Teaching Guide				
Identifying Data				2020/21
Subject (*)	Industrial Management		Code	730G03024
Study programme	Grao en Enxeñaría Mecánica			
Descriptors				
Cycle	Period	Year	Type	Credits
Graduate	2nd four-month period	Third	Obligatory	6
Language	Spanish			
Teaching method	Hybrid			
Prerequisites				
Department	EconomíaEmpresa			
Coordinador	Crespo Pereira, Diego	E-mail	diego.crespo@udc.es	
Lecturers	Crespo Pereira, Diego Garcia del Valle, Alejandro	E-mail	diego.crespo@udc.es alejandro.garcia.delvalle@udc.es	
Web	www.gii.udc.es			
General description	This course teaches Operations Management from the point of view of Industrial Engineering.			
Contingency plan	1. Modifications to the contents 2. Methodologies *Teaching methodologies that are maintained *Teaching methodologies that are modified 3. Mechanisms for personalized attention to students 4. Modifications in the evaluation *Evaluation observations: 5. Modifications to the bibliography or webgraphy			

Study programme competences / results	
Code	Study programme competences / results
A17	CR11 - Coñecementos aplicados de organización de empresas.
B2	CB02 - Que os estudantes saiban aplicar os seus coñecementos ao seu traballo ou vocación dunha forma profesional e posúan as competencias que adoitan demostrarse por medio da elaboración e defensa de argumentos e a resolución de problemas dentro da súa área de estudo
B3	CB03 - Que os estudantes teñan a capacidade de reunir e interpretar datos relevantes (normalmente dentro da súa área de estudo) para emitiren xuízos que inclúan unha reflexión sobre temas relevantes de índole social, científica ou ética
B4	CB04 - Que os estudantes poidan transmitir información, ideas, problemas e solucións a un público tanto especializado como leigo
B5	CB05 - Que os estudantes desenvolvan aquelas habilidades de aprendizaxe necesarias para emprenderen estudos posteriores cun alto grao de autonomía
B7	B5 - Ser capaz de realizar unha análise crítica, avaliación e síntese de ideas novas e complexas
C1	C3 - Utilizar as ferramentas básicas das tecnoloxías da información e as comunicacións (TIC) necesarias para o exercicio da súa profesión e para a aprendizaxe ao longo da súa vida.
C4	C6 - Valorar criticamente o coñecemento, a tecnoloxía e a información dispoñible para resolver os problemas cos que deben enfrontarse.
C6	C8 - Valorar a importancia que ten a investigación, a innovación e o desenvolvemento tecnolóxico no avance socioeconómico e cultural da sociedade.

Learning outcomes			
Learning outcomes	Study programme competences / results		
Knowledge of operations management methods.	A17	B2 B3 B4 B5 B7	C1 C4 C6
Knowledge of manufacturing systems.	A17	B2 B3 B4 B5 B7	C1 C4 C6

Contents	
Topic	Sub-topic
The following topics develop the contents established in the tab of the Verification Memory that are:	The Production System. Operations management. Planning, management and control.
1. Introduction	
2. Technical and economic analysis of decisision alternatives	
3. Selection, design and process analysis	
4. Forecasting and demand planning	
5. Aggregate Production Planning	
6. Inventory Management	
7. LEAN and JIT Production	
8. Enterprise Resource Planning ERP	
9. Scheduling jobs	

Planning				
Methodologies / tests	Competencies / Results	Teaching hours (in-person & virtual)	Student?s personal work hours	Total hours
Guest lecture / keynote speech	A17 B2 B3 B5	30	39	69
ICT practicals	B4 B7 C1 C4 C6	15	15	30
Supervised projects	A17 B2 B3 B4 B5 B7 C1 C4 C6	2	11	13
Problem solving	A17 B2 B3 B4 B5 B7 C1 C4 C6	13	13	26
Mixed objective/subjective test	A17 B2 B3 B4 B5 B7 C1 C4 C6	3	6	9
Personalized attention		3	0	3
(*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.				

Methodologies	
Methodologies	Description
Guest lecture / keynote speech	Lectures in large groups
ICT practicals	Classes in medium and small groups using ICT (Excel, ExtendSim and other appropriate tools).
Supervised projects	Team based work proposed by the teacher at the beggining of the course.
Problem solving	Classes for solving problems using a computer.

Mixed objective/subjective test	Final exam

Personalized attention	
Methodologies	**Description**
Guest lecture / keynote speech ICT practicals Mixed objective/subjective test Supervised projects Problem solving	Personal attention will be made in tutorial hours.

Assessment			
Methodologies	**Competencies / Results**	**Description**	**Qualification**
Mixed objective/subjective test	A17 B2 B3 B4 B5 B7 C1 C4 C6	Final exam.	70
Supervised projects	A17 B2 B3 B4 B5 B7 C1 C4 C6	Submission and presentation of a project proposed by the teacher.	30

Assessment comments
The "students with recognition of a part-time academic and exemption of assistance" will communicate at the beginning of the course your situation to the teachers of the subject, as established by the "Standard that regulates the dedication to the study of undergraduates in the UDC "(Art.3.be 4.5) and the" Standards for evaluation, review and claim of the qualifications of undergraduate and master's degree (Art. 3 and 8b).Students in this situation will be assessed on the date approved by the School Board, by an objective test consisting of solving exercises on the contents of step 3 of the Guide.The students will be graded according to the weights assigned to each methodology in the previous table. In the second chance exam the students can resit the mixed test.

Sources of information	
Basic	- David Krahl, Robin Clark (2011). ExtendSIM for Discrete Event System Simulation. Imagine That! - Collier, David Alan; Evans, James R. (). OM4. CENGAGE Learning - Heizer, Jay and Render, Barry (). Operations Management. Prentice Hall - Slack, Nigel; Chambers, Stuart; Johnston, Robert (). Operations Management. Prentice Hall - García del Valle, Alejandro; Lamas, Adolfo; Crespo, Diego (). Apuntes de Organización de Empresas. Moodle
Complementary	- Greasley, Andrew (2009). Operations Management. John Wiley - Askin, Ronald G and Jeffrey, B. Goldberg (2002). Desing and Analysis of Lean Production Systems. John Wiley

Recommendations
Subjects that it is recommended to have taken before
Statistics/730G03008 Business Management/730G03010
Subjects that are recommended to be taken simultaneously
Subjects that continue the syllabus
Other comments

There is an extensive literature on Operations Management in the library of the Polytechnic School (mostly in English).The chapters of the course are available as PDF documents in Moodle. Exams and solutions of previous years are available in Moodle.

(*)The teaching guide is the document in which the URV publishes the information about all its courses. It is a public document and cannot be modified. Only in exceptional cases can it be revised by the competent agent or duly revised so that it is in line with current legislation.