



centro adscrito a:



UNIVERSITAT POLITÈCNICA
DE CATALUNYA
BARCELONATECH

GUÍA DOCENTE DE DISEÑO Y CREACIÓN DE PRODUCTOS Y SERVICIOS 2023-2024

DATOS GENERALES

Nombre Asignatura:	Diseño y creación de productos (bienes y servicios)
Código:	801745
Curso:	2023-2024
Titulación:	Grado en Ciencias y Tecnologías Aplicadas al Deporte y al Acondicionamiento Físico
N.º de créditos (ECTS):	6
Requisitos:	Sin requisitos previos
Ubicación en el plan de estudios:	Tercer curso, primer cuatrimestre
Departament:	Dirección estratégica y organización
Responsable Departament:	Dra. Cristina Cáliz
Fecha de la última revisión:	Julio de 2023
Profesores Responsables:	Dr. Pablo Rial

1 GENERAL DESCRIPTION

The "Development and Design of New Sports Products" course is a 12-week practical module designed for undergraduate sports management students. The course aims to provide students with the knowledge, tools, and practical experience necessary to conceptualize, design, and propose innovative sports products or services for a sports company. Students will work in groups to tackle a real-world challenge and develop a comprehensive proposal, culminating in a persuasive presentation to an imaginary board of directors.

This course will empower students to become innovative problem solvers in the sports industry, equipping them with the knowledge and skills to create impactful sports products and services.

2 OBJECTIVES

The principal objectives of this course are:

- **Understand Sports Product Development:** Gain a deep understanding of the sports product development process, including market research, ideation, prototyping, testing, and marketing strategies.
- **Apply Design Thinking Methodology:** Utilize the design thinking approach to identify opportunities, generate creative solutions, and iterate based on feedback to develop innovative sports products or services.

- Enhance Teamwork and Collaboration Skills: Develop effective teamwork, collaboration, and communication skills through group projects, enabling students to work cohesively in a team environment.
- Present and Persuade: Learn to articulate and present their ideas effectively, persuasively communicating the value proposition and benefits of their proposed sports product or service.
- Learn to design products and services based on the needs and requirements of the recreational/professional athlete or other relevant stakeholders in the sport.
- Assume innovation as an iterative process of continuous learning.
- Apply apprehended skills in a real life project in order to learn the complexity and difficulty of the process first hand.

3 CONTENT

BLOCK 1: Innovación y el desarrollo de productos y servicios a través del deporte

THEME 1: Innovación y el desarrollo de productos y servicios a través del deporte

Learning outcomes

After finishing this topic, the student will be able to:

- Identify areas of economic growth within the sports world
- Distinguish between the different stakeholders in the sports world
- Understand the commercial interest of each of these interested parties
- Reflect on the current state of technology development within the sector

Content

1. Sectors of economic growth within sport
2. New technological developments in sport
3. Stakeholders, consumers and users in sport

BLOCK 2: Design Thinking: Empathize

THEME 1: *Design thinking*. Empathize

Learning outcomes

After finishing this topic, the student will be able to:

- Conduct interviews and observations to obtain relevant information about the way stakeholders relate to the challenge.
- Create one or multiple people who have a relevant link to the challenge
- Create a “customer journey map” for a person
- Create a “day in the life” for a person

Content

1. Trend analysis
2. The in-depth interview
3. Persona & the customer journey map

BLOCK 3: Managing creativity and innovation

THEME 1: Managing creativity and innovation

Learning outcomes

After finishing this topic, the student will be able to:

- Organize the creative process individually and in groups
- Effectively define and limit the creative focus to generate ideas
- Generate more original and varied ideas per minute
- Recognize the most valuable ideas for a given challenge

Content

1. The development of critical thinking
2. Team management of the creative process
3. Tools for idea generation

BLOCK 4: Design Thinking: Define and create

THEME 1: *Design thinking*. Define

Learning outcomes

After finishing this topic, the student will be able to:

- Define one or more problems related to the challenge

Content

1. Define the problema to solve

THEME 2: *Design thinking*. Create

Learning outcomes

After finishing this topic, the student will be able to:

- Devise a variety of solutions oriented to solve the defined problem
- Create a value proposition of a solution
- Evaluate the relevance of a solution through a Value Proposition Canvas

Content

2. Ideate using Analogies & SCAMPER
3. The Value Proposition

BLOCK 5: Design Thinking: Prototype & Test

THEME 1: *Design thinking*. Prototype & Test

Learning outcomes

After finishing this topic, the student will be able to:

- Validate and refine possible solutions to a problem
- Identify the key elements of a solution, the uncertainties that exist about them and apply methods to prioritize them as to when to validate them.
- Define relevant metrics to draw valid conclusions in a solution validation process.
- Create simple and quick prototypes to validate uncertainties about a solution
- Make decisions about the continuation of a product development process
- Make multiple iterations of a product design
- Recognize the need to abandon a solution and pivot the development of a product or service in another direction

Content

1. Designing experiments

2. Rapid Prototyping
3. Iterate & Pivot

BLOCK 6: Models of disruptive and exponential innovation

THEME 1: Models of disruptive and exponential innovation

Learning outcomes

After finishing this topic, the student will be able to:

- Identify opportunities from exponential technologies
- Design solutions and business models that improve the scalability of the project (growth possibilities)
- Design solutions and business models with greater commercial success (exponential growth)

Content

1. Disruptive innovation
2. 10 types of business model innovation
3. Exponential growth models (Pentagrowth, ExO organisations)

4 TEACHING AND LEARNING METHODOLOGY

The teaching methodology is a combination of the following pedagogical resources:

- Lectures and Discussions: Weekly lectures on theoretical concepts followed by discussions to ensure understanding and application.
- Group Projects and Workshops: Students work in groups on a real-world challenge, applying the theory learned each week, and receive feedback during dedicated workshops.
- Case Studies and Analysis: Analyzing case studies from the sports industry to understand successful product development strategies and challenges.
- Field Visits (Optional): Organizing visits to sports companies or manufacturing facilities to provide hands-on exposure to product development processes.

5 EVALUATION

In accordance with the Bologna Plan, the model rewards the constant and continued effort of the students. 40% of the grade is obtained by continuous evaluation through directed activities and the remaining 60% from a final presential exam. There are two opportunities to take the final exam.

The final grade of the course (NF) is calculated according to the following formula:

- **NF = Final exam grade x 60% + Continuous evaluation grade x 40%**
- Minimum grade for the final exam to calculate the NF Will be 40 out of 100 points.
- The passing grade for this course is a NF equal or superior to 50 out of 100 points.

Continuous Evaluation activities:

	Description	% of continuous evaluation	
Deliverables:			40%
	Deliverables part 1	40%	
	Presentation session of ideas	10%	
	Deliverables part 2	25%	
	Final Presentations	25%	
Final exam:			60%
	Final exam	100%	

6 BIBLIOGRAPHY

- Cooper, R. G. (2019). Winning at New Products: Creating Value Through Innovation.
- Kumar, V., 2013. **101 Design Methods**. Hoboken, N.J.: Wiley.
- Liedtka, J. and Ogilvie, T. **Designing for Growth**
- Osterwalder, A., Pigneur, Y., Bernarda, G. and Smith, A., **Value Proposition Design**.
- Osterwalder, A., Pigneur, Y., **Business Model Generation**.
- Ratten, Vanessa, **Sports Innovation Management**, Routledge. 2018
- Stickdorn, M. and Schneider, J., 2010. **This Is Service Design Thinking**.

- Thiel, P. (2014). **Zero to One**. De cero a uno. Cómo inventar el futuro. Ed. Crown Business.
- Ulrich, K., & Eppinger, S. D. (2015). Product Design and Development.

COMPLEMENTARY READINGS

- Bayó, E, Camps, X. 2015. **Cómo llegar a ser una empresa innovadora**. Barcelona
- Ratten, Vanessa, **Sports Technology and Innovation: Assessing Cultural and Social Factors**, Palgrave Macmillan. 2019
- Vaughan et al. **Developing Creativity to Enhance Human Potential in Sport: A Wicked Transdisciplinary Challenge**. *Frontiers in Psychology*. 2019

WEBGRAPHY / BLOGS / ETC.

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