Professional Master's Degree
Product Design

tech technological university

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Professional Master's Degree

Product Design

Course Modality: **Online**
Duration: **12 months.**
Certificate: **TECH Technological University**
60 ECTS Credits
Teaching Hours: **1,500 hours.**
Website: **www.techtitute.com/us/design/professional-masters-degree/professional-masters-degree-product-design**

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01

Introduction

The design of a product is the key to its marketability and functionality. Without a proper design, their appearance, usability and even their production can be affected, causing losses and delays for the production company. For this reason, the profile of the professional specialized in this field is increasingly in demand, and large industrial companies are looking for experts who can respond to the contemporary challenges of the discipline. With this program, the designer will be able to learn about all the advances in this area, preparing him/her to meet the expectations of today's demanding labor market. And you will do it from the best online learning methodology that will adapt to your personal circumstances, allowing you to choose the time and place to study.

This program will prepare you to respond to the current and future challenges of Product Design, based on a 100% online methodology that will adapt completely to your professional and personal circumstances"

Behind the tools and devices that millions of people use every day there is an exhaustive planning and design work. Every aspect of the physical and tangible elements used in any facet of life, from vehicles to home furnishings and street furniture, pens, smartphones and, in short, any object of daily use, has been carefully crafted.

This attention to detail responds to several strong arguments: with an appropriate design, costs can be reduced, production can be more efficient, and the result will be more attractive from a commercial point of view. For this reason, this professional area is of growing importance and is essential for many companies in the industrial, textile and related sectors.

Thus, nowadays, designers who are focused on this field can aspire to enjoy great job opportunities, but to achieve this they need the best knowledge and skills in this discipline. This Professional Master's Degree in Product Design provides them, by integrating over 10 specialized modules the most recent developments in this field and delving into relevant issues such as Digital Technology, the Fundamentals of Marketing, Design for Manufacturing or Sustainable Design.

All this, through an online teaching system specially created for working professionals, since it adapts to them, allowing them to study from wherever they want and whenever they want, without uncomfortable travel or rigid schedules.

This **Professional Master's Degree in Product Design** contains the most complete and up-to-date scientific program on the market. The most important features include:

- The development of case studies presented by experts in Product Design.
- The graphic, schematic, and eminently practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice.
- Practical exercises where self-assessment can be used to improve learning.
- Its special emphasis on innovative methodologies
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an Internet connection

You will be able to deepen, thanks to this Professional Master's Degree, in the keys of Sustainable Design, optimizing the production work of your creations"

This program has the best didactic resources: theoretical and practical activities, videos, interactive summaries, master classes, etc. Everything you need to become a great expert in Product Design"

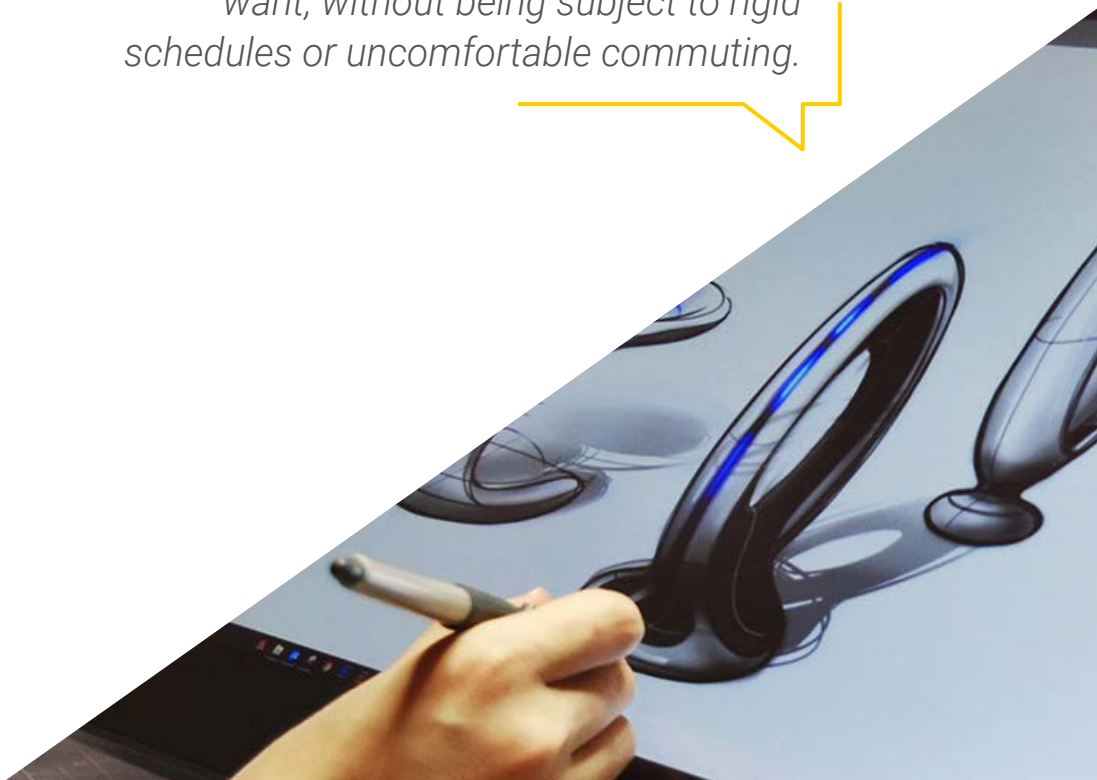
You will learn about the most advanced materials for design and their possible applications, thus improving your professional prospects immediately.

TECH's online learning system will allow you to study when, how and where you want, without being subject to rigid schedules or uncomfortable commuting.

The program's teaching staff includes professionals from the sector who contribute their work experience to this training program, as well as renowned specialists from leading societies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will allow the professional a situated and contextual learning, that is, a simulated environment that will provide an immersive training programmed to train in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.



02

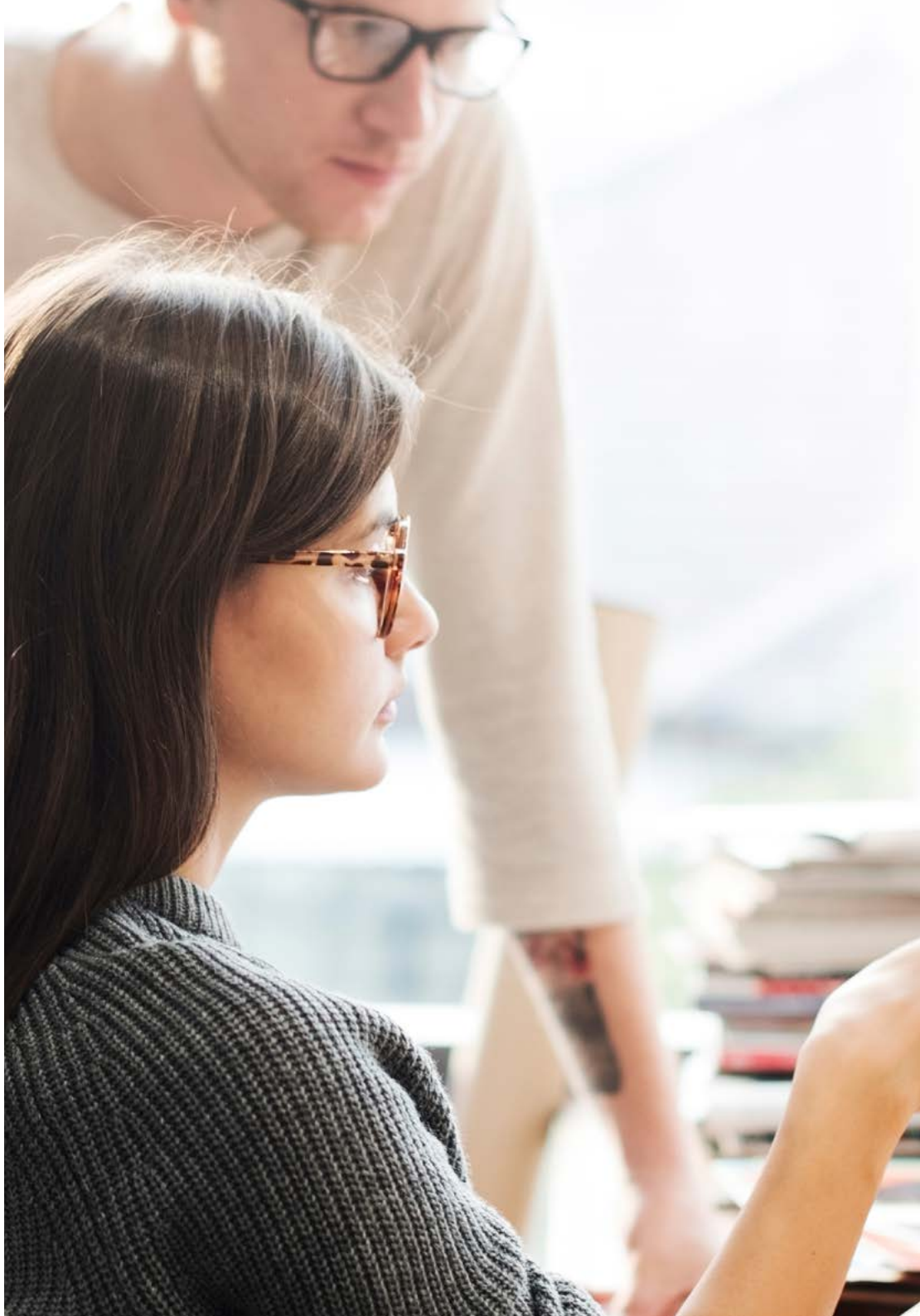
Objectives

The main objective of this program is to turn the student into a professional who is highly sought after by large design firms and leading industrial companies. Thus, this Professional Master's Degree in Product Design has the most complete and deepest contents in this area and will provide the student with all the
the student all the necessary tools to stand out in the work environment.

Reach, thanks to this program, a great professional progress in the field of Product Design"

General Objectives

- Understand the creative, analytical and study process for the realization of any work
- Deepen market analysis techniques and apply them to communication and marketing processes in project development
- Understand the basic concepts that are part of the communication policy of an organization: its identity, its culture, how it communicates, its image, its brand, its reputation and social responsibility
- To know the basics of design, as well as the references, styles and movements that have shaped it from its beginnings to the present day



Specific Objectives

Module 1. Design Fundamentals

- Connect and correlate the different areas of design, fields of application and professional branches
- Know the processes of ideation, creativity and experimentation and know how to apply them to projects
- Integrate language and semantics in the ideation processes of a project, relating them to its objectives and use values

Module 2. Fundamentals of Creativity

- Know how to synthesize one's own interests through observation and critical thinking, translating them into Artistic Creations
- Losing the fear of artistic blockage and using techniques to combat it
- Investigate in oneself, in one's own emotional space and in what is around, in such a way that an analysis of these elements is carried out in order to use them in favor of one's own creativity

Module 3. Digital Technology

- Master the vocabulary, methodologies and theoretical and practical content on Digital Imaging
- Master the vocabulary, methodologies and theoretical and practical content on Vectorial Imaging

Module 4. Fundamentals of Marketing

- Understand the central role of communication in a historical time defined by the paradigms of the information and knowledge society
- Knowledge of communication processes in all their social manifestations (interpersonal, group and media)
- Analyze the different approaches and disciplinary and theoretical approaches to communication
- Develop an understanding of vocabulary adapted to the basic language of marketing and communication
- Knowledge of the characteristics of social media and their difference with Mass Media, as well as their implications and the changes they have generated in Marketing and Design Management

Module 5. Corporate Image

- Understand which are the strategic areas that a graphic manager must manage in the communicative process of the Graphic and Visual Identity of Brands

Module 6. Design for Manufacturing

- Achieve a sufficient level of knowledge related to the specific objectives and techniques related to the production area
- Analyze production from a strategic perspective

Module 7. Materials

- Analyze and evaluate materials used in engineering based on their properties
- Understand, analyze and evaluate the processes of corrosion and degradation of materials
- Evaluate and analyze the different techniques for non-destructive testing of materials

Module 8. Sustainable Design

- Recognize the sustainability setting and environmental context
- Know the main tools for environmental impact analysis
- Recognize the importance of Sustainability in Design
- Know the environmental regulations relevant to design
- Ability to develop a Sustainable Product Design strategy

Module 9. Materials for design

- Work with the most appropriate materials in each case, in the field of Product Design
- Explain and describe the main families of materials: their manufacture, typologies, properties, etc
- Have the necessary criteria to be able to identify and select, according to a Briefing, the different ranges of materials

Module 10. Packaging design

- Promote in students the global vision of packaging and label design, understanding it as an activity in which many factors must be taken into account, from the product it accompanies to its physical and socioeconomic context
- Train students, through practice, in the competence for the professional development of packaging and label design projects

TECH will accompany you on your path to professional success"

03

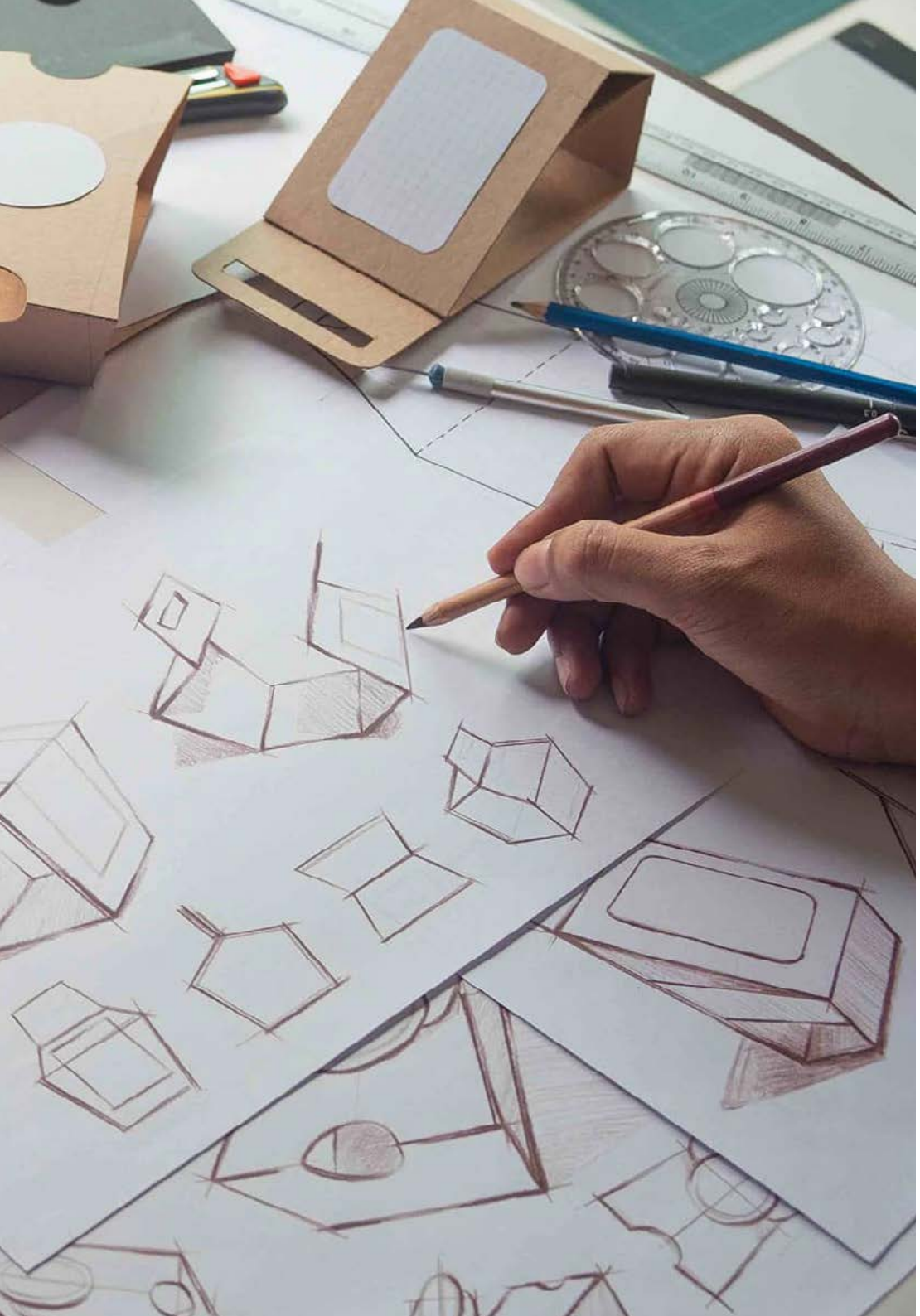
Skills

This Professional Master's Degree will allow the student to develop a series of professional competencies oriented towards this field of design. Thus, this program has been designed to turn the student into a great expert in Product Design, since it provides knowledge and skills in areas such as materials, Sustainable Design, Marketing or Packaging Design.

You will incorporate to your professional practice the best skills in Packaging Design and Sustainable Design thanks to this Professional Master's Degree"

General Skills

- Plan, develop and conveniently present artistic productions, using effective elaboration strategies and with own creative contributions
- Master image retouching and manipulation software and develop the skills required for its use
- Knowledge of the theoretical and practical tools and strategies that facilitate the management of corporate and institutional communication in all types of organizations
- Know how to correctly select an information and communication organization method for the proper use of a brand
- Research and identify the most significant elements of the company-client, as well as their needs for the creation of communication strategies and messages
- Identify the stages and production phases of a project
- Knowledge of the principles of nanomaterials
- Obtain knowledge and mastery of the techniques, forms, processes and trends in packaging and label design and their industrial applications



Specific Skills

- Manage vector drawing software and develop the skills required for its use
- Employ editorial design software and develop the skills to create final artwork of your own
- Master the coordination strategies between the aspects of product creation, production, marketing and communication functions
- Analyze and evaluate metallic materials, both ferrous and non-ferrous
- Analyze and evaluate polymeric, ceramic and composite materials
- Analyze and evaluate materials used in additive manufacturing
- Develop a regulated system of basic graphic standards based on visual identity/ brand elements
- Choose wisely, from a wide spectrum, when developing a design proposal for mass production
- Decide on the most suitable materials for the realization of mock-ups or prototypes

This program offers you the best Product Design techniques, meeting the current needs of the professional market"

04

Structure and Content

This Professional Master's Degree in Product Design has been structured in 10 specialized modules, through which the professional will be able to learn about the latest advances in the Fundamentals of Design, Design Materials, Sustainable Design, the Fundamentals of Marketing and Corporate Image, to obtain a more global vision of Product and Manufacturing Design, with which the student will have a more industrial perspective to carry out their projects.

The most updated contents in Product Design are now at your fingertips. Enroll now and get an immediate professional improvement"

1.1. Design History
- 1.1.1. Industrial Revolution
- 1.1.2. The Stages of Design
- 1.1.3. Architecture
- 1.1.4. The Chicago School

1.2. Design Styles and Movements
- 1.2.1. Decorative Design
- 1.2.2. Modernist Movement
- 1.2.3. Art Deco
- 1.2.4. Industrial Design
- 1.2.5. Bauhaus
- 1.2.6. World War II
- 1.2.7. Transvanguardias
- 1.2.8. Contemporary Design

1.3. Designers and Trends
- 1.3.1. Interior Designers
- 1.3.2. Graphic Designers
- 1.3.3. Industrial or Product Designers
- 1.3.4. Fashion Designers

1.4. Design Methodology
- 1.4.1. Bruno Munari
- 1.4.2. Gui Bonsiepe
- 1.4.3. J. Christopher Jones
- 1.4.4. L. Bruce Archer
- 1.4.5. Guillermo González Ruiz
- 1.4.6. Jorge Frascara
- 1.4.7. Bernd Löbach
- 1.4.8. Joan Costa
- 1.4.9. Norberto Cháves

1.5. Language in Design
- 1.5.1. Objects and the Subject
- 1.5.2. Semiotics of Objects
- 1.5.3. The Object Layout and its Connotation
- 1.5.4. Globalization of Signs
- 1.5.5. Proposal

1.6. Design and its Aesthetic-Formal Dimension
- 1.6.1. Visual Elements
  - 1.6.1.1. The Shape
  - 1.6.1.2. The Measure
  - 1.6.1.3. Color
  - 1.6.1.4. Texture
- 1.6.2. Relationship Elements
  - 1.6.2.1. Management
  - 1.6.2.2. Position
  - 1.6.2.3. Spatial
  - 1.6.2.4. Severity
- 1.6.3. Practical Elements
  - 1.6.3.1. Representation
  - 1.6.3.2. Meaning
  - 1.6.3.3. Function
- 1.6.4. Frame of Reference

1.7. Analytical Design Methods
- 1.7.1. Pragmatic Design
- 1.7.2. Analog Design
- 1.7.3. Iconic Design
- 1.7.4. Canonical Design
- 1.7.5. Main Authors and Their Methodology

1.8. Design and Semantics
- 1.8.1. Semantics
- 1.8.2. The Significance
- 1.8.3. Denotative Meaning and Connotative Meaning
- 1.8.4. Lexicon
- 1.8.5. Lexical Field and Lexical Family
- 1.8.6. Semantic Relationships
- 1.8.7. Semantic Change
- 1.8.8. Causes of Semantic Changes

1.9. Design and Pragmatics
- 1.9.1. Practical Implications, Abduction and Semiotics
- 1.9.2. Mediation, Body and Emotions
- 1.9.3. Learning, Experiencing and Closing
- 1.9.4. Identity, Social Relations and Objects

1.10. Current Design Context
- 1.10.1. Current Design Issues
- 1.10.2. Current Design Issues
- 1.10.3. Contributions on Methodology

Module 2. Fundamentals of Creativity

2.1. Creative Introduction
- 2.1.1. Style in Art
- 2.1.2. Educate Your Eyes
- 2.1.3. Can Anyone be Creative?
- 2.1.4. Pictorial Languages
- 2.1.5. What do I Need? Materials

2.2. Perception as the First Creative Act
- 2.2.1. What do you see? What do you hear? How Do You Feel?
- 2.2.2. Perceive, Observe and Examine Carefully
- 2.2.3. Portrait and Self-Portrait: Cristina Núñez
- 2.2.4. Case Study Photodialogue. Diving into Oneself

2.3. Facing the Blank Paper
- 2.3.1. Drawing without Fear
- 2.3.2. The Notebook as a Tool
- 2.3.3. The Artist's Book, What is It?
- 2.3.4. Referrals

2.4. Creating Our Artist's Book
- 2.4.1. Analysis and Gaming: Pencils and Markers
- 2.4.2. Tricks to Loosen the Hand
- 2.4.3. First lines
- 2.4.4. The Nib

2.5. Creating Our Artist's Book II
- 2.5.1. The Spot
- 2.5.2. Waxes. Experimentation
- 2.5.3. Natural Pigments

2.6. Creating Our Artist's Book III
- 2.6.1. Collage and Photomontage
- 2.6.2. Traditional Tools
- 2.6.3. Online Tools: *Pinterest*
- 2.6.4. Experimentation with Image Composition

2.7. Doing without Thinking
- 2.7.1. What Do We Achieve by Doing Without Thinking?
- 2.7.2. Improvise: Henri Michaux
- 2.7.3. Action Painting

2.8. The Critic as Artist
- 2.8.1. Constructive Criticism
- 2.8.2. Manifesto on Creative Criticism

2.9. The Creative Block
- 2.9.1. What is a Blockage?
- 2.9.2. Extend your Limits
- 2.9.3. Case Study Getting your Hands Dirty

2.10. Study of our Artist's Book
- 2.10.1. Emotions and Their Management in the Creative Sphere
- 2.10.2. Your own World in a Notebook
- 2.10.3. What Did I Feel? Self-Analysis
- 2.10.4. Case Study: Criticizing myself

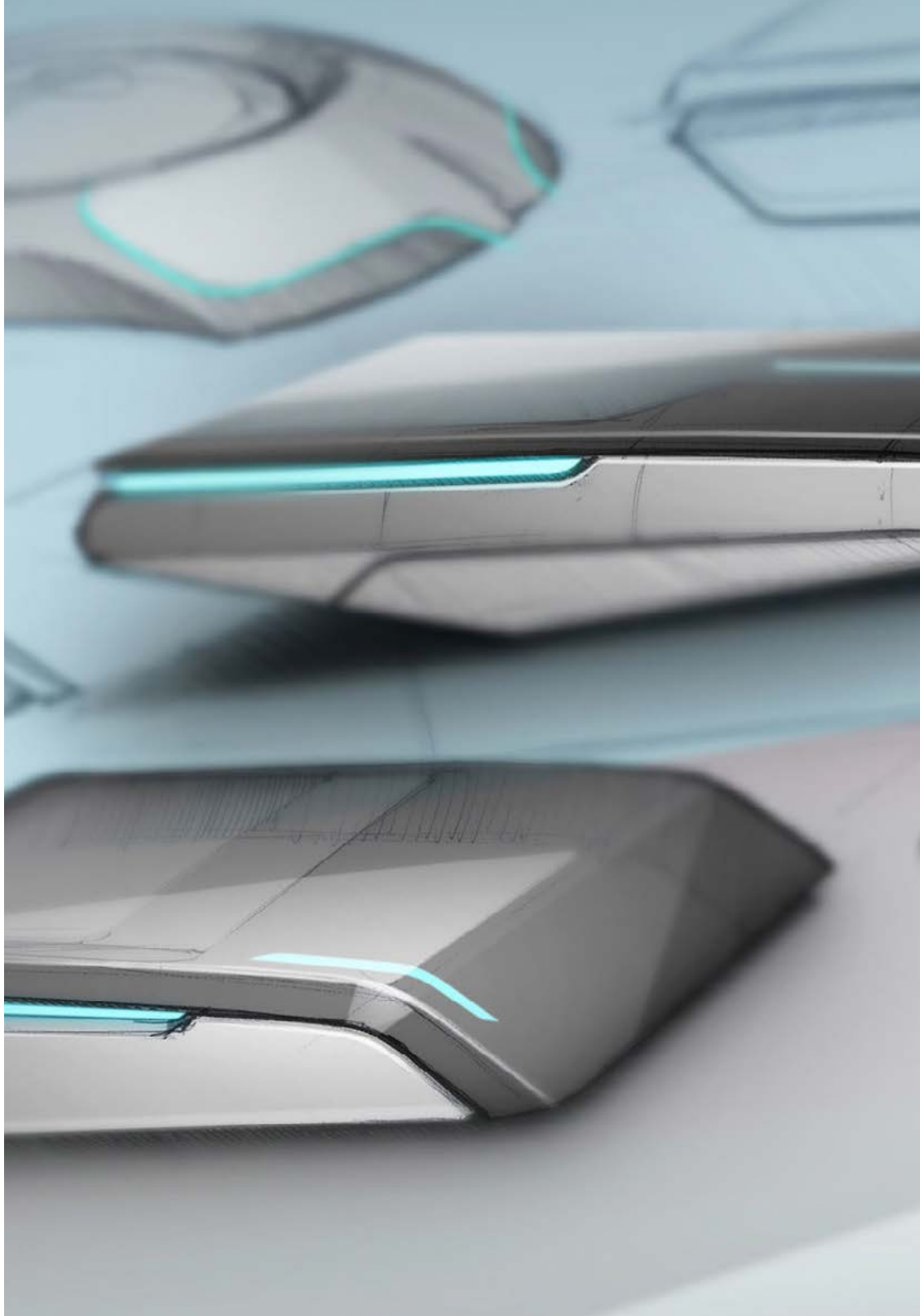
Module 3. Digital Technology

3.1. Introduction to Digital Imaging
- 3.1.1. ICT
- 3.1.2. Description of Technologies
- 3.1.3. Commands

3.2. Vector image. Working with Objects
- 3.2.1. Selection Tools
- 3.2.2. Grouping
- 3.2.3. Align and Distribute
- 3.2.4. Intelligent Guides
- 3.2.5. Symbolism
- 3.2.6. Transform
- 3.2.7. Distortion
- 3.2.8. Enclosures
- 3.2.9. Tracehunter
- 3.2.10. Compound Forms
- 3.2.11. Compound Plots
- 3.2.12. Cutting, Splitting and Separating

3.3. Vector image. Color
- 3.3.1. Color Modes
- 3.3.2. Dropper Tool
- 3.3.3. Samples
- 3.3.4. Gradients
- 3.3.5. Motif Filling
- 3.3.6. Appearance Panel
- 3.3.7. Attributes

3.4. Vector image. Advanced Editing
- 3.4.1. Gradient Mesh
- 3.4.2. Transparency Panel
- 3.4.3. Fusion Modes
- 3.4.4. Interactive Tracing
- 3.4.5. Clipping Masks
- 3.4.6. Text:



3.5. Image Bitmap. The Layers
- 3.5.1. Creation
- 3.5.2. Liaison
- 3.5.3. Transformation
- 3.5.4. Grouping
- 3.5.5. Adjustment Layers

3.6. Image Bitmap. Selections, Masks and Channels
- 3.6.1. Frame Selection Tool
- 3.6.2. Lasso Selection Tool
- 3.6.3. Magic Wand Tool
- 3.6.4. Menu Selections. Color Range
- 3.6.5. Channels
- 3.6.6. Mask Retouching
- 3.6.7. Clipping Masks
- 3.6.8. Vector Masks

3.7. Image Bitmap. Blending Modes and Layer Styles
- 3.7.1. Layer Styles
- 3.7.2. Lens opacity
- 3.7.3. Layer Style Options
- 3.7.4. Fusion Modes
- 3.7.5. Examples of Fusion Modes

3.8. The Editorial Project. Types and Forms
- 3.8.1. The Editorial Project
- 3.8.2. Typologies of the Editorial Project
- 3.8.3. Document Creation and Configuration

3.9. Compositional Elements of the Editorial Project
- 3.9.1. Master Pages
- 3.9.2. Reticulation
- 3.9.3. Text Integration and Composition
- 3.9.4. Image Integration

3.10. Layout, Export and Printing
- 3.10.1. Layout
  - 3.10.1.1. Photo Selection and Editing
  - 3.10.1.2. Preliminary Check
  - 3.10.1.3. Packaging.
- 3.10.2. Export
  - 3.10.2.1. Export for Digital Media
  - 3.10.2.2. Export for Physical Media
- 3.10.3. Print
  - 3.10.3.1. Traditional Printing
    - 3.10.3.1.1. Binding
  - 3.10.3.2. Digital Printing

Module 4. Fundamentals of Marketing

4.1. Introduction to Marketing
- 4.1.1. Marketing Concept
  - 4.1.1.1. Definition of Marketing
  - 4.1.1.2. Evolution and Current Affairs of Marketing
- 4.1.2. Different Approaches to Marketing

4.2. Marketing in the Company: Strategic and Operational. The Marketing Plan
- 4.2.1. Commercial Management
- 4.2.2. Importance of Commercial Management
- 4.2.3. Diversity of Forms of Management
- 4.2.4. Strategic Marketing
- 4.2.5. Commercial Strategy
- 4.2.6. Scope of Application
- 4.2.7. Commercial Planning
- 4.2.8. The Marketing Plan
- 4.2.9. Concept and Definitions
- 4.2.10. Stages of the Marketing Plan
- 4.2.11. Types of Marketing Plan

4.3. The Business Environment and the Organizational Marketplace
- 4.3.1. The Environment
- 4.3.2. Concepts and Limits of the Environment
- 4.3.3. Macro-Environment
- 4.3.4. Micro-Environment
- 4.3.5. The Market
- 4.3.6. Market Concepts and Limits
- 4.3.7. Market Developments
- 4.3.8. Types of Markets
- 4.3.9. The Importance of Competence

4.4. Consumer Behavior
- 4.4.1. The Importance of Behavior in Strategy
- 4.4.2. Influencing Factors
- 4.4.3. Benefits for the Company
- 4.4.4. Consumer Benefits
- 4.4.5. Approaches to Consumer Behavior
- 4.4.6. Characteristics and Complexity
- 4.4.7. Variables Involved
- 4.4.8. Different Types of Approaches

4.5. Stages in the Consumer Buying Process
- 4.5.1. Approach
- 4.5.2. Approach According to Different Authors
- 4.5.3. The Evolution of the Process in History
- 4.5.4. Stages
- 4.5.5. Recognition of the Problem
- 4.5.6. Information Search
- 4.5.7. Evaluation of Alternatives
- 4.5.8. Purchase
- 4.5.9. Post-Purchase
- 4.5.10. Models in Decision Making
- 4.5.11. Economic Model
- 4.5.12. Psychological Model
- 4.5.13. Mixed Behaviour Models
- 4.5.14. Market Segmentation in the Strategy of Organizations
- 4.5.15. Market Segmentation
- 4.5.16. Concept
- 4.5.17. Types of Segmentation
- 4.5.18. The Influence of Segmentation in Strategies
- 4.5.19. Importance of Segmentation in the Company
- 4.5.20. Planning Strategies based on Segmentation

4.6. Consumer and Industrial Market Segmentation Criteria

4.7. Segmentation Procedure
- 4.7.1. Segment Delimitation
- 4.7.2. Profile Identification
- 4.7.3. Evaluation of the Procedure

4.8. Segmentation Procedure
- 4.8.1. Geographic Characteristics
- 4.8.2. Social and Economic Characteristics
- 4.8.3. Other Criteria
- 4.8.4. Consumer Response to Segmentation

4.9. Supply-Demand Market. Segmentation Evaluation
- 4.9.1. Offer Analysis
  - 4.9.1.1. Offer Classifications
  - 4.9.1.2. Determination of the Offer
  - 4.9.1.3. Factors Affecting Supply
- 4.9.2. Demand Analysis
  - 4.9.2.1. Demand Classifications
  - 4.9.2.2. Market Areas
  - 4.9.2.3. Demand Classifications
- 4.9.3. Segmentation Evaluation
  - 4.9.3.1. Evaluation Systems
  - 4.9.3.2. Methods of Monitoring
  - 4.9.3.3. Feedback

4.10. The Marketing Mix
- 4.10.1. Definition of Marketing Mix
  - 4.10.1.1. Concept and Definition
  - 4.10.1.2. History & evolution

4.10.2. Marketing Mix Elements
4.10.2.1. Product
4.10.2.2. Price
4.10.2.3. Distribution
4.10.2.4. Promotion
4.10.3. The New 4p's of Marketing
4.10.3.1. Personalization
4.10.3.2. Participation
4.10.3.3. Peer To Peer
4.10.3.4. Modeled Predictions
4.10.4. Current Management Strategies for the Product Portfolio. Growth and Competitive Marketing Strategies
4.10.5. Portfolio Strategies
4.10.5.1. The BCG Matrix
4.10.5.2. The Ansoff Matrix
4.10.5.3. The Competitive Position Matrix
4.10.6. Strategies
4.10.6.1. Segmentation Strategy
4.10.6.2. Positioning Strategy
4.10.6.3. Loyalty Strategy
4.10.6.4. Functional Strategy

Module 5. Corporate Image

5.1. Identity
5.1.1. Idea of Identity
5.1.2. Why is Identity Sought?
5.1.3. Types of Identity
5.1.4. Digital Identity
5.2. Corporate Identity
5.2.1. Definition. Why have a Corporate Identity?
5.2.2. Factors Influencing Corporate Identity
5.2.3. Corporate Identity Components
5.2.4. Identity Communication
5.2.5. Corporate Identity, Branding and Corporate Image
5.3. Corporate Image
5.3.1. Characteristic of the Corporate Image
5.3.2. What is Corporate Image for?
5.3.3. Types of Corporate Image
5.3.4. Examples:
5.4. Basic identifying signs
5.4.1. The name or Naming
5.4.2. Logos
5.4.3. Monograms
5.4.4. Imagotypes
5.5. Identity Memorization Factors
5.5.1. Originality
5.5.2. Symbolic Value
5.5.3. Pregnancy
5.5.4. Repetition
5.6. Methodology for the Branding process
5.6.1. Study of the Sector and Competition
5.6.2. Briefing, Template
5.6.3. Define Brand Strategy and Personality. Values
5.6.4. Target Audience
5.7. The Customer
5.7.1. Intuit what the Customer is Like
5.7.2. Customer Typologies
5.7.3. The Meeting Process
5.7.4. The Importance of Knowing the Customer
5.7.5. Establish Budget
5.8. Corporate Identity Manual
5.8.1. Construction Standards and Application of the Mark
5.8.2. Corporate Typography
5.8.3. Corporate Colors
5.8.4. Other Graphic Elements
5.8.5. Examples of Corporate Manuals

5.9. Identity Redesign
- 5.9.1. Reasons to Choose an Identity Redesign
- 5.9.2. Managing a Change in Corporate Identity
- 5.9.3. Good practice. Visual References
- 5.9.4. Malpractice. Visual References

5.10. Brand Identity Project
- 5.10.1. Presentation and Explanation of the Project. Referrals
- 5.10.2. Brainstorming Market Analysis
- 5.10.3. Target Audience, Brand Value
- 5.10.4. First Ideas and Sketches. Creative Techniques
- 5.10.5. Establishment of the Project. Fonts and Colors
- 5.10.6. Delivery and Correction of Projects

Module 6. Design for Manufacturing

6.1. Design for Manufacture and Assembly

6.2. Forming by Molding
- 6.2.1. Foundry
- 6.2.2. Injection

6.3. Forming by Deformation
- 6.3.1. Plastic Deformation
- 6.3.2. Printed
- 6.3.3. Forge
- 6.3.4. Extrusion

6.4. Conformation due to Loss of Material
- 6.4.1. Abrasion
- 6.4.2. By Chip Removal

6.5. Heat Treatment
- 6.5.1. Tempering
- 6.5.2. Annealing
- 6.5.3. Coating
- 6.5.4. Standardization
- 6.5.5. Thermochemical Treatments

6.6. Application of Paints and Coatings
- 6.6.1. Electrochemical Treatments
- 6.6.2. Electrolytic Treatments
- 6.6.3. Paints, Lacquers and Varnishes

6.7. Forming of Polymers and Ceramic Materials

6.8. Manufacture of Composite Parts

6.9. Additive Manufacturing
- 6.9.1. *Powder Bed Fusion*
- 6.9.2. *Direct Energy Deposition*
- 6.9.3. *Binder Jetting*
- 6.9.4. *Bound Powder Extrusion*

6.10. Robust Engineering
- 6.10.1. Taguchi Method
- 6.10.2. Experiment Design
- 6.10.3. Statistical Process Control

Module 7. Materials

7.1. Material Properties
- 7.1.1. Mechanical Properties
- 7.1.2. Electrical Properties
- 7.1.3. Optical Properties
- 7.1.4. Magnetic Properties

7.2. Metallic Materials I. Ferrous

7.3. Metallic Materials II. Non-Ferrous

7.4. Polymeric Materials
- 7.4.1. Thermoplastics
- 7.4.2. Thermosetting Plastics

7.5. Ceramic Materials

7.6. Composite Materials

7.7. Biomaterials

7.8. Nanomaterials

7.9. Corrosion and Degradation of Materials
- 7.9.1. Types of Corrosion
- 7.9.2. Oxidation of Metals
- 7.9.3. Corrosion Control

7.10. Non-Destructive Testing
- 7.10.1. Visual Inspections and Endoscopies
- 7.10.2. Ultrasound
- 7.10.3. X-Rays
- 7.10.4. Eddy Currents (Eddy)
- 7.10.5. Magnetic Particles
- 7.10.6. Penetrating Liquids
- 7.10.7. Infrared Thermography

Module 8. Sustainable Design

8.1. Environmental Status
- 8.1.1. Environmental Context
- 8.1.2. Environmental Perception
- 8.1.3. Consumption and Consumerism

8.2. Sustainable Production
- 8.2.1. Ecological Footprint
- 8.2.2. Biocapacity
- 8.2.3. Ecological Deficit

8.3. Sustainability and Innovation
- 8.3.1. Production Processes
- 8.3.2. Process Management
- 8.3.3. Implementation of the Production
- 8.3.4. Productivity by Design

8.4. Introduction. Ecodesign
- 8.4.1. Sustainable Development
- 8.4.2. Industrial Ecology
- 8.4.3. Eco-Efficiency
- 8.4.4. Introduction to the Concept of Ecodesign

8.5. Ecodesign Methodologies
- 8.5.1. Methodological Proposals for the Implementation of Ecodesign
- 8.5.2. Project Preparation (Driving Forces, Legislation
- 8.5.3. Environmental Aspects

8.6. Life Cycle Assessment (LCA)
- 8.6.1. Functional Unit
- 8.6.2. Inventory
- 8.6.3. Impact Ratio
- 8.6.4. Generation of Conclusions and Strategy

8.7. Improvement Ideas (Ecodesign Strategies)
- 8.7.1. Reduce Impact
- 8.7.2. Increase Functional Unit
- 8.7.3. Positive Impact

8.8. Circular Economy
- 8.8.1. Definition
- 8.8.2. Evolution
- 8.8.3. Success Stories

8.9. *Cradle to Cradle*
- 8.9.1. Definition
- 8.9.2. Evolution
- 8.9.3. Success Stories

8.10. Environmental Regulations
- 8.10.1. Why Do We Need a Regulation?
- 8.10.2. Who Makes the Regulations?
- 8.10.3. European Union Environmental Framework
- 8.10.4. Regulations in the Development Process

Module 9. Materials for Design

9.1. Material as Inspiration
- 9.1.1. Search for Materials
- 9.1.2. Classification
- 9.1.3. The Material and its Context

9.2. Materials for Design
- 9.2.1. Common Uses
- 9.2.2. Contraindications
- 9.2.3. Combination of Materials

9.3. Art + Innovation
- 9.3.1. Materials in Art
- 9.3.2. New Materials
- 9.3.3. Composite Materials

9.4. Physical
- 9.4.1. Basic Concepts
- 9.4.2. Composition of Materials
- 9.4.3. Mechanical Testing

9.5. Technology
- 9.5.1. Intelligent Materials
- 9.5.2. Dynamic Materials
- 9.5.3. The Future in Materials

9.6. Sustainability
- 9.6.1. Procurement
- 9.6.2. Use
- 9.6.3. Final Management

9.7. Biomimicry
- 9.7.1. Reflection
- 9.7.2. Transparency
- 9.7.3. Other techniques

9.8. Innovation
- 9.8.1. Success Stories
- 9.8.2. Materials Research
- 9.8.3. Sources of Research

9.9. Risk Prevention
- 9.9.1. Safety Factor
- 9.9.2. Fire
- 9.9.3. Breakage
- 9.9.4. Other Risks

9.10. Regulations and Legislation
- 9.10.1. Regulations According to Application
- 9.10.2. Regulations by Sector
- 9.10.3. Regulations According to Location

Module 10. Packaging Design

10.1. Introduction to Packaging
- 10.1.1. Historical Perspective
- 10.1.2. Functional Characteristics
- 10.1.3. Description of System-Product and Life Cycle

10.2. Packaging Research
- 10.2.1. Sources of information
- 10.2.2. Field Work
- 10.2.3. Comparisons and Strategies

10.3. Structural Packaging
- 10.3.1. Analysis of Specific Needs
- 10.3.2. Shape, Color, Smell, Volume and Textures
- 10.3.3. Packaging Ergonomics

10.4. Packaging Marketing
- 10.4.1. Relationship of *the* Pack with the Brand and the Product
- 10.4.2. Brand Image Application
- 10.4.3. Examples:

10.5. Packaging Communication
- 10.5.1. Relationship of the Pack with the Product, the Customer and the User
- 10.5.2. Relationship of the Pack with the Product, the Customer and the User
- 10.5.3. Experience Design

10.6. Materials and Production Processes
- 10.6.1. Glass
- 10.6.2. Paper and Cardboard
- 10.6.3. Metal
- 10.6.4. Plastic fluids
- 10.6.5. Natural Materials Composites

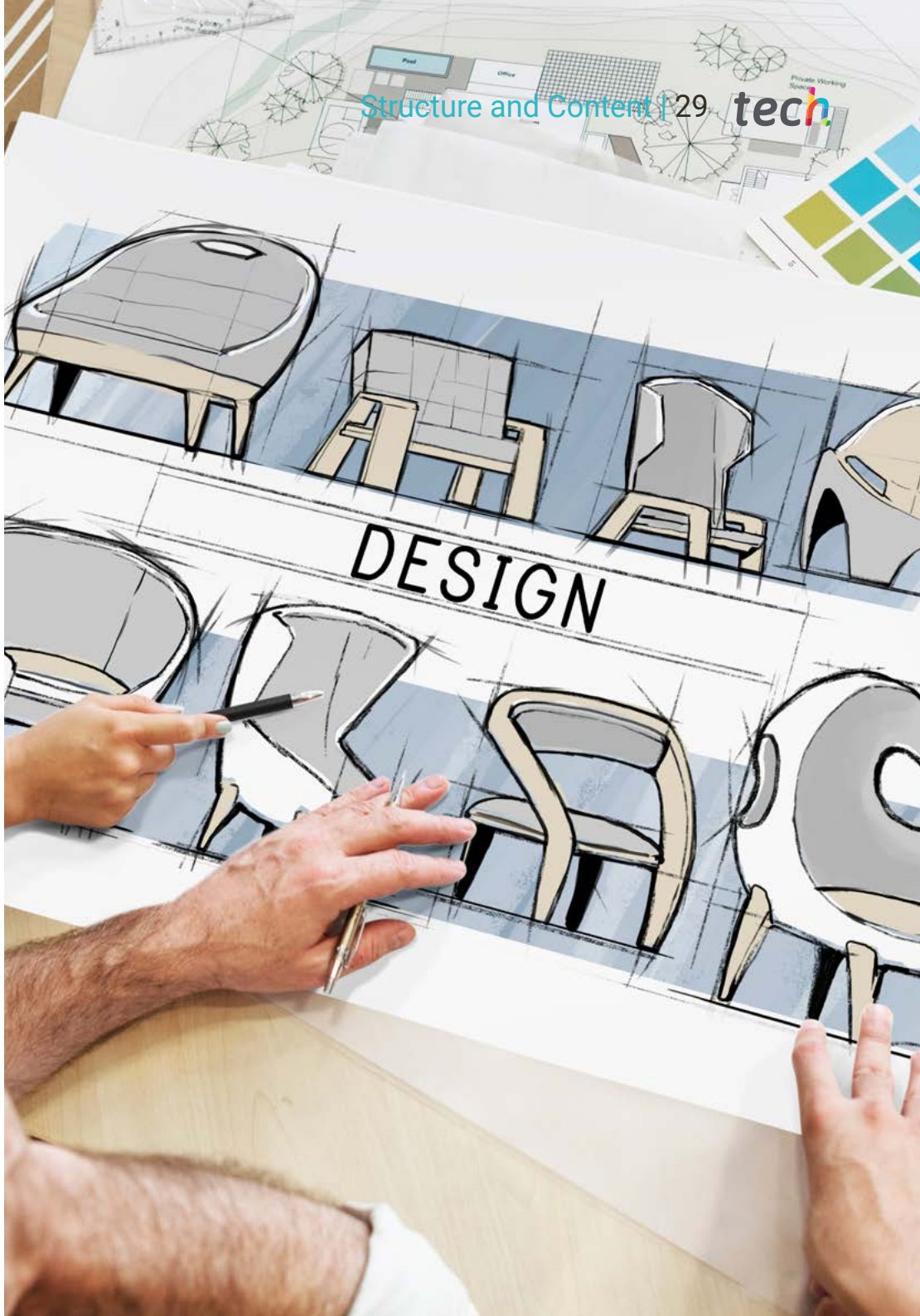
10.7. Sustainability Applied to Packaging
- 10.7.1. Ecodesign Strategies
- 10.7.2. Life Cycle Analysis
- 10.7.3. The Pack as Waste

10.8. Food Legislation
- 10.8.1. Specific Regulations: Identification and
- 10.8.2. Plastics Regulations
- 10.8.3. Regulatory Trends

10.9. Innovation in Packaging
- 10.9.1. Differentiation with Packaging
- 10.9.2. Latest Trends
- 10.9.3. Design For All

10.10. Packagin Projects
- 10.10.1. Study Cases
- 10.10.2. Packaging Strategy
- 10.10.3. Practical Exercise

TECH's innovative teaching system is combined with a complete and updated syllabus, making it the best educational option for professionals who want to focus their careers on Product Design"



05

Methodology

This training program provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the ***New England Journal of Medicine have considered it to be one of the most effective.***

Discover Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: A way of learning that has proven to be extremely effective, especially in subjects that require memorization".

At TECH we use the Case Method

Our program offers a revolutionary method of skills and knowledge development. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

At TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world."

We are the first online university to combine Harvard Business School case studies with a 100% online learning system based on repetition.

The student will learn, through collaborative activities and real cases, how to solve complex situations in real business environments.

A learning method that is different and innovative.

This intensive program in Design at TECH Technological University will prepare you to face all the challenges in this area, both nationally and internationally. We are committed to promoting personal and professional growth, the best way to walk towards success, so TECH uses case studies from Harvard Business School, with which we have a strategic agreement that allows us to bring our students the materials of the best university in the world.

> *Our program prepares you to face new challenges in uncertain environments and achieve success in your career"*

The case method is the most widely used learning system by the best faculties in the world. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question we face in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

Re-Learning Methodology

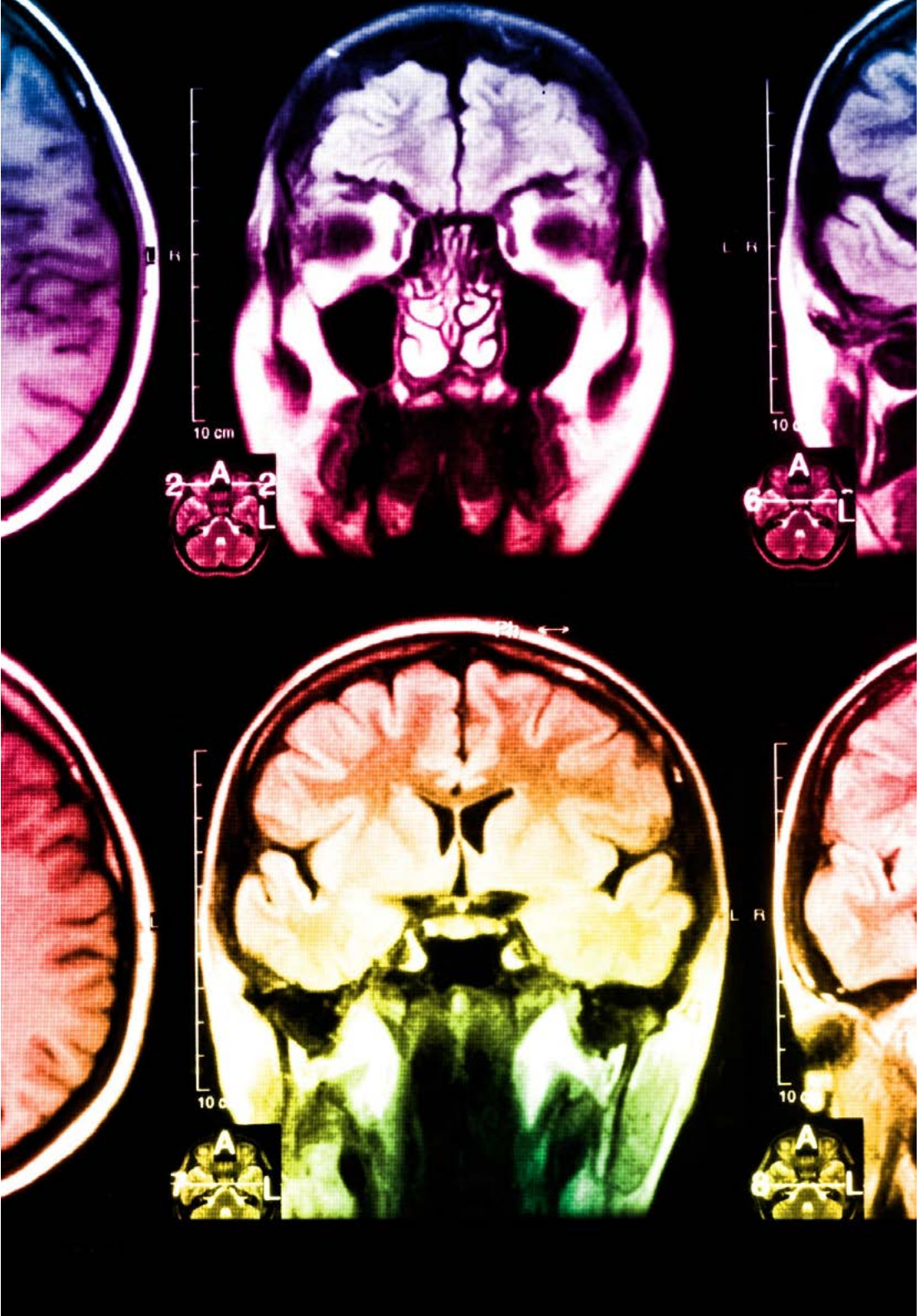
Our university is the first in the world to combine the Harvard University *case studies method* with a 100% online learning system based on repetition, combining 8 different didactic elements in each lesson.

We enhance Harvard *case studies* with the best 100% online teaching method: Re-learning.

> *In 2019 we obtained the best learning results of all Spanish-language online universities in the world.*

At TECH you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Re-learning.

Our university is the only Spanish-speaking university qualified to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best Spanish online university indicators.



In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically. With this methodology we have trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, markets, and financial instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

Re-learning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: A direct equation for success.

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.

This program offers the best educational material, prepared with professionals in mind:

Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.

Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

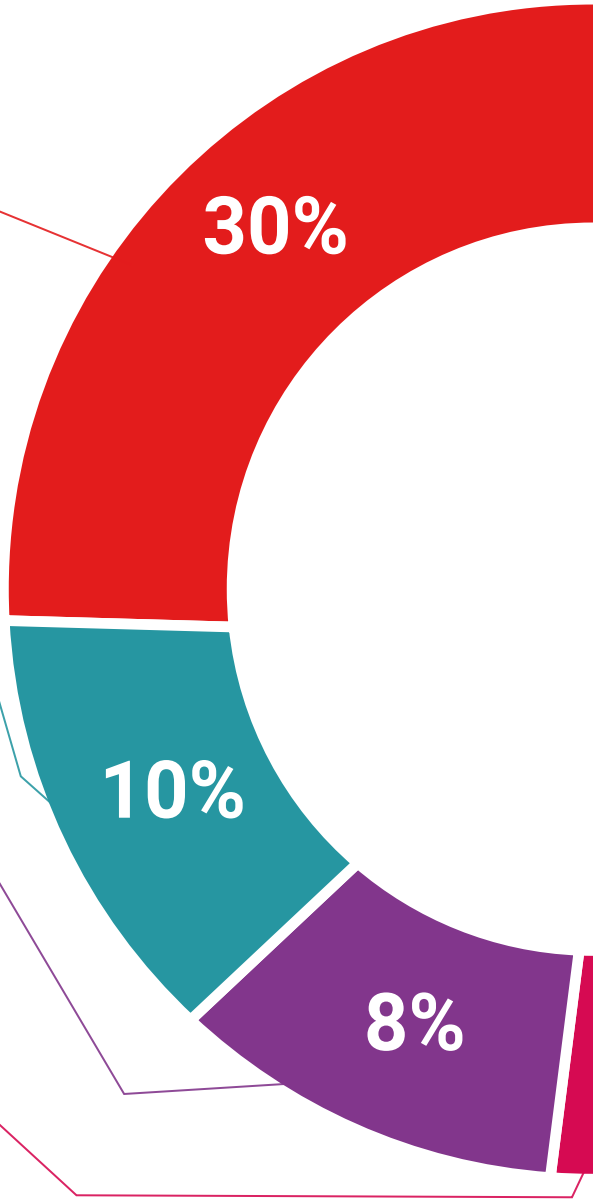
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

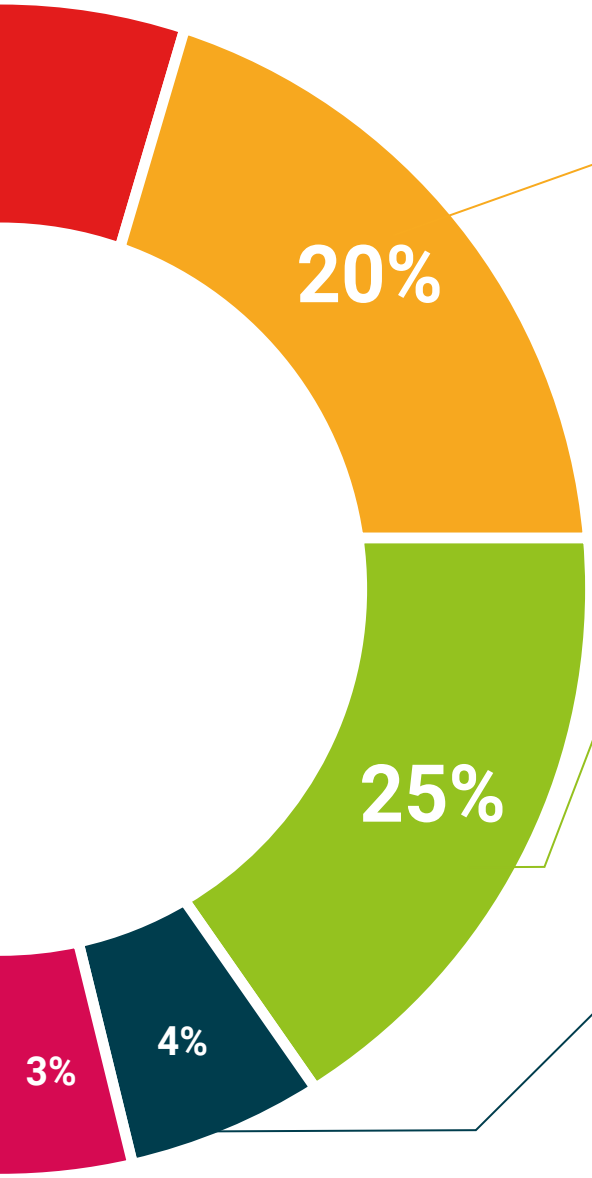
Practising Skills and Abilities

They will carry out activities to develop specific competencies and skills in each thematic area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization we live in.

Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





Case Studies

They will complete a selection of the best case studies in the field used at Harvard. Cases that are presented, analyzed, and supervised by the best senior management specialists in Latin America.

Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive multimedia content presentation training Exclusive system was awarded by Microsoft as a "European Success Story".

Testing & Re-testing

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises: So that they can see how they are achieving your goals.

06

Certificate

This Professional Master's Degree in Product Design guarantees, in addition to the most rigorous and up-to-date training, access to a Professional Master's Degree issued by TECH Technological University

Successfully complete this training program and receive your university certificate without travel or laborious paperwork"

This **Professional Master's Degree in Product Design** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding Professional Master's Degree **diploma** issued by **TECH Technological University** via tracked delivery*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Professional Master's Degree, and will meet the requirements commonly demanded by job exchanges, competitive examinations and professional career evaluation committees.

Title: **Professional Master's Degree in Product Design**
ECTS: **60**
Official Nº of Hours: **1,500 hours.**


tech technological university

Awards the following

DIPLOMA

to

Mr./Ms. _____, with identification number _____.
For having successfully passed and accredited the following program

PROFESSIONAL MASTER'S DEGREE
in

Product Design

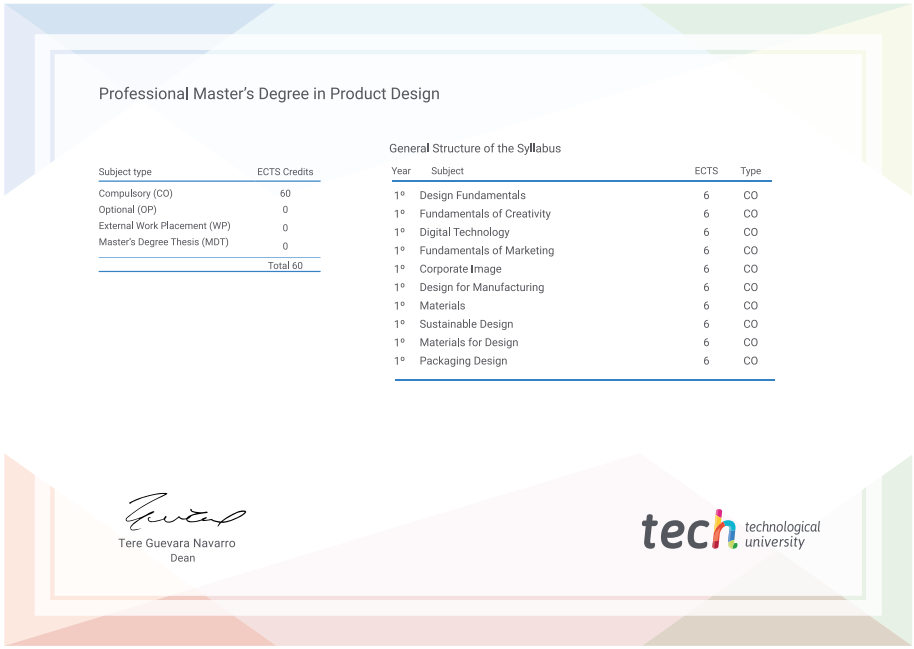
This is a qualification awarded by this University, with 60 ECTS credits and equivalent to 1.500 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates


Professional Master's Degree in Product Design

Subject type	ECTS Credits
Compulsory (CO)	60
Optional (OP)	0
External Work Placement (WP)	0
Master's Degree Thesis (MDT)	0
	Total 60

General Structure of the Syllabus

Year	Subject	ECTS	Type
1º	Design Fundamentals	6	CO
1º	Fundamentals of Creativity	6	CO
1º	Digital Technology	6	CO
1º	Fundamentals of Marketing	6	CO
1º	Corporate Image	6	CO
1º	Design for Manufacturing	6	CO
1º	Materials	6	CO
1º	Sustainable Design	6	CO
1º	Materials for Design	6	CO
1º	Packaging Design	6	CO

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Dean

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*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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Professional Master's Degree

Product Design

Course Modality: **Online**
Duration: **12 months.**
Certificate: **TECH Technological University**
60 ECTS Credits
Teaching Hours: **1,500 hours.**

Professional Master's Degree
Product Design

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