



POLITÉCNICA

INTERNATIONAL
CAMPUS OF
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COORDINATION PROCESS OF
LEARNING ACTIVITIES
PR/CL/001



E.T.S. de Ingenieros de
Telecomunicacion

ANX-PR/CL/001-01

LEARNING GUIDE

SUBJECT

93000852 - Digital Business

DEGREE PROGRAMME

09AQ - Master Universitario en Ingeniería de Telecomunicacion

ACADEMIC YEAR & SEMESTER

2020/21 - Semester 2

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1. Description

1.1. Subject details

Name of the subject	93000852 - Digital Business
No of credits	3 ECTS
Type	Optional
Academic year of the programme	Second year
Semester of tuition	Semester 4
Tuition period	February-June
Tuition languages	English
Degree programme	09AQ - Master Universitario en Ingenieria de Telecomunicacion
Centre	09 - Escuela Tecnica Superior de Ingenieros de Telecomunicacion
Academic year	2020-21

2. Faculty

2.1. Faculty members with subject teaching role

Name and surname	Office/Room	Email	Tutoring hours *
Angel Hernandez Garcia (Subject coordinator)	A-127	angel.hernandez@upm.es	Sin horario. Appointment by e-mail.

* The tutoring schedule is indicative and subject to possible changes. Please check tutoring times with the faculty member in charge.

3. Prior knowledge recommended to take the subject

3.1. Recommended (passed) subjects

The subject - recommended (passed), are not defined.

3.2. Other recommended learning outcomes

- Foundations of marketing
- Foundations of business management

4. Skills and learning outcomes *

4.1. Skills to be learned

CG2 - Que los estudiantes sepan aplicar los conocimientos adquiridos y su capacidad de resolución de problemas en entornos nuevos o poco conocidos dentro de contextos más amplios (o multidisciplinares) relacionados con su área de estudio.

CT6 - Capacidad para emitir juicios sobre implicaciones económicas, administrativas, sociales, éticas y medioambientales ligadas a la aplicación de sus conocimientos.

4.2. Learning outcomes

RA190 - Conocer y entender los procesos de marketing de una empresa en un entorno digital.

RA191 - Conocer y aplicar los sistemas y tecnología de las información que dan soporte a los procesos comerciales de una empresa.

RA192 - Conocer los procesos de inteligencia de negocio que se realizan en una empresa, así como las herramientas que les dan soporte.

* The Learning Guides should reflect the Skills and Learning Outcomes in the same way as indicated in the Degree Verification Memory. For this reason, they have not been translated into English and appear in Spanish.

5. Brief description of the subject and syllabus

5.1. Brief description of the subject

The main objective of the course is to understand how Information Systems and Technologies support digital business strategies and processes.

This course focuses on the application of IT systems and technologies to business processes in digital markets. The course gives an overview of the foundational concepts and main tools used in the digital transformation of business, with a special focus on digital marketing, customer relationship management and business intelligence.

This course complements the strategic concepts learnt in "Dirección y Administración de Empresas" (1st semester) and the fundamentals of Enterprise Information Systems learnt in "Sistemas de Información para la Gestión Empresarial" (1st semester).

5.2. Syllabus

1. Introduction
2. Introduction to the digital transformation
3. Digital strategy
4. The digital transformation of business areas
 - 4.1. Digital marketing
 - 4.2. Digital operations management
 - 4.3. Digital talent management
 - 4.4. Digital finance management
5. Business intelligence and digital marketing in practice

6. Schedule

6.1. Subject schedule*

Week	Face-to-face classroom activities	Face-to-face laboratory activities	Distant / On-line	Assessment activities
1	Introduction Duration: 00:30 Lecture Introduction to the digital transformation Duration: 01:30 Lecture			
2	Introduction to the digital transformation Duration: 01:00 Lecture Introduction to the digital transformation Duration: 01:00 Additional activities			Case: Introduction to the digital transformation Group work Continuous assessment Not Presential Duration: 00:10
3	Digital strategy Duration: 02:00 Lecture			
4	Digital strategy Duration: 02:00 Lecture			Case: Digital strategy Individual work Continuous assessment Not Presential Duration: 00:10
5	The digital transformation of business areas Duration: 02:00 Lecture			
6	The digital transformation of business areas Duration: 02:00 Lecture			Test: The digital transformation of business areas Online test Continuous assessment Presential Duration: 00:10
7	Business intelligence and digital marketing in practice Duration: 02:00 Lecture			Test: The digital transformation of business areas Online test Continuous assessment Presential Duration: 00:10
8	Business intelligence and digital marketing in practice Duration: 01:00 Lecture Business intelligence and digital marketing in practice Duration: 01:00 Additional activities			

9	<p>Business intelligence and digital marketing in practice Duration: 01:00 Lecture</p> <p>Business intelligence and digital marketing in practice Duration: 01:00 Additional activities</p>			
10	<p>Business intelligence and digital marketing in practice Duration: 01:00 Lecture</p> <p>Business intelligence and digital marketing in practice Duration: 01:00 Additional activities</p>			
11	<p>Business intelligence and digital marketing in practice Duration: 01:00 Lecture</p> <p>Business intelligence and digital marketing in practice Duration: 01:00 Additional activities</p>			
12	<p>Business intelligence and digital marketing in practice Duration: 01:00 Lecture</p> <p>Business intelligence and digital marketing in practice Duration: 01:00 Additional activities</p>			
13	<p>Business intelligence and digital marketing in practice Duration: 01:00 Lecture</p> <p>Business intelligence and digital marketing in practice Duration: 01:00 Additional activities</p>			
14	<p>Business intelligence and digital marketing in practice Duration: 02:00 Additional activities</p>			<p>Final case. Report and presentation Other assessment Continuous assessment Presential Duration: 02:00</p> <p>Attendance and participation Other assessment Continuous assessment Presential Duration: 00:00</p> <p>Case reports and deliverables Other assessment Final examination Not Presential Duration: 00:00</p>

15				
16				
17				Final Exam Written test Final examination Presential Duration: 03:00

Depending on the programme study plan, total values will be calculated according to the ECTS credit unit as 26/27 hours of student face-to-face contact and independent study time.

* The schedule is based on an a priori planning of the subject; it might be modified during the academic year, especially considering the COVID19 evolution.

7. Activities and assessment criteria

7.1. Assessment activities

7.1.1. Continuous assessment

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
2	Case: Introduction to the digital transformation	Group work	No Presential	00:10	10%	/ 10	CT6 CG2
4	Case: Digital strategy	Individual work	No Presential	00:10	10%	/ 10	CT6 CG2
6	Test: The digital transformation of business areas	Online test	Face-to-face	00:10	10%	/ 10	CT6 CG2
7	Test: The digital transformation of business areas	Online test	Face-to-face	00:10	10%	/ 10	CT6 CG2
14	Final case. Report and presentation	Other assessment	Face-to-face	02:00	50%	3 / 10	CT6 CG2
14	Attendance and participation	Other assessment	Face-to-face	00:00	10%	/ 10	CT6 CG2

7.1.2. Final examination

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
14	Case reports and deliverables	Other assessment	No Presential	00:00	0%	5 / 10	CT6 CG2
17	Final Exam	Written test	Face-to-face	03:00	100%	5 / 10	CT6 CG2

7.1.3. Referred (re-sit) examination

Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
Case reports and deliverables	Other assessment	Face-to-face	00:00	0%	5 / 10	CT6 CG2
Final Exam	Written test	Face-to-face	03:00	100%	5 / 10	CT6 CG2

7.2. Assessment criteria

Due to the course methodology, **students will be graded through continuous assessment by default. Students who will not be able to attend the lessons are strongly advised against enrolling in this course.** Nonetheless, students who wish to renounce continuous assessment and opt for final exam assessment (comprising one or more course assignments or deliverables) must inform the course coordinator in writing, using the corresponding link in the course page in Moodle-UPM, before the end of the third week of the course. Additionally, at the same time, students who opt-out of continuous assessment must contact the course coordinator to be informed about the content and schedule of the alternative assignments.

Continuous assessment includes the following assignments and final grade weights:

- Case Reports: 20% (10% each case report).
- Tests: 20% (10% each test)
- Final Case. Report and Presentation: 50% (minimum grade to pass: 3/10; students with scores lower than 3/10 in the final case will have a final grade equal to the grade obtained in the final case)
- Attendance and participation: 10%

The evaluation will assess the competence level achieved by students. Therefore, students renouncing to continuous assessment and opting for final exam will be subject to all the assessment techniques used in continuous assessment (EX, ET, TG, etc.). The final exam will take place in the time and place approved by "Junta de Escuela" for the current academic semester and year. Evaluation assignments assessing learning outcomes that may not be assessed through a single exam can be completed and delivered during the semester following the instructions given by the course coordinator.

If a student opts for final exam assessment, the process will be as follows:

- The student must comply with the schedule of deliverables appointed by the course coordinator, and obtain a grade equal to or higher than 5.0 points. If any of the deliverables receives grades lower than 5.0 points, the final grade will be the average of those deliverables.
- If all the deliverables receive a grade equal to or higher than 5.0 points, the final exam will include questions about both theoretical and practical concepts seen in the course and developed in the deliverables. The final grade will then be calculated only upon the final exam score.

Assesment of the extraordinary final exam will follow the final exam assessment option only. In this case, the student must contact the course coordinator at least two weeks before the official examination date approved by

"Junta de Escuela" because the deliverables must be sent at least one week before the examination date.

8. Teaching resources

8.1. Teaching resources for the subject

Name	Type	Notes
http://moodle.upm.es/titulaciones/oficiales	Web resource	Course materials developed by the course instructors: presentations, documents, cases, etc.
Kotler, P., Kartajaya, H., & Setiawan, I. Marketing 4.0: Moving from Traditional to Digital. John Wiley & Sons. 2017.	Bibliography	Complementary bibliography
Deiss, R., & Henneberry, R. Digital Marketing For Dummies. John Wiley & Sons. 2017.	Bibliography	Complementary bibliography.
Stricchiola, J., Spencer, S., & Enge, E.: The Art of SEO: Mastering Search Engine Optimization (3rd Edition). O'Reilly Media, 2015.	Bibliography	Complementary bibliography
Greenberg, P.: CRM at the Speed of Light, Fourth Edition: CRM 2.0 Strategies, Tools, and Techniques for Engaging Your Customers. McGraw-Hill. 2010	Bibliography	Complementary bibliography
Sherman, R.: Business intelligence guidebook : from data integration to analytics. Morgan Kaufmann Publ., 2015	Bibliography	Complementary bibliography
Liderando la transformación digital en las organizaciones	Web resource	Canal Youtube UPM. MOOC Liderando la transformación digital en las organizaciones: https://www.youtube.com/user/UPM

9. Other information

9.1. Other information about the subject

- Communications between the instructor and students: In order to facilitate the communication with the instructors, and whenever the questions or doubts cannot be solved during the class, e-mail will be the preferred way to direct any inquiry, question or doubt about the course to the instructors. Additionally, office hours and meetings will also be requested by e-mail.
- Supporting tools and technologies: Certain tasks and activities may require the use of Moodle, Zoom or Microsoft Teams. If there is a mandate or recommendation for the use of other digital tools from the authorities (University, State), the information about the alternative means of communication/assessment/teaching will be communicated to the students in advance.
- Sustainable development goals: the course aims to foster awareness and knowledge about the Sustainable Development Goals through the development and presentation of projects that motivate students to work on different solutions with a telecommunication engineering perspective. More specifically, the course will contribute to substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship (SDG 4.4)