Teaching Guide				
Identifying Data				2023/24
Subject (*)	Technology: Fabrics and Materials		Code	710G03023
Study programme	Grao en Xestión Industrial da Moda			
Descriptors				
Cycle	Period	Year	Type	Credits
Graduate	1st four-month period	Third	Obligatory	6
Language	Spanish			
Teaching method	Face-to-face			
Prerequisites				
Department	Enxeñaría Naval e Industrial			
Coordinador	López Beceiro, Jorge José	E-mail	jorge.lopez.beceiro@udc.es	
Lecturers	López Beceiro, Jorge José Pereira Rodríguez, Mercedes Vázquez Vázquez, Laura Sabela	E-mail	jorge.lopez.beceiro@udc.es mercedes.pereira@udc.es laura.s.vazquez@udc.es	
Web				
General description	Materials used in textile manufacturing. Synthetic and natural polymers. Physical and mechanical characteristics. Textile structures. Manufacturing methods. Additives. Emerging technologies.			

Study programme competences / results	
Code	Study programme competences / results
A9	To master the logistics process of a fashion firm from a global perspective, from procurement to manufacturing and transportation, with a special focus on the typical textile industry processes: selection of materials and fabrics, patternmaking, manufacturing, etc, ?
A13	To know the impact of technology on the different processes of the textile industry
A18	To know the plastic and visual languages in the realm of fashion industry design, in order to understand and interpret the artistic creations of fashion garments
B1	That students demonstrate that they acquired and understood knowledge in a study area that originates from general secondary education and that can be found at a level that, though usually supported by advanced textbooks, also includes aspects implying knowledge from the avantgarde of its field of study
B2	That students know how to apply their knowledge to their job or vocation in a professional form, and have the competencies that are usually demonstrated through elaboration and advocacy of arguments and problem resolution within their field of study
B3	That students have the capacity to collect and interpret relevant data (normally within their field of study) in order to issue judgements that include a reflection upon relevant topics in the social, scientific or ethical realm
B4	That students may convey information, ideas, problems and solution to the public, both specialized and not
B5	That students develop those learning skills that are needed to undertake ulterior studies with a high degree of autonomy
B8	Capacity to plan, organize and manage resources and operations
B9	Capacity to analyse, diagnose and take decisions
C3	Using ICT in working contexts and lifelong learning.
C8	Valuing the importance of research, innovation and technological development for the socioeconomic and cultural progress of society.
C9	Ability to manage times and resources: developing plans, prioritizing activities, identifying critical points, establishing goals and accomplishing them.

Learning outcomes	
Learning outcomes	Study programme competences / results

Master the logistics process of a fashion company from a global perspective, ranging from provisioning to the production process and transportation, with special emphasis on the main processes of the textile industry: selection of fabrics and materials, pattern making, clothing, etc, ...	A9	B3 B5 B8 B9	C3 C9
Know the impact of technology and how it is applied in the different processes of the textile industry.	A13	B1 B3 B5	C8
Know and apply plastic and visual languages in the field of fashion industry design, to understand and interpret the artistic creations of fashion garments	A18	B1 B2 B4	C3

Contents	
Topic	**Sub-topic**
Material elements for the design in fashion	Textile materials and structures Types of materials Woven and non-woven structures
Materials used in textile manufacturing	Synthetic polymers Natural polymers Natural and synthetic leather Additives Physical and mechanical properties
Manufacturing methods	Fibers, threads and yarns Fabrics and knitting Non-woven textile structures 3d print Leather Treatments Synthetic leather and other structures used in the fashion industry
Current and emerging technologies	Smart fabrics Environmentally friendly manufacturing Surface treatments for resistance to various substances

Planning				
Methodologies / tests	**Competencies / Results**	**Teaching hours (in-person & virtual)**	**Student?s personal work hours**	**Total hours**
Guest lecture / keynote speech	A9 A13 A18 C8	12	36	48
Seminar	A9 A13 A18 C8	2	6	8
Laboratory practice	A9 A13 A18 B1 B3 B9 C3	3	12	15
Document analysis	A9 A13 A18 B1 B3 B9 C3	3	12	15
Supervised projects	A9 A13 A18 B1 B2 B3 B4 B5 B8 C3 C8 C9	4	28	32
Oral presentation	B1 B2 B3 B4 C3 C8 C9	7	14	21
Mixed objective/subjective test	A9 A13 A18 B4	1	0	1
Personalized attention		10	0	10
(*)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	The master class is also known as "lecture", "expository method" or "master class". This last modality is usually reserved for a special type of lesson given by a teacher on special occasions, with content that involves original elaboration and based on the almost exclusive use of the word as a way of transmitting information to the audience.
Seminar	Group work technique whose purpose is the intensive study of a topic. It is characterized by discussion, participation, the preparation of documents and the conclusions that all the components of the seminar have to reach.
Laboratory practice	Methodology that allows students to learn effectively through practical activities, such as demonstrations, exercises, experiments and research
Document analysis	Methodological technique that involves the use of audiovisual and / or bibliographic documents (fragments of documentary reports or movies, current news, graphic panels, photographs, biographies, articles, legislative texts, etc.) relevant to the subject matter with activities specifically designed for their analysis. It can be used as a general introduction to a topic, as an instrument for applying case studies, for explaining processes that cannot be directly observed, for presenting complex situations or as a synthesis of theoretical or practical content.
Supervised projects	Methodology designed to promote the autonomous learning of students, under the tutelage of the teacher and in varied settings (academic and professional). It is primarily concerned with learning "how to do things." It is an option based on the assumption by students of responsibility for their own learning. This teaching system is based on two basic elements: independent student learning and monitoring of that learning by the teacher-tutor
Oral presentation	Intervention inherent in the teaching-learning processes based on verbal exposure through which students and teachers interact in an orderly manner, raising questions, making clarifications and exposing themes, works, concepts, facts or principles in a dynamic way.
Mixed objective/subjective test	Test that integrates standard test test questions and objective test type questions. As for essay questions, collect open-ended questions. In addition, as objective questions, you can combine multiple-choice, ranking, short-answer, discrimination, completion and / or association questions.

Personalized attention	
Methodologies	**Description**
Guest lecture / keynote speech Laboratory practice Oral presentation Document analysis Supervised projects Seminar	Clarification of doubts that arise after the master sessions and fundamentally explanations, comments, and resolution of doubts that arise during the development of the classes in general.

Assessment			
Methodologies	**Competencies / Results**	**Description**	**Qualification**
Laboratory practice	A9 A13 A18 B1 B3 B9 C3	Delivery of practice report	20
Oral presentation	B1 B2 B3 B4 C3 C8 C9	Oral presentation of the supervised work and answer to the questions that are formulated	20
Mixed objective/subjective test	A9 A13 A18 B4	Includes questions about everything covered in the course (including supervised work presented by students)	40
Supervised projects	A9 A13 A18 B1 B2 B3 B4 B5 B8 C3 C8 C9	Delivery of the assigned supervised work report	20

Assessment comments

The mixed test may include questions related to the contents addressed in any of the sessions, whether theoretical, practical or during the debates that occur in the presentations of works.

To pass the subject, a minimum score of 4 (on a scale of 0 to 10) in the mixed test is required.

Students with an academic exemption will have to take the mixed test and present a previously agreed work with the professors of the subject. The assessment will be 60% the mixed test and 40% the supervised work.

The evaluation criteria for the 2nd opportunity are the same as those for the 1st opportunity. If the student did not carry out the proposed work during the course, she must present a work previously agreed with the professors of the subject. The assessment will be 60% the mixed test and 40% the supervised work.

The evaluation criteria for the extraordinary call are the same as those for the 1st opportunity. If the student did not carry out the proposed work during the course, he/she must present a work previously agreed with the professors of the subject. The assessment will be 60% the mixed test and 40% the supervised work.

It will be graded as Not Presented in the entire subject in all cases that do not attend the mixed test.

The fraudulent completion of exams or evaluation activities, once confirmed, will directly result in a failing grade in the session in which it occurs: the student will be awarded a 'fail' (numerical grade of 0) in the corresponding academic year session, whether the offense is committed during the first opportunity or the second. To this end, their grade will be modified in the first opportunity transcript, if necessary.

Sources of information	
Basic	Notas e documentación proporcionada en clase ou a través de Moodle ou a plataforma Microsoft UDC.
Complementary	- Kim Gandhi (2020). Woven Textiles. Principles, Technologies and Applications. Second Edition. Elsevier (Woodhead) - Alexandr A. Berlin, DSc, Roman Joswik, PhD, and Nikolai I. Vatin, DSc (2016). ENGINEERING TEXTILES Research Methodologies, Concepts, and Modern Applications. CRC Press, Apple Academic Press, Inc - Radostina A. Angelova (2016). Textiles and Human Thermophysiological Comfort in the Indoor Environment. CRC Press

Recommendations
Subjects that it is recommended to have taken before
Subjects that are recommended to be taken simultaneously
Subjects that continue the syllabus
Other comments
A entrega dos traballos documentais que se realicen nesta materia:Solicitarase en formato virtual e/ou soporte informático.Realizarase a través de Moodle, en formato dixital sen necesidade de imprimilosDe se realizar en papel:-Non se empregarán plásticos.- Realizaranse impresións a dobre cara.- Empregarase papel reciclado.- Evitarase a impresión de borradores.

(*)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.