007 - STATISTICS	
COMPULSORY SUBJECTS				12 créditos
Curso	Título	Créditos	Subject	
1	COMPULSORY	6	21008 - FUNDAMENTALS OF DATA BASES	
1	COMPULSORY	6	21009 - PROGRAMMING 2	

SECOND YEAR

CORE SUBJECTS				12 créditos
Curso	Título	Créditos	Subject	
2	CORE	6	21010 - MULTIMEDIA SYSTEMS	
2	CORE	6	21011 - SIGNALS AND SYSTEMS	
COMPULSORY SUBJECTS				48 créditos
Curso	Título	Créditos	Subject	
2	COMPULSORY	6	21012 - OPERATING SYSTEMS	
2	COMPULSORY	6	21014 - DATA AND ALGORITHM STRUCTURE	
2	COMPULSORY	6	21015 - DISTRIBUTED SYSTEMS	
2	COMPULSORY	6	21016 - MULTIMEDIA DATA BASE DESIGN	
2	COMPULSORY	6	21017 - MULTIMEDIA SYSTEMS ANALYSIS AND SPECIFICATIONS	
2	COMPULSORY	6	21018 - COMPUTER SIMULATION AND ANIMATION	
2	COMPULSORY	6	21019 - STRUCTURING CONTENTS	
2	COMPULSORY	6	21025 - WEB CUSTOMER PROGRAMMING	

THIRD YEAR

COMPULSORY SUBJECTS				60 créditos
Curso	Título	Créditos	Subject	
2	COMPULSORY	6	21025 - WEB CUSTOMER PROGRAMMING	
3	COMPULSORY	6	21013 - USABILITY AND ACCESSIBILITY	
3	COMPULSORY	6	21020 - WEB APPLICATIONS DEVELOPMENT	
3	COMPULSORY	6	21021 - APPLIANCES AND INFRASTRUCTURES FOR MULTIMEDIA SYSTEMS	
3	COMPULSORY	6	21022 - MULTIMEDIA SYSTEM DESIGN	
3	COMPULSORY	6	21023 - COMPUTER-ASSISTED GRAPHICS	
3	COMPULSORY	6	21024 - COMPRESSION AND SECURITY	
3	COMPULSORY	6	21026 - COMPUTER-GENERATED IMAGE AND VIDEO	
3	COMPULSORY	6	21027 - FUNDAMENTALS OF VIDEO GAMES	
3	COMPULSORY	6	21028 - COMPUTER-GENERATED SOUND AND MUSIC	
3	COMPULSORY	6	21029 - MULTIMEDIA CONTENT MANAGEMENT	

FOURTH YEAR

COMPULSORY SUBJECTS				24 créditos
Curso	Título	Créditos	Subject	
4	END OF DEGREE WORK	12	21044 - FINAL PROJECT	
4	COMPULSORY	6	21030 - MULTIMEDIA PROJECTS	
4	COMPULSORY	6	21031 - ADVANCED GRAPHICS TECHNIQUES	
OPTIONAL SUBJECTS				36 créditos
Curso	Título	Créditos	Subject	

4	OPTIONAL	6	21032 - MULTIMEDIA SERVICES ON INTERNET
4	OPTIONAL	6	21033 - E-LEARNING
4	OPTIONAL	6	21034 - MULTIMEDIA TRANSMISSION SYSTEMS
4	OPTIONAL	6	21035 - ADVANCED MULTIMEDIA SERVICES
4	OPTIONAL	6	21036 - BUSINESS AND MULTIMEDIA
4	OPTIONAL	6	21037 - DIGITAL POST-PRODUCTION
4	OPTIONAL	6	21038 - VIDEO GAMES I
4	OPTIONAL	6	21039 - SOUND DESIGN TECHNIQUES
4	OPTIONAL	6	21040 - VIRTUAL REALITY
4	OPTIONAL	6	21041 - VIDEO GAMES II
4	OPTIONAL	6	21042 - TRAINEESHIP I
4	OPTIONAL	6	21043 - TRAINEESHIP II
4	OPTIONAL	6	34541 - ENGLISH I
4	OPTIONAL	6	34542 - ENGLISH II

LANGUAGE

Superado este bloque se obtiene

DEGREE IN MULTIMEDIA ENGINEERING

ROUTE 1 DIGITAL CREATION AND ENTERTAINMENT

OPTIONAL SUBJECTS

24 créditos

Curso	Título	Créditos	Subject
4	OPTIONAL	6	21037 - DIGITAL POST-PRODUCTION
4	OPTIONAL	6	21038 - VIDEO GAMES I
4	OPTIONAL	6	21039 - SOUND DESIGN TECHNIQUES
4	OPTIONAL	6	21040 - VIRTUAL REALITY
4	OPTIONAL	6	21041 - VIDEO GAMES II

Superado este bloque se obtiene

ROUTE 1: DIGITAL CREATION AND ENTERTAINMENT

ROUTE 2 CONTENT MANAGEMENT

OPTIONAL SUBJECTS

24 créditos

Curso	Título	Créditos	Subject
4	OPTIONAL	6	21032 - MULTIMEDIA SERVICES ON INTERNET
4	OPTIONAL	6	21033 - E-LEARNING
4	OPTIONAL	6	21034 - MULTIMEDIA TRANSMISSION SYSTEMS
4	OPTIONAL	6	21035 - ADVANCED MULTIMEDIA SERVICES
4	OPTIONAL	6	21036 - BUSINESS AND MULTIMEDIA

Superado este bloque se obtiene

ROUTE 2: CONTENT MANAGEMENT

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 leisure".

- [Credit structure of the degree course](#)
- [Distribution of credits per subject type](#)
- [General description of the course programme](#)
- [Optional subjects and routes](#)

CREDIT 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	60
Compulsory	132
Optional	36
Final Project	12
Total credits	240

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 I1: Digital creation and entertainment

Route I2: 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 attained 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 2nd 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 4th Year students taking the subject Multimedia Projects. 3rd Year students from Multimedia Systems Design will be entrusted with analysis and design, whilst 2nd 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 1st 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 2nd Year. Accordingly, 3rd 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, 2nd and 3rd Year students will be working on projects proposed by 4th Year students, whilst at the same time preparing the projects they will direct when they take Multimedia Projects.

The fact 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 this 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 2nd 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 I1: Digital creation and entertainment

Route I2: 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 I: DIGITAL CREATION AND ENTERTAINMENT	VIDEOGAMES I	OP	6	7
	DIGITAL POST-PRODUCTION	OP	6	7
	SOUND DESIGN TECHNIQUES	OP	6	7
	VIDEOGAMES II	OP	6	8
	VIRTUAL REALITY	OP	6	8
ROUTE 2: CONTENT MANAGEMENT	DISSEMINATION AND MULTIMEDIA SYSTEMS	OP	6	7
	E-LEARNING	OP	6	7
	INTERNET-BASED MULTIMEDIA SERVICES	OP	6	7
	ADVANCED MULTIMEDIA SYSTEMS	OP	6	8
	BUSINESS AND MULTIMEDIA	OP	6	8
WORK EXPERIENCE	WORK EXPERIENCE I	OP	6	7
	WORK EXPERIENCE II	OP	6	8
ENGLISH	ENGLISH I	OP	6	7
	ENGLISH II	OP	6	8

LANGUAGE REQUIREMENT (IN A FOREIGN LANGUAGE)

Students who study an **undergraduate degree** at the University of Alicante must **confirm** a minimum **level of B1 in a foreign language** (a B2 is recommended) 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 **assess the final year project**.

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

[+info](#)

LANGUAGE TEACHING COMPETENCE CERTIFICATE

Students who want to have a career in non-university **teaching** when they finish their studies are **recommended** to obtain the **teaching competence certificate** (Valencian and/or foreign languages).

This certificate can be obtained by taking specific itineraries in your university studies or by taking the **UA teaching competence course in Valencian, German, French and English**.

[+info](#)

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 coordinated. Each student will prepare this project under the supervision of a tutor, allowing students to show the received training 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 continuation 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 168 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 (B2 is recommended) must be confirmed.

[+info](#)

- [Access routes](#)
- [Procedure for applying for admission](#)
- [Recommended applicant profile](#)
- [Number of places and pass marks](#)

ACCESS ROUTES

Admission to this degree course is open to any applicant who meets one of the following entrance requirements:

1. **SPANISH BACCALAUREATE (LOMCE) UNIVERSITY ENTRANCE EXAM (PAU):** Although students can access university by means of any Baccalaureate specialization, the recommended one is **Sciences**.

ADMISSION SCORES FOR THIS DEGREE CAN BE IMPROVED BY TAKING THE SPECIFIC MODULES OF THE UNIVERSITY ENTRANCE EXAM (PAU) AS INDICATED IN THE TABLE BELOW WITH THEIR RESPECTIVE WEIGHTINGS.

TABLE 1

Multimedia Engineering

2. **PREVIOUS BACCALAUREATES WITH OR WITHOUT A PASS IN THE UNIVERSITY ENTRANCE EXAM (PAU):** Students who have completed their Baccalaureate under previous education systems and have passed the PAU will be able to use the mark obtained in their application.

HOWEVER, STUDENTS CAN TAKE SPECIFIC EXAM MODULES DURING THE VOLUNTARY PAU EXAM PERIOD IN ORDER TO IMPROVE THEIR ADMISSION SCORE AS SHOWN IN TABLE 1. THEY CAN ALSO SIT FOR THE OBLIGATORY PAU EXAMS, IN WHICH CASE THEY WILL HAVE TO TAKE ALL THE EXAMS SCHEDULED DURING THIS PERIOD.

3. **VOCATIONAL EDUCATION:** Vocational educational qualifications such as senior technician, senior technician of plastic arts and design, or senior technician in sports is the preferred professional area although access to this degree may be through any professional field.

ADMISSION SCORES CAN BE IMPROVED BY TAKING THE PAU EXAM IN UP TO 4 OF THE MODULES IN TABLE 1.

4. **STUDENTS FROM EDUCATION SYSTEMS IN COUNTRIES OF THE EUROPEAN UNION OR OTHER STATES WITH WHICH SPAIN HAS AN INTERNATIONAL AGREEMENT:** Accreditation is required and issued by *Universidad Nacional de Educación a Distancia (UNED)*.

STUDENTS CAN SIT FOR EXAMS IN SUBJECTS INCLUDED IN THE *PRUEBAS DE COMPETENCIAS ESPECÍFICAS (PCE)*, ORGANISED BY THE UNED, IN ORDER TO IMPROVE THEIR ADMISSION SCORE UP TO 14 POINTS AS INDICATED IN THE WEIGHTINGS IN TABLE 1.

5. **STUDENTS FROM FOREIGN EDUCATION SYSTEMS:** Prior to applying for the validation of their foreign Baccalaureate, students may sit for up to 4 exams in subjects offered by the *Pruebas de Competencias Específicas (PCE)* organised by **UNED** (at least one subject from the core subjects).

THE WEIGHTINGS INDICATED IN TABLE 1 WILL BE APPLIED TO CORE AND/OR OPTIONAL SUBJECTS.

6. **OTHER:** University degrees and other similar qualifications. University entrance exam for students over 25 (preferential option: Engineering and architecture). Access on the basis of professional experience (applicants over 40 years of age). Access to applicants aged 45 years or more by means of an exam.

Weightings of the subjects of the specific phase of the Proof of Access to the University (PAU) in the previous years

High School Diploma Subjects	Weighting parameters	Music Analysis II	Biology	Earth and Environmental Sciences	Drawing II	Technical Drawing II	Design	Business Economics	Electronics	Physics	Geography	Greek II	History of Music and Dance	Art History	Latin II	Musical Language and Practice	World Literature	Mathematics Applied to the Social Sciences II	Mathematics II	Chemistry	Expressive techniques in the Arts and Crafts	Industrial Technology II
Academic Years 2010-11	0.1						X	X												X		
2011-12	0.2		X	X		X			X	X									X			X

Academic Years	0.1		x	x			x	x										x		
2012-13																				
2013-14																				
2014-15	0.2					x			x	x								x		
2015-16																				
2016-17																				x

PROCEDURE FOR APPLYING FOR ADMISSION: PRE-ENROLMENT AND REGISTRATION

- Anticipated number of places offered during the first pre-enrolment session:95
- In order to apply for a place, the procedure and pre-enrolment periods established each year must be observed. [Information concerning the application procedure \(Pre-enrolment\)](#).
- Applicants admitted to a course must formally register within the timescale established annually in the enrolment calendar [Registration Information](#).

RECOMMENDED APPLICANT PROFILE

New students should possess:

- A capacity for work (perseverance, method and rigour);
- A capacity for reasoning and critical analysis;
- The ability to work individually or as part of a team;
- The capacity to obtain, interpret and apply knowledge;
- Problem-solving skills;
- A capacity for synthesis and abstraction and good communication skills;
- A specific interest in multi-media creativity and communication;
- Artistic and cultural sensitivity in one or various forms, whether written, plastic or audiovisual.

NUMBER OF PLACES AND PASS MARKS

COURSES	NUMBER OF PLACES	PASS MARKS						
		GENERAL	OVER 25	OVER 40	OVER 45	GRADUATES	SPORSTPEOPLE	DISABLED
2010-11	95	8,000	5,295	---	---	6,140	---	7,110
2011-12	95	7,688	6,376	---	---	6,170	---	5,000
2012-13	95	7,236	5,095	---	---	6,600	---	5,000
2013-14	95	7,710	6,555	---	---	6,600	5,000	5,000
2014-15	95	7,724	6,078	---	---	5,000	---	5,000
2015-16	95	7,872	7,570	---	---	---	7,120	---
2016-17	95	8,538	5,000	---	---	5,000	---	5,000

- "Pass marks" indicated correspond to the results of the first adjudication of June.
- The definitive marks can be inferior to the here collected.

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**TIMESCALE**

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

- [Verified Report](#)
- [Resolution from the Universities Council: Positive verification](#)
- [Resolution from the Universities Council: Accreditation renewal](#)
- [Authorization from the Valencian Government](#)

Internal Quality Assurance System (SGIC) of the Title

- Structure of the Centre for Quality
 - [Comission of Internal Quality Guarantee](#)
 - [Other Commissions](#)
- [Handbook SGIC](#)
- [Procedures](#)
 - [Strategic \(PE\)](#)
 - [Key \(PC\)](#)
 - [Support \(PA\)](#)
 - [Measurement \(PM\)](#)
- [Management of the SGIC \(Access to ASTUA\)](#)

Follow-up of the Title

- [International quality label](#)  ^S_{ell}
- [Self-reports UA](#)
- [External reports AVAP](#)
- [Other reports](#)
- [Improvement Plans](#)
- [Progress and Learning Outcomes](#)

Information about the Centre	General information for students
<ul style="list-style-type: none"> • Polytechnic University College Telephone:+ 34 96 590 3648 Fax:+ 34 96 590 3644 eps@ua.es http://www.eps.ua.es/ • Mobility Programmes • Work experience with companies and institutions • Reception and welcome events • Tutorial Action Programme • Frequently asked questions about the implementation of degrees at the implementation of degrees at the Polytechnic University College 	<ul style="list-style-type: none"> • Grants and assistance • Accommodation • Student refectories and cafeterias • Transport • Emergency medical care • Insurance • Services for students with special needs • Student representation and participation • University student identity card (TIU) • Frequently asked questions
UA: General Regulations	+ Information about qualifications
<ul style="list-style-type: none"> • Academic regulations and procedures of the University of Alicante 	<ul style="list-style-type: none"> • Official State Gazette (BOE) on publication of course programmes 16 january 2019 • Official State Gazette (BOE) on publication of course programmes 12 march 2012 Error correction Error correction • Presentation document for the Degree in Multimedia Engineering • Information pamphlet • Video presentation of the degree