



Teaching Guide

| Teaching Guide | | | | |
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| Identifying Data | | | | 2020/21 |
| 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 | Artiaga Diaz, Ramon Pedro | E-mail | ramon.artiaga@udc.es | |
| Lecturers | Artiaga Diaz, Ramon Pedro López Beceiro, Jorge José | E-mail | ramon.artiaga@udc.es jorge.lopez.beceiro@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. | | | |



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| Contingency plan | <p>1. Modifications in the contents.</p> <p>The content is not modified.</p> <p>2. Methodologies</p> <p>* Teaching methodologies that are maintained</p> <p>Master Session (through Teams) Seminar (online) Analysis of documentary sources (through Teams) Tutored works (tutored through Teams or email) Oral presentation (through Teams) Mixed test (online through Moodle or Teams)</p> <p>* Teaching methodologies that change</p> <p>Laboratory practices. It is replaced by practice-oriented documentary source analysis sessions.</p> <p>3. Mechanisms for personalized attention to students.</p> <p>- Email: every day. Useful for making inquiries, requesting virtual meetings to answer questions and follow up on supervised work. - Microsoft Teams: personalized tutoring of students and exchange of documentation. - Moodle: it will be used as an additional deposit to Teams of the documentation provided to the students and as a platform for carrying out the mixed test.</p> <p>4. Modifications in the evaluation.</p> <p>Analysis of documentary sources 10%. - Delivery of the analysis summary of documentary sources. 30% supervised works. - Delivery of the report of the assigned supervised work. Oral presentation 30%. -Oral presentation of the supervised work and answer to the questions that are formulated. Mixed test 30%. - Questions about everything covered in the course (including supervised works presented by students).</p> <p>* Evaluation observations: -</p> <p>5. Modifications to the bibliography or webography.</p> <p>Without modifications</p> |
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| 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 |



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| 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 | |
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| 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 |



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| Current and emerging technologies | Smart fabrics Environmentally friendly manufacturing Surface treatments for resistance to various substances |
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| 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 C9 | 4 | 28 | 32 |
| Oral presentation | B1 B2 B3 B4 C3 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 | |
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| 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 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 |



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| 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. |
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| Assessment | | | |
|---------------------------------------|---------------------------------------|---|---------------|
| Methodologies | Competencies / Results | Description | Qualification |
| Laboratory practice | A9 A13 A18 B1 B3 B9 C3 | Delivery of practice report | 5 |
| Oral presentation | B1 B2 B3 B4 C3 C9 | Oral presentation of the supervised work and answer to the questions that are formulated | 30 |
| Mixed objective/subjective test | A9 A13 A18 B4 | Includes questions about everything covered in the course (including supervised work presented by students) | 30 |
| Document analysis | A9 A13 A18 B1 B3 B9 C3 | Delivery of analysis summary of documentary sources | 5 |
| Supervised projects | A9 A13 A18 B1 B2 B3 B4 B5 B8 C3 C9 | Delivery of the assigned supervised work report | 30 |

| Assessment comments |
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| 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 |
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| Subjects that it is recommended to have taken before |
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| Subjects that are recommended to be taken simultaneously |
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| Subjects that continue the syllabus |
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| Other comments |
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(*)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.