



1. Code: 32513 **Name:** Models for the Innovation of Products and Services

2. Credits: 4,50 **--Lecture:** 2,00 **--Practice:** 2,50 **Type of Course:** Elective

Degree: 2160-Master's Degree in Design Engineering

Module: 2-Elective subjects Semester B

Subject: 2-Models, methods, and techniques for innovation in products and services

University Center: SCHOOL OF DESIGN ENGINEERING

3. Coordinator: Hernandis Ortuño, Bernabé

Departament: GRAPHICS ENGINEERING

4. References

Diseño de nuevos productos : una perspectiva sistémica

Modelo sistémico para la gestión de empresas

Pelos camihos do design. Metodologia de Projeto
ID-Think Bussines Modelling & Product Modelling
www.rdis.upv.es

Transdisciplinary Colaboration in Education-La perspectiva de aprendizaje del proyecto de diseño avanzado
www.id-think.com/ id-think Business, Product and Research Model

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Revista de diseño

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5. Course Outline

From the concepts acquired in 'Modelling of Systems Oriented to Knowledge Management ' it is a question of investigating these, with the aim of deepening them by creating conceptual models of products or services. We will proceed to the study and segmentation of the market in order to innovate in the creation of new systems (Products, Services, Companies or any hierarchical system) in order to control their operation and therefore measure the degree of compliance in relation to the objectives defined and act on the basis of deviations.

All of this is oriented towards knowledge management, studying all the possibilities that systemic modeling provides us with in conceptual design and product development.

It is also intended to generate databases on products or services (typological definition), in order to optimize their designs and improve the management of companies and in particular what affects the design. Study of business strategies and analysis of workspaces in design.

To know the management of knowledge in the field of design and the necessary models for the improvement and control of hierarchical systems, all oriented towards the development and research of new products and services and their relationship with the socioeconomic environment. An online magazine is available in design www.rdis.es in order to present the academic work in the form of article and / or poster. also pretende that the student participates in exhibitions or design events of a research or business character.

The aim is to generate innovative companies based on these models and to learn how to implement and monitor them in the socio-economic environment. To this end, there is currently a business platform that facilitates the launch of business projects of social interest.

6. Recommended Prior Knowledge

We recommend the knowledge acquired in the subject Models for the management of knowledge in products and services. Works of the subject Systems Modelling and Models for Innovation in Products and Services of other years. Final master's theses related to the topic.

7. Student Outcomes

Specific Student Outcomes

005(GE) That students possess the learning skills that will enable them to continue studying in a way that will be largely self-directed or autonomous.

21(ES) Knowledge management in design applied to the business model and industrial product design

20(ES) Analyze factors and research methods focused on the knowledge of business systems.

UPV-Generic Student Outcomes

(04) Innovation, creativity and entrepreneurship

- Activities carried out to achieve the student outcome

To make innovative models about companies, products and services oriented to entrepreneurship.

- Detailed description of the activities

Learn to define models for innovation related to the generation of business activity. Carry out and implement ID-Think models oriented to the innovation of products and services that form part of the creative economy. Exhibition of models, posters and writing of articles.

- Assessment criteria

Valuation of models, posters and articles.

8. Syllabus

1. Theme 1 Advanced systems for the management and development of products and services 1.1- Strategic analysis of design 1.2- Models for knowledge management in the design of products and services.

2. Theme 2 Concurrent Design Model 2.1. Analysis of the Exterior System, Study of Suprasystems, Setting of objectives, Types of variables Study of the factors that make up the design 2.2- Fundamental subsystems of the design 2.2.2 Analysis of the fundamental subsystems 2.2.1- Use volumes, use surfaces and contour limits. 2.3- Conceptual Models of Form, Function and Ergonomics. 2.4- Design Space. 2.5- Application to the development of New Products.

3. Topic 3. Conceptual Modeling 3.1- Design Architectures 3.2- Conceptual Design 3.3- Drafting 3.4- Phases and Stages of the Concurrent Design model. Applications

4. Theme 4 4.1- Product Models 4.2- Hybrid Models 4.3- Development and Management Models 4.4- Sectoral Models 4.5- Applications

9. Teaching and Learning Methodologies

<u>UN</u>	<u>LE</u>	<u>SE</u>	<u>PS</u>	<u>LS</u>	<u>FW</u>	<u>CP</u>	<u>AA</u>	<u>CH</u>	<u>NCH</u>	<u>TOTAL HOURS</u>
1	2,00	1,00	--	5,00	--	--	0,50	8,50	5,00	13,50
2	8,00	2,00	--	10,00	--	--	1,00	21,00	30,00	51,00
3	2,00	1,00	--	5,00	--	--	1,00	9,00	20,00	29,00
4	3,00	1,00	--	5,00	--	--	0,50	9,50	20,00	29,50
TOTAL HOURS	15,00	5,00	--	25,00	--	--	3,00	48,00	75,00	123,00

UN: Unit. LE: Lecture. SE: Seminar. PS: Practical session. LS: Lab sessions. FW: Field work. CP: Computer-mediated practice. AA: Assessment activities. CH: Contact hours. NCH: Non contact hours.

10. Assessment

Outline

	<u>Num. Acts</u>	<u>Weight (%)</u>
(04) Conceptual chart	1	10
(05) Academic studies	1	30
(12) Co-evaluation	1	10
(09) Project	2	30
(08) Portfolio	1	20

The monitoring of tasks as well as compliance with established planning and adaptive capacity will be assessed according to the fulfilment of tasks and objectives. The creativity and innovation in the development of proposals are also valued. Several presentations will be made in order to monitor the degree of compliance with the objectives set. It will be necessary to realise a Conceptual Map with objects to evaluate the relationship between factors that influence the system described. The evaluation system is based on the realization of a knowledge management model and its presentation, corresponding to an industrial product or service of innovative character with its presentation in classroom and/or magazine. The student will participate in the evaluation through co-evaluation. In the case that the student presents himself to the recovery of the matter he will have to recover the items that have been executed in a defective way. The teacher may propose additional tasks or exercises of a similar level to those previously evaluated in this subject.

11. Absence threshold

Activity

Percentage Observations

Lecture Theory 20 Exposition of contents by means of presentation or explanation on the part of a teacher (including demonstrations).



11. Absence threshold

<u>Activity</u>	<u>Percentage</u>	<u>Observations</u>
Lecture Practice	20	Preparation of activities to develop, expose and deliver in the practical classes.
Field Practice	20	The student must explore and work on a practical problem applying interdisciplinary knowledge referenced in class.