



IDENTIFYING DATA

Industrial organisation and processes in the wood industry

Subject	Industrial organisation and processes in the wood industry			
Code	P03G370V01707			
Study programme	(*)Grao en Enxeñaría Forestal			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	6	Optional	4th	1st
Teaching language	#EnglishFriendly Spanish Galician			
Department				
Coordinator	González Prieto, Óscar			
Lecturers	González Prieto, Óscar			
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Web	http://www.forestales.uvigo.es			
General description	Matter that treats on the industrial processes of transformation of the wood, especially those that carry out in the manufacture of the final products, as well as the technicians of management and continuous improvement of the production.			

Skills

Code	
B12	Capacity for organization and planning of companies and other institutions, with knowledge of the legislative provisions that affect them and the fundamentals of marketing and marketing of forest products.
C30	Ability to know, understand and use the principles of: knowledge of the basic principles of the second transformation processes of wood.
C31	Knowledge for the calculation and design of carpentry facilities. Drying, debarking and crushing of wood.
D5	Capacity for information management, analysis and synthesis
D8	Ability to solve problems, critical reasoning and decision making

Learning outcomes

Expected results from this subject	Training and Learning Results
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2R. 2018 Knowledge and understanding of the disciplines of engineering of the his speciality, to the necessary level to purchase the rest of the competitions of the qualifications, including notions of the last advances.	B12	C30	D5
3R. 2018 Be conscious of the multidisciplinary context of the engineering.		C31	D8
4R. 2018 Capacity to analyze products, processes and complex systems in the his field of study; choose and apply analytical methods, of calculation and experimental relevantes of form relevante and interpret correctly the results of these analyses.			
5R. 2018 Capacity to identify, formulate and resolve problems of engineering in the his speciality; choose and apply analytical methods, of calculation and experiments properly established; Recognize the importance of the social restrictions, of health and security, environmental, economic and industrial.			
6R. 2018 Capacity to project, design and develop complex products (pieces, component, products finished, etc.), processes and systems of the his speciality, that fulfil the requirements established, including the knowledge of the social aspects, of health and environmental security, economic and industrial; as well as select and apply methods of appropriate project.			
7R. 2018 Capacity of the project using any knowledges advanced of the his speciality in engineering.			
8R. 2018 Capacity to realize bibliographic researches, consult and use databases and other sources of information with discretion, to realize @simulación and analysis with the objective to realize investigations on technical subjects of the his speciality.			
9R. 2018 Capacity to consult and apply codes of good practices and security of the his speciality.			
11R. 2018 Understanding of the techniques and methods of analysis, project and applicable investigation and his limitations within the scope of the his speciality.			
12R. 2018 Capacity to resolve complex problems, realize complex projects of engineering and realize specific investigations stop his speciality.			
13R. 2018 Knowledge of the application of materials, teams and tools, technological processes and of engineering and his limitations within the scope of the his speciality.			
15R. 2018 Knowledge of the social implications, of health and security, environmental, economic and industrial of the practice in engineering.			
16R. 2018 Ideas general on economic questions, organisational and of management (how management of projects, management of risks and change) in the industrial and entrepreneurial context.			
18R. 2018 Capacity to manage activities or technical projects or complex professionals of the his speciality, assuming the responsibility of the takes of decisions.			

2R. 2018 Knowledge and understanding of the disciplines of engineering of the his speciality, to the necessary level to purchase the rest of the competitions of the qualifications, including notions of the last advances.

3R. 2018 Be conscious of the multidisciplinary context of the engineering.

4R. 2018 Capacity to #analyze products, processes and complex systems in the his field of study; choose and apply analytical methods, of calculation and experimental *relevantes of form *relevante and interpret correctly the results of these analyses.

5R. 2018 Capacity to identify, formulate and resolve problems of engineering in the his speciality; choose and apply analytical methods, of calculation and experiments properly established; Recognize the importance of the social restrictions, of health and security, environmental, economic and industrial.

6R. 2018 Capacity to project, design and develop complex products (pieces, component, products finished, etc.), processes and systems of the his speciality, that fulfil the requirements established, including the knowledge of the social aspects, of health and environmental security, economic and industrial; as well as select and apply methods of appropriate project.

7R. 2018 Capacity of the project using any knowledges advanced of the his speciality in engineering.

8R. 2018 Capacity to realize bibliographic researches, consult and use databases and other sources of information with discretion, to realize @simulación and analysis with the objective to realize investigations on technical subjects of the his speciality.

9R. 2018 Capacity to consult and apply codes of good practices and security of the his speciality.

11R. 2018 Understanding of the techniques and methods of analysis, project and applicable investigation and his limitations within the scope of the his speciality.

12R. 2018 practical Competition to resolve complex problems, realize complex projects of engineering and realize specific investigations stop his speciality.

13R. 2018 Knowledge of the application of materials, teams and tools, technological processes and of engineering and his limitations within the scope of the his speciality.

14R. 2018 Capacity to apply norms of engineering in the his speciality.

15R. 2018 Knowledge of the social implications, of health and security, environmental, economic and @industrial of the practice in engineering.

16R. 2018 general Ideas on economic questions, organisational and of management (how management of projects, management of risks and change) in the industrial and entrepreneurial context.

19R. 2018 Capacity to communicate of effective way information, ideas, problems and solutions in the field of the engineering and with the society in general.

20R. 2018 Capacity to work effectively in national and international contexts, individually and in team, and cooperate with the engineers and people of other disciplines.

Contents

Topic

The sector of second transformation of the wood	The carpentry and furniture industry in: <ul style="list-style-type: none"> · Galicia · Spain · Europe
Industrial operations on wood and boards Mechanization of wood and boards	Industry 4.0 Adhesives and gluing techniques in the wood industry Application of edges on boards Application of decorative surfaces on boards Sanding practices in carpentry and furniture Finishing technology on wood and boards
Basic principles and production management tools	Basic concepts Tools for supply chain management, purchasing and inventory Mathematical tools and models for the optimization of production
Inventory management	Introduction Inventory management: basic concepts Inventory management tools
Aggregate planning	Introduction Aggregate planning: basic concepts Aggregate planning strategies
Materials requirements planning	Introduction MRP elements Methods
Basic principles and tools for continuous improvement in the organization of industrial production	Lean management basics and production excellence Application of Lean management to the wood industry Other tools: JIT, six-sigma

Planning

	Class hours	Hours outside the classroom	Total hours
Introductory activities	2	0	2
Lecturing	20	40	60
Problem solving	13	28	41
Mentored work	7	20	27
Studies excursion	8	10	18
Problem and/or exercise solving	2	0	2

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies

	Description
Introductory activities	Introduction to the objectives and development of the subject
Lecturing	Structured exposition of objectives, theoretical contents and examples of the themes and subtopics that make up the program of the subject. This exhibition will be held in the classroom in person or through the remote campus. Students will have all the material to be able to follow the classes in person.
Problem solving	Active participation in the resolution of problems and / or exercises
Mentored work	Resolution of small practical exercises that accompany a theoretical explanation. Seminars of approach and resolution of type problems with oral presentation
Studies excursion	Explanation "in situ" of the organization and industrial processes in carpentry and furniture industries. The studies excursion will not be carried out in the case of non-face-to-face teaching or in the case that it is not allowed with semi-face-to-face teaching. It will be replaced by practical observation of audiovisual material from manufacturing processes of the wood industries (videos and digital information).

Personalized assistance

Methodologies Description

Lecturing	Personalized attention will make preferably by telematic means (email, campus remoto, forums of doubts in FaiTIC). If a student wants, as possible, it can be presencially. They will be indicated at the beginning of course the concrete forms of communication as well as the schedules.
Mentored work	Personalized attention will make preferably by telematic means (email, campus remoto, forums of doubts in FaiTIC). If a student wants, as possible, it can be presencially. They will be indicated at the beginning of course the concrete forms of communication as well as the schedules.
Problem solving	Personalized attention will make preferably by telematic means (email, campus remoto, forums of doubts in FaiTIC). If a student wants, as possible, it can be presencially. They will be indicated at the beginning of course the concrete forms of communication as well as the schedules.

Assessment

	Description	Qualification	Training and Learning Results
Lecturing	Active participation in the debate that arises in the remote classroom / campus about theoretical concepts. Participation in forums that are enabled on the FaiTIC platform will also be valued.	10	C30 C31
Mentored work	Active participation in the seminars for solving exercises and case studies / analysis of situations, with constructive criticism of the resolutions of other colleagues and timely delivery of the assigned tasks.	5	C30 C31
Studies excursion	Presentation of a memory of the visits made. In the case of teaching no face-to-face or semi-face-to-face, will evaluate memory elaborated employing audiovisual material of processes of manufacture of industries of the wood (videos and digital information).	5	C30 C31
Problem and/or exercise solving	Written exercises on the theoretical and practical contents of the subject. Some exercises will be planned throughout the course and will be delivered through the Teleteaching platform	80	C30 C31

Other comments on the Evaluation

The delivery dates of the different activities will be communicated sufficiently in advance so that the students can plan their implementation

EXAM DATES AND PUBLICATION OF NOTES:

The dates of the exams, according to the official calendar approved by the center, are as follows:

First call: January 15, 2021, 4:00 p.m.

Second call: July 2, 2021, 4:00 p.m.

The publication of provisional notes will be made in the Virtual Secretary and on the Teleteaching platform, and as possible on the center bulletin board

Sources of information

Basic Bibliography

Jay Heizer, Barry Render, **Dirección de la producción y de operaciones : decisiones tácticas**, 11, Pearson Educación, 2015

Complementary Bibliography

Carlos Rodrigo Illera, María Pilar Alberca Oliver, **Dirección de la producción**, Sanz y Torres, 2015

Lluís Cuatrecasas Arbós, **Organización de la producción y dirección de operaciones : sistemas actuales de gestión eficiente y competitiva**, Díaz de Santos, 2011

Tony Crespo Franco, Pilar Piñeiro García, **Producción : planificación, programación e control : ejercicios resueltos**, Universidade de Vigo, Servizo de Publicacións, 2005

Daniel Arias Aranda, Beatriz Mingueta Rata (directores), **Dirección de la producción y operaciones : decisiones operativas**, Pirámide, 2018

Javier Santos, Richard A. Wysk, José Manuel Torres, **Mejorando la producción con lean thinking**, 2, Pirámide, 2015

Recommendations

Subjects that are recommended to be taken simultaneously

Primary wood processing industries/P03G370V01706

Subjects that it is recommended to have taken before

Wood technology/P03G370V01606

Other comments

Eligible subject for dual training projects as established by the memory of the degree.

Contingency plan

Description

=== EXCEPTIONAL PLANNING ===

Given the uncertain and unpredictable evolution of the health alert caused by COVID-19, the University of Vigo establishes an extraordinary planning that will be activated when the administrations and the institution itself determine it, considering safety, health and responsibility criteria both in distance and blended learning. These already planned measures guarantee, at the required time, the development of teaching in a more agile and effective way, as it is known in advance (or well in advance) by the students and teachers through the standardized tool.

=== ADAPTATION OF THE METHODOLOGIES ===

* Teaching methodologies maintained

Introductory activities

Lecturing

Problem solving

Mentored work

* Teaching methodologies modified

Studies excursion: The planned exit of practices will not be carried out in the case of non-face-to-face teaching or in the case that it is not allowed with semi-face-to-face teaching. It will be replaced by practical observation of audiovisual material from the manufacturing processes of the wood industries (videos and digital information)

* Non-attendance mechanisms for student attention (tutoring)

Remote campus, email and forums on the Teledocencia platform

* Modifications (if applicable) of the contents

The planned exit of practices will not be carried out in the case of non-face-to-face teaching or in the case that it is not allowed with semi-face-to-face teaching. It will be replaced by practical observation of audiovisual material from the manufacturing processes of the wood industries (videos and digital information)

* Additional bibliography to facilitate self-learning

It is not necessary, since materials are provided on Faltic, many of them made by the teachers, in order to track the subject

* Other modifications

It is not necessary

=== ADAPTATION OF THE TESTS ===

* Tests already carried out

Weight is maintained as all activities are adapted to any circumstance

* Pending tests that are maintained

Weight is maintained as all activities are adapted to any circumstance

* Tests that are modified

Weight is maintained as all activities are adapted to any circumstance

* New tests

It is not necessary

* Additional Information

It is not necessary
