

# Analyzing double degrees in Spain: A proposal

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**Abstract:** This article reviews the situation of single and double degrees in both public and private Spanish universities. To do so, this study analyzes information from the Registry of Universities, Centers, and Qualifications (RUCT) and Universia Spain. After analyzing the programs currently available to students, we present a proposal to establish a double degree in Administration and Business Management/Industrial Management Engineering. The proposal specifies the degree's main objectives, specific nature, and fundamental aims and benefits in terms of technical, corporate, innovative, and entrepreneurial competencies.

**Keywords:** Double degree, Administration and Business Management, Industrial Management Engineering

## Introduction

This study presents a proposal to create a double degree in Administration and Business Management/Industrial Management Engineering. This degree would cover the full range of industry needs in the following knowledge areas: production process management, resource management, quality management, innovation management, internationalization strategies, and other aspects including accounting, marketing, and entrepreneurship.

To support the proposal, this study analyzes existing double degrees in Spain. According to Universia Spain, two types of university qualifications exist in Spain: official university qualifications and qualifications granted by specific universities. This study focuses only on official university titles. Spanish universities offer 3,160 undergraduate degrees, 8,235 postgraduate degrees, and 1,574 PhD programs. Of these 3,160 undergraduate degrees, 441 are double degrees. This study analyzes these 441 double degrees to discover whether a double degree in Administration and Business Management/Industrial Management Engineering is viable.

Section 2 outlines the university degrees currently available in Spain. Section 3 describes the double degree proposal. Finally, section 4 presents conclusions and future research opportunities.

## University degrees

The Registry of Universities, Centers, and Qualifications (RUCT) provides relevant information about universities, centers, and qualifications in the Spanish university system, including the new official degrees (grados in Spanish), master's degrees, and PhD programs. The RUCT institution is a public and administrative tool that is constantly updating the information it offers.

According to Universia Spain, there are currently 50 public universities and 32 private universities in Spain. Furthermore, Spanish degrees may be official national degrees (títulos oficiales) or degrees granted only by a particular university (títulos propios). All universities, regardless of whether they are public or private, can issue both qualifications.

Official degrees (grados, master's degrees, and PhDs), which are valid throughout Spain, appear in the RUCT and meet the requirements established by the European Higher Education Area (EHEA). Therefore, these degrees are valid in all countries within the EHEA. These degrees are also equivalent to degrees granted in other countries outside the EHEA.

An individual university's degrees have several labels: non-official degree, non-official master's degree, Master's for Specialists, or Master's for Experts, among others. Unofficial qualifications are created by universities and are not valid within the EHEA. Generally, unofficial qualifications are not equivalent to degrees in other countries and are recognized only by the university that offers them.

This study focuses on official degrees. In Spain, there are currently 3,160 undergraduate degrees (441 of which are double degrees), 8,235 postgraduate degrees, and 1,574 PhD programs. General degrees consist of 240 European Credit Transfer and Accumulation System (ECTS) credits (including a final degree dissertation), whereas double degrees consist of 360 ECTS credits. The Spanish provinces with the highest numbers of double degrees are Madrid (211), Valencia (45), Barcelona (40), and Seville (27). All other provinces offer fewer than 15 double degrees each. Table 1 lists Spanish universities and the single degrees and double degrees on offer.

**Table 1.** BA degrees and double degrees at Spanish universities (Source: RUCT and Universia)

University	All degrees (RUCT)	All degrees (Universia)	Double degrees
Universidad Europea de Madrid	46	53	49
Universidad Rey Juan Carlos	55	55	42
Universidad San Pablo-CEU	32	35	28
Universidad Cardenal Herrera-CEU	20	21	26
Universidad Antonio de Nebrija	30	26	23
Universidad Camilo José Cela	33	38	19
Universidad de Sevilla	62	67	18
Universidad Alfonso X El Sabio	42	33	16
Universidad Autónoma de Barcelona	79	87	12
Universidad Católica de Valencia San Vicente Mártir	24	25	12
Universidad de Cádiz	42	49	12
Universidad de Navarra	34	43	12
Universidad Europea Miguel de Cervantes	12	12	10
Universidad Católica San Antonio de Murcia	29	30	9
Universidad Francisco de Vitoria	21	18	9
Universidad Pablo de Olavide	20	19	9
Universidad Pontificia Comillas	18	15	8
Universitat de València (Estudi General)	53	57	8
Universidad Carlos III de Madrid	27	28	7
Universidad Católica Santa Teresa de Jesús de Ávila	10	11	7
Universidad de Deusto	21	27	7
Universidad Complutense de Madrid	69	85	6
Universidad de Barcelona	63	67	6
Universidad de Girona	41	46	6
Universidad de Huelva	29	28	6
Universidad Ramón Llull	34	34	6
Universitat Abat Oliba CEU	11	12	6
Universitat Internacional de Catalunya	14	14	6
Universidad de Extremadura	59	64	5
Universidad de Málaga	52	58	5
Universidad de Granada	62	78	4
Universidad de Lleida	31	31	4
Universidad Autónoma de Madrid	40	41	3

Universidad de Burgos	27	27	3
Universidad de Las Palmas de Gran Canaria	36	32	3
Universidad Pompeu Fabra	29	34	3
Universidad de Alcalá	36	34	2
Universidad de Alicante	37	37	2
Universidad de Córdoba	32	29	2
Universidad de Oviedo	49	55	2
Universidad de Valladolid	56	71	2
Universidad del País Vasco/EuskalHerrikoUnibertsitatea	69	73	2
Universidad Pública de Navarra	19	21	2
Universidad San Jorge	14	13	2
Universitat de les Illes Balears	32	30	2
Universitat Politècnica de València	30	30	2
IE Universidad	10	7	1
Universidad de A Coruña	37	40	1
Universidad de Jaén	33	38	1
Universidad de Zaragoza	54	55	1
Universidad Politécnica de Catalunya	43	44	1
Universidad Rovira i Virgili	39	39	1
Mondragón Unibertsitatea	15	15	0
Universidad a Distancia de Madrid	23	15	0
Universidad de Almería	29	27	0
Universidad de Cantabria	29	27	0
Universidad de Castilla-La Mancha	46	64	0
Universidad de La Laguna	45	50	0
Universidad de La Rioja	19	19	0
Universidad de León	37	37	0
Universidad de Murcia	48	50	0
Universidad de Salamanca	64	74	0
Universidad de Santiago de Compostela	44	48	0
Universidad de Vic-Universidad Central de Catalunya	26	29	0
Universidad de Vigo	40	41	0
Universidad Internacional de La Rioja	17	14	0
Universidad Politécnica de Madrid	40	42	0
Universidad Pontificia de Salamanca	22	22	0
Universitat Oberta de Catalunya	15	17	0
Universidad Jaume I de Castellón	31	32	0
Universidad Miguel Hernández de Elche	27	25	0
Universidad Nacional de Educación a Distancia	27	27	0
Universidad Politécnica de Cartagena	18	20	0
Universidad Europea de Canarias	5	--	--
Universidad Europea de Valencia	10	--	--
Universidad Internacional Isabel I de Castilla	10	--	--
Universidad Loyola Andalucía	11	--	--
Universitat Internacional Valenciana	5	--	--
<b>Total</b>	<b>2618</b>	<b>2711</b>	<b>441</b>

Of the 441 double degrees, 108 are in Administration and Business Management, 88 are in Law, 69 are in Communication Sciences, and 49 are in Technology and Engineering. Spanish universities also offer double degrees in other subjects like Teaching, Political Sciences, Marketing and Advertising, and Computing.

Nevertheless, only 53 double degrees are registered in the RUCT. This number is low because double degrees are actually two complete degrees and therefore ultimately provide the student with two different qualifications rather than one (double) degree. This is the case for most double degrees. For example, a student taking the double degree in Administration and Business Management/Law at the University of Valencia would obtain two qualifications upon completing the degree: one qualification as a graduate in Administration and Business Management and another as a graduate in Law. The

University of Valencia's webpage describes this particular degree's structure as follows: 'These studies are planned so that the student may obtain a degree in Administration and Business Management (*ADE* in Spanish) and a degree in Law after studying for a period of five academic years'.

In this study, we make no distinction whatsoever because we understand that the two ways of obtaining the double degree are equally valid and provide students with the necessary knowledge in both fields.

## **New double degree proposal**

After performing the above analysis, we propose the creation of a double degree in Administration and Business Management/Industrial Management Engineering.

The double degree Administration and Business Management/Industrial Management Engineering would cover industrial environment's needs through the following knowledge fields: production process management, resource management, quality management, innovation management, internationalization strategies, and other aspects that include accounting, marketing, and entrepreneurship. This approach means this degree would provide students with the knowledge and tools required to adapt to the changing industrial environment, while adding value by combining competencies from different technical, business, and international fields.

The education/training of students enrolled in this double degree responds to the increasing demand for versatile professionals in small and medium enterprises (SME), large enterprises, and enterprises with a technological basis because of the double degree's technical, managerial, and international components (Asgary & Robbert, 2010). Hence, students of the double degree in Administration and Business Management/Industrial Management Engineering would be trained to perform a range of tasks such as strategic decision-making, innovation management for competitive advantage, optimization and management of limited resources, and planning, development, and implementation of expansion and internationalization strategies.

Thus, the double degree proposed in this study has two objectives: (1) to train versatile professionals with strong scientific and technical skills together with a solid theoretical grounding in industrial management engineering; and (2) to train professional graduates in business management using a practical approach based on models, case studies, and experiences.

The main objectives and benefits of this double degree are technical, business, and innovative and entrepreneurial competencies. Technical competencies are attained by (1) acquiring knowledge related to industrial management based not only on advanced textbooks but also on avant-garde business; and (2) understanding and mastering the basic concepts and techniques of different scientific and technological fields such as thermodynamics, electricity, design, materials, electromagnetism, chemistry, acoustics, environment, and quality.

Business-related competencies refer to the following areas. (1) Building knowledge of existing business structures and their evolution and developing capabilities in business management for decision-making. (2) Compiling, selecting, and interpreting relevant information to analyze and judge relevant social, scientific, and ethical topics. Students would also learn to communicate and transmit information and ideas, solve problems, analyze data, and find solutions. (3) Acquiring resources and abilities to provide

enterprises with differentiating characteristics (e.g., developing databases to manage and use ICTs, developing tools to manage resources related to the control, implementation, and design of processes, developing the ability to implement management and quality control systems, and defining follow-up and monitoring mechanisms through evaluation processes.

Innovation and entrepreneurial competencies refer to students' training with an international, entrepreneurial, and innovative orientation to generate sustainable competitive advantage.

The double degree in Administration and Business Management/Industrial Management Engineering is aimed at all kinds of students who want to build a career working in organizations and enterprises by combining strong technical competencies with an innovative and international approach. This degree is also aimed at managers and professionals keen to reinforce their knowledge and skills in managing available resources to obtain competitive advantage, while deepening their knowledge of industrial management.

## **Conclusions and future research**

This study proposes the creation of a new qualification: a double degree in Administration and Business Management/Industrial Management Engineering. Similar double degrees are Electrical Engineering/Establishment and Operation of Companies at the Universidad Europea de Madrid; Industrial Technology Engineering/Administration and Business Management at the Universitat de Girona and the Universidad de Deusto; Computer Engineering/Administration and Business Management at the Universidad Rey Juan Carlos and the Universidad de Las Palmas de Gran Canaria; and Industrial Electronics Engineering and Automation/Establishment and Operation of Companies at the Universidad Europea de Madrid.

These double degrees include modules related to Administration and Business Management. However, they do not allow students to combine Administration and Business Management with Industrial Management Engineering, which is a key degree to link technological knowledge, society's needs, and business management. So far, no university offers the double degree this study proposes. Nonetheless, industry and the economy have two main features that call for such a degree: the need to optimize companies' resources management; and the increasing competition and complexity of national markets, which forces firms to internationalize. Thus, this study proposes the creation of a double degree that will educate and train versatile professionals with strong scientific and technical skills together with a solid theoretical grounding in industrial management engineering. Graduates will gain insight and competencies in administration and business management through a practical approach based on models, case studies, and experience. Furthermore, the degree can offer an international approach that will allow graduates to develop their abilities in a globalized context (Culver, Puri, Spinelli, DePauw & Dooley, 2011).

Future research could design a triple degree in Administration and Business Management and Industrial Management Engineering. According to Universia, only two triple degrees exist in Spain: the triple degree in Journalism/Audiovisual Communication and Multimedia/Advertising and the triple degree in Media and Performing Arts/Musical Creation/Dance Sciences, both at the Universidad Europea de Madrid.

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