



Universidad
de Alcalá

GUÍA DOCENTE

LOGISTICS TECHNOLOGY TRENDS

**Grado en Administración y Dirección
de Empresa
Universidad de Alcalá**

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GUÍA DOCENTE

Name:	LOGISTICS TECHNOLOGY TRENDS
Code:	410055
Degree:	Grado Administración y Dirección de Empresa Grado Administración y Dirección de Empresa (Guadalajara) Grado Turismo y Administración y Dirección de Empresa Grado en Economía y Negocios Internacional
Department and Area of Knowledge:	Economics and Business Management
Type:	Elective
Credits ECTS:	6
Year y semester:	4th Year
Teaching staff:	Sorín Gavrilá Gavrilá (sorin.gavrilá@uah.es) Antonio de Lucas Ancillo (antonio.lucas@uah.es)
Office Hour:	To be arranged between professor and students
Language:	English

1. OUTLINE

With the growth of eCommerce and the continuous changes in business models, it becomes essential to keep track of all aspects involving logistics, either merely for control or being part of the industry. Good management means having the right information at the right time, making it visible only to those users with the right permissions. Moreover, a good organization allows a great coordination and communication between members. Other benefits of an optimal information organization are the reduction of costs and effort in achieving strategic objectives.

To achieve these objectives, it is necessary to develop a "Technological Transformation Plan" of the organization through the deployment of Enterprise Information Systems (EIS) and Digital Enablers (DE) specialized in the so-called "Logistics 4.0": from Business Management Systems to Integrated Warehouse Management Systems, through Geographic Information Systems, etc., all in a context of continuous innovation (Internet of Things, 5G, Cloud/BigData, 3D and 4D Printing, Virtual Reality, Robotics, Drones, Blockchain, Cybersecurity, etc.).

The objective of this course is to assimilate and understand the above with a clear orientation towards the practical application of this knowledge in business organizations.

2. COMPETENCIES

General competencies:

- CG1 Ability to know, understand and apply the necessary legislation during the development of a Technological Transformation Plan, as well as to handle specifications, regulations and mandatory standards.
- CG2 Knowledge to perform measurements, calculations, valuations, appraisals, appraisals, surveys, studies, reports, task planning and the like, in accordance with the knowledge acquired as established in section 5 of this annex.
- CG3 Knowledge and application of basic elements of economics and human resources management, organization and project planning, as well as legislation, regulation and standardization in the field of business and innovation IT projects, in accordance with the knowledge acquired as established in section 5 of this annex.

Specific competencies:

- CS11 Ability to integrate Information and Communications Technology solutions and business processes to meet the information needs of organizations, enabling them to achieve their objectives effectively and efficiently, thus giving them competitive advantages.
- CS12 Ability to determine the requirements of an organization's information and communication systems, taking into account security aspects and compliance with regulations and legislation in force.
- CS14 Ability to understand and apply the principles and practices of organizations so that they can serve as a liaison between the technical and management communities of an organization and actively participate in the training of users.
- CS15 Ability to understand and apply the principles of risk assessment and apply them correctly in the development and implementation of action plans.

The expected learning outcomes, are the following:

- RA1: Be aware of the increasing importance of Enterprise Information Systems (EIS) and Digital Enablers (DEs), given the broad scope of organizational systems involved and the role such systems play in facilitating organizational strategies.
- RA2: Possess the cognitive and attitudinal elements to solve problems and think critically.
- RA3: Use the concepts and fundamentals of EIS and DE to understand and contextualize problems.
- RA4: Understand the importance of people, procedures, hardware, software and data as essential components of EIS and DE.
- RA5: Understand that EIS and DE require the application of professional codes of conduct.
- RA6: Possess both oral and written communication skills necessary for the design and management of EISs and DEs.
- RA7: Understand the social and cultural aspects and the influence on human interaction of EIS and DE, taking them into consideration for the design of EIS and DE.
- RA8: Develop capacity and skills to propose EIS and DE in organizations. Modeling of the solution to be applied and tools.

- RA9: Be able to identify and handle project planning and estimation techniques.
- RA10: Manage projects and develop in work teams according to the special characteristics of a company.
- RA11: To know the best practices in ICT service management.
- RA12: Know the tools offered by the market for their practical application in the management of projects and services.

3. CONTENTS

Units	Number of credits
Module I. Enterprise Systems Unit 1.1. ERP, CRM, e-Business, SCM, WMS, etc. Unit 1.2. MES, TMS, ITV, GIS, BI, etc.	<ul style="list-style-type: none"> • 3 ECTS
Module II. Digital Enablers Unit 2.1. IoT, 5G, Cloud/Cloud Computing, 3D and 4D Printing, etc. Unit 2.2. Virtual Reality, Robotics, Drones, Blockchain, Cybersecurity, etc.	<ul style="list-style-type: none"> • 2 ECTS
Module III. Technological Transformation Plan Unit 3.1. Technology deployment. Organization perspective. Human Resources perspective.	<ul style="list-style-type: none"> • 1 ECTS

4. METHODOLOGY

4.1. CREDIT DISTRIBUTION (in hours)

Class hours:	20 hours
Search and interpretation of the information obtained:	6 hours
Case studies:	20 hours
Evaluation exams and presentation of results:	2 hours
Independent self-guided study:	102 hours
Total hours	150 hours

4.2. Methodological strategies, materials and teaching resources

Face-to-face and virtual education	<p>Face-to-face or virtual classes: presentation of the main ideas and working concepts.</p> <p>The viewing of videos or the analysis of documents will be proposed for discussion in the classroom.</p> <p>Tutoring and continuous support with an e-learning platform.</p>
Research and search for concepts	<p>By using the available means, the student complements and develops the class topics with their own effort and individual initiative, including the review of the materials proposed in the classroom (videos, documentation, etc.).</p> <p>Raise doubts and expose the results in the e-learning platform.</p>
Application of the case method	<p>Based on practical cases presented throughout the course and working in groups, students develop and put into practice the knowledge acquired, translating it into activities of value for their personal and professional enrichment.</p>
Presentation of results	<p>Classroom and presentations of the different activities developed during the course.</p>
Continuous evaluation exams	<p>Through the correction of case studies and feedback of activities proposed in class and on the Blackboard platform.</p>
Examination strengthening of knowledge and its practical application	<p>Theoretical-practical final exam: at the end of the course there will be an exam in which the student will have to interrelate all the knowledge he/she has learned, thus ensuring that the knowledge is transversal, and that the student is able to relate the concepts and apply them.</p>

5. ASSESSMENT: Procedures and Evaluation criteria ¹

Evaluation criteria:

The dimension and questions that will be assessed in the learning process correspond to the acquisition of competencies presented in the guide. The following general evaluation criteria will also be considered for this purpose:

Regarding the attitude in the classes (both face-to-face and virtual):

- Respect for the teacher and other classmates.
- Collaboration in the development of the exercises carried out in class.
- Interest shown in the planned sessions.
- Active participation in the planned sessions.
- Individual student initiatives.

The normal evaluation process will be inspired by the continuous evaluation of the student.

The following specific evaluation criteria are established for the subject:

- CE1: The student knows and understands the meaning of Enterprise Information Systems (EIS) and Digital Enablers (DEH), as well as their deployment and management in organizations.
- SC2: The student develops a model of ICT organization in a typical organization.
- CE3: The student develops and models a transformation project for a negative business case.
- CE4: The student is able to draft and defend a bid to the market to undertake the transformation project.
- SC5: Selected students will respond to the bid by submitting a bid that meets the requirements established in the previous bid.
- CE6: The rest of the students will analyze and publicly present the results of the public evaluation of the different bids.
- CE7: The student assimilates the concept of ICT as a lever for business.
- CE8: The student knows the state of the art of the different applications in the market.
- CE9: The student, at all times, knows and knows how to implement activities, methodologies based on best practices and market trends in the development of ideas and solutions, always with a prism based on process optimization, change management in organizations and the application of technological tools that improve the flow of information.

¹ *Seguindo la Normativa reguladora de los procesos de evaluación de los aprendizajes, aprobada en Consejo de Gobierno de 24 de Marzo de 2011, es importante señalar los procedimientos de evaluación: por ejemplo evaluación continua, final, autoevaluación, co-evaluación. Instrumentos y evidencias: trabajos, actividades. Criterios o indicadores que se van a valorar en relación a las competencias: dominio de conocimientos conceptuales, aplicación, transferencia conocimientos. Para el sistema de calificación hay que recordar la Normativa del Consejo de Gobierno del 16 de Julio de 2009.*

Those students who decide to abandon the continuous evaluation system must notify the dean or director of the center within the first two weeks of the course, explaining the reasons that prevent them from following the continuous evaluation system.

If the student does not participate in the teaching-learning process as established in this teaching guide (attendance, completion and delivery of learning activities and evaluation), he/she will be considered not presented in the ordinary call.

Continuous review

Continuous assessment accounts for 80% of the grade and is based on participation in class and on the e-learning platform, the performance of oriented research and the search for information on the topics covered, as well as the development of case studies and their defense. This evaluation will be carried out in three main phases:

- Case study of the Technological Transformation Plan through the use of Business Information Systems (P1), with a weight in the evaluation of 40%.
- Case study of the Technological Transformation Plan through the use of Digital Enablers (P2), with a weight in the evaluation of 30%.
- Organization and implementation of the Technological Transformation Plan (P3), with a weight in the evaluation of 10%.

There will be an exam that will assess the acquisition of the essential concepts for the understanding of the subject and the participation in the group case studies through questions and specific developments related to such work. This exam represents the remaining 20% (PE4).

To pass the course the student must satisfactorily pass the set of tests, i.e., the classroom activities and the exam, understanding that all of them together evaluate the acquisition of all the competencies developed. The total number of face-to-face activities will be 4 during the whole course, being able to be extended to a total of 6 in certain groups of the course and depending on the dynamics of the course.

The following table indicates the weight in the grade (between 0 and 100) of each test, and its relation to the evaluation criteria, learning outcomes and general competencies:

Competencies	Learning Outcome	Evaluation Criteria	Evaluation Instrument	Weight in the rating
CG1, CG2, CG3, CSI1, CSI2, CSI4, CSI5	RA1, RA2, RA3, RA4, RA5, RA6, RA7, RA8, RA9, RA10, RA11, RA12	CE1, CE2, CE3, CE4, CE5, CE6, CE7, CE8, CE9, CE8, CE9	P1	40%
CG1, CG2, CG3, CSI1, CSI2, CSI4, CSI5	RA1, RA2, RA3, RA4, RA5, RA6, RA7, RA8, RA9, RA10, RA11, RA12	CE1, CE2, CE3, CE4, CE5, CE6, CE7, CE8, CE9, CE8, CE9	P2	30%
CG1, CG2, CG3, CSI1, CSI2, CSI4, CSI5	RA1, RA2, RA3, RA4, RA5, RA6, RA7, RA8, RA9, RA10, RA11, RA12	CE1, CE2, CE3, CE4, CE5, CE6, CE7, CE8, CE9, CE8, CE9	P3	10%
CG1, CG2, CG3, CSI1, CSI2, CSI4, CSI5	RA1, RA2, RA3, RA4, RA5, RA6, RA7, RA8, RA9, RA10, RA11, RA12	CE1, CE2, CE3, CE4, CE5, CE6, CE7, CE8, CE9, CE8, CE9	PE4	20%

Final exam

It will consist of several theoretical questions and practical cases in which students will have to demonstrate that they have acquired the generic and specific competencies of the subject. This exam will be taken by students who have rejected or have not passed the continuous evaluation or students who are trying to improve their grade.

- FP: Theoretical-practical knowledge exam on the content blocks of the course (100% of the total).

Competencies	Learning Outcome	Evaluation Criteria	Instrument of Evaluation	Weight in the rating
CG1, CG2, CG3, CSI1, CSI2, CSI4, CSI5	RA1, RA2, RA3, RA4, RA5, RA6, RA7, RA8, RA9, RA10, RA11, RA12	CE1, CE2, CE3, CE4, CE5, CE6, CE7, CE8, CE9, CE8, CE9	PF	100%

Extraordinary Call for June

Students who have not passed any of the two previous phases will have to repeat the exam in the extraordinary exam and the rest of their continuous evaluation grades will be kept to be added to it.

Students in any other circumstance different from the above: they must take a final exam that will constitute 100% of their grade.

Competencies	Learning Outcome	Evaluation Criteria	Evaluation Instrument	Weight in the rating
CG1, CG2, CG3, CSI1, CSI2, CSI4, CSI5	RA1, RA2, RA3, RA4, RA5, RA6, RA7, RA8, RA9, RA10, RA11, RA12	CE1, CE2, CE3, CE4, CE5, CE6, CE7, CE8, CE9, CE8, CE9	PCE	100%

6. BIBLIOGRAPHY

Essential Reading

- LAUDON, K.C. & LAUDON, J.P. (2007) Management Information Systems: Managing the Digital Firm. Prentice Hall. 10th Edition.
- TURBAN, E., LEIDNER, D., MCLEAN, E. & WETHERBE, J. (2005) Information Technology for Management: Transforming Organizations in the Digital Economy. John Wiley & Sons, 5th Edition.
- Beynon-Davies, P. (2019) Business Information Systems. Macmillan Education.
- de Lucas Ancillo, A. (2010) Introducción al e-Business. Instituto de Dirección y Organización de Empresa.
- Mohapatra, S. (2012) E-Commerce Strategy: Text and Cases. Springer US (Springer Texts in Business and Economics).

- Turban, E. et al. (2017) Introduction to Electronic Commerce and Social Commerce. Springer International Publishing (Springer Texts in Business and Economics).
- Class notes and Internet (links to videos and documentation)

Supplementary Bibliography (optional)

- Articles from specialized journals and selected websites recommended throughout the course

7. INFORMATION NOTE

The University of Alcalá guarantees its students that, if due to health requirements the competent authorities prevent the total or partial presence of the teaching activity, the teaching plans will achieve their objectives through a teaching-learning and evaluation methodology in online format, which will return to the face-to-face modality as soon as these impediments cease.