UNIVERSIDAD AUTÓNOMA DE BAJA CALIFORNIA

COORDINACIÓN GENERAL DE FORMACIÓN BÁSICA
COORDINACIÓN GENERAL DE FORMACIÓN PROFESIONAL Y VINCULACIÓN UNIVERSITARIA
PROGRAMA DE UNIDAD DE APRENDIZAJE

I. IDENTIFICATION INFORMATION

1. **Academic Unit**: Faculty of Engineering, Architecture and Design, Ensenada.
2. **Study Program(s):** Nanotechnology Engineer
3. **Plan Duration:** 2019-2
4. **Name of Learning Unit:** Nanotechnology Product Marketing
5. **Code**: 33561
6. **HC:** 01 **HL:** 00 **HT:** 03 **HPC:** 00 **HCL:** 00 **HE:** 01 **CR:** 05
7. **Learning stage to which it belongs**: Terminal
8. **Character of Learning Unit**: Obligatory
9. **Requirements for enrollment in learning unit:** None

UNIVERSIDAD AUTÓNOMA DE BAJA CALIFORNIA
REGISTRADO
09 NOV 2018
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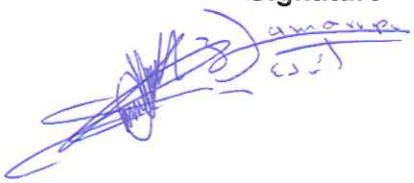
COORDINACIÓN GENERAL DE FORMACIÓN BÁSICA

PUA Formulated by:	Signature	Approved by	Signature
José de Jesús Zamarripa Topete Miguel Ángel Adame Monreal		Humberto Cervantes De Ávila	

Date: September 4, 2018

UNIVERSIDAD AUTÓNOMA DE BAJA CALIFORNIA
FACULTAD DE INGENIERÍA, ARQUITECTURA Y DISEÑO
ENSENADA, B.C.

II. GENERAL PURPOSE OF THE COURSE

The purpose of the Nanotechnology Product Marketing learning unit is to design a proposal to commercialize nanotechnological goods and services. Its usefulness is the fact that the student is given a complete perspective of the procedures and procedures that must be fulfilled in order to carry out a marketing process in nanotechnology, with honesty, responsibility and respect for the environment. It is taught in the terminal stage, it is mandatory, integrative, it belongs to the area of knowledge of Applied Engineering.

III. COURSE COMPETENCIES

Generate a marketing program for a nanotechnological product, through the development and implementation of marketing strategies and methodologies, with distribution logistics, based on the quantitative and qualitative analysis of the nanotechnological product, so that it can reach from the producer to the consumer in time, form, costs and place, with honesty, responsibility and respect for the environment.

IV. EVIDENCE OF PERFORMANCE

Digital evidence portfolio of the commercialization process of a nanotechnological product that contains: the program and the manual that includes standardization, normativity, safety and hygiene.

V. DEVELOPMENT BY UNITS

UNIT I: Definitions, background, types of trade, commercial systems and legislation.

Competency: Identify the correct terms of commercialization and its corresponding regulatory framework, with the review of the historical evolution of commercialization and commercial legislation, from the origins of society to the current concepts and precepts, for its correct application in construction of programs and manuals of commercialization of nanotechnological products, with tolerance, responsibility and collaborative attitude.

Content: **Duration:** 4 hours

1.1. Definitions.
1.2. Background.
1.3. Types of trade.
1.4. Commercial systems
1.5. Legislation.

UNIT II. - Commercial distribution, distribution channels.

Competency: Specify the elements of a nanotechnology product distribution plan, through the analysis of the particularities of commercial distribution tools, so that a nanotechnological product can reach from the producer to the consumer, with a collaborative attitude, responsibility and respect for the environment .

Content: **Duration:** 4 hours

2.1. The commercial distribution.
- 2.1.1. Marketing points of view.
- 2.1.2. Changes in the market.
- 2.1.3. Functions of the commercial distribution.

2.2. Distribution channel.
- 2.2.1. Basic concepts of distribution channel.
- 2.2.2. Types of distribution channels.
- 2.2.3. Choice of distribution channel.
- 2.2.4. Stages of the design of the distribution channel.
- 2.2.5. The intangible products channel.
- 2.2.6. Dynamics of distribution channels.
- 2.2.7. Types of integration.
- 2.2.8. Outsourcing.
- 2.2.9. Internal relations of the distribution channel.

UNIT III. - Commercial formats and logistics of the manufacturer, distributor and retailer.

Competency: Define the commercial formats used by the subjects of the trade, by means of the analysis and comparison of its elements, to apply them in the logistic design of programs and manuals of commercialization of nanotechnological products attached to the legality, with honesty, responsibility and team work.

Content: **Duration:** 6 hours

3.1. Commercial formats.
- 3.1.1. Commercial format based on the manufacturer.
  - 3.1.1.1. Wholesale market.
  - 3.1.1.2. Wholesalers classification.
  - 3.1.1.3. Intermediary agents.
- 3.1.2. Retail-based retail formats.
  - 3.1.2.1. Classification of retailers.
  - 3.1.2.2. Types of sales (with or without seller).
  - 3.1.2.3. Management planning and retail management.
  - 3.1.2.4. Retail strategy.
  - 3.1.2.5. Management decision-making process.
  - 3.1.2.6. Economic importance of retailers.
  - 3.1.2.7. Retail financial strategy.
  - 3.1.2.8. Accounting instruments.
  - 3.1.2.9. Retail Budget.
  - 3.1.3.10. Behavior of consumer shopping.
    - 3.1.3.10.1 Approach to consumer behavior.
    - 3.1.3.10.2. Internal and external factors of purchase.
    - 3.1.3.10.3. The purchase process.
    - 3.1.3.10.4. Needs.
    - 3.1.3.10.5. Search for information.
    - 3.1.3.10.6. Evaluation of the purchase.
- 3.1.3. Ethical and legal aspects.
  - 3.1.3.1. Standards and codes of ethics.
  - 3.1.3.2. Ethical and unethical sales.
- 3.1.4. Electronic commerce.

3.1.4.1. Concepts.
3.1.4.2. Digital documents.
3.1.4.3. Digital certificates.

3.2. Logistics.

3.2.1. Concepts.
3.2.2. Logistic strategy
3.2.3. Logistic system design.
3.2.4. Consumer response systems.
3.2.5. Point of sale management.
3.2.6. Supply Chain.
3.2.7. Chain planning.
3.2.8. Current vision of logistics.
3.2.9. Route design.

UNIT IV. - International Trade.

Competency: Exemplify the distribution procedures in the design of programs and manuals for the commercialization of nanotechnological products, through the reflection of the concepts of export, import, customs and incoterms, for their application in the trade of a nanotechnological product, with honesty, responsibility and respect for other cultures.

Content: **Duration:** 2 hours

4.1. International Trade
4.2. Export.
4.3. Import.
4.4. Customs.
4.5. Incoterms.

VI. STRUCTURE OF PRACTICES				
Practice No.	**Proficiency**	**Description**	**Support materials**	**Time**
UNIT I				
1	Apply the essential terms and regulations in the design of product marketing programs and manuals to design a distribution plan for nanotechnological goods and services, with tolerance, responsibility and collaborative attitude.	Detect the need or problem of the productive or social sector. Determine the nanotechnological product to market. Establish the terms of the commercialization and the most appropriate regulations for the nanotechnological product to be commercialized. Start the program and marketing manual.	Information on the needs of the productive and social sector. Producto nanotecnológico a comercializar. Class documents, specialized databases and the internet. Videos. Digital format of the program and marketing manual. Computer. Projector.	12 hours
UNIT II				
2	Structure a distribution plan of nanotechnological products, through commercial distribution tools, to strategically determine the best channel that allows the nanotechnological product to reach from the producer to the consumer, with honesty, responsibility and respect for the environment.	By teams with the characteristics of the nanotechnological product design the most appropriate distribution channel. Document the distribution channel in the program documents and marketing manual.	Nanotechnological product to market. Class documents, specialized databases and the internet. Videos. Digital format of the program and marketing manual. Computer. Projector.	12 hours
UNIT III	**Commercial formats and logistics of the manufacturer, distributor and retailer.**			

3	Design commercial formats for the design of goods and services distribution logistics, to implement programs and manuals for the commercialization of nanotechnological products adhering to legality, with honesty, responsibility and teamwork.	By teams with the formats of the manufacturer, intermediary and retailer, structuring the most functional logistics for the product or nanotechnology to market. Document the characteristics of the manufacturer, intermediary and retailer, with the proposal of logistics in the program documents and marketing manual.	Nanotechnological product to market. Class documents, specialized databases and the internet. Videos. Digital format of the program and marketing manual. Computer Projector.	18 hours
UNIT IV				
4	Propose distribution procedures in the design of the program and manual of marketing of nanotechnological products, with the criteria of export, import, customs and incoterms, so that a nanotechnological product can reach another country, with honesty, responsibility and respect for other cultures.	With working groups review the procedures for exporting, importing, the operation of the customs and the correct use of the incoterms so that the nanotechnological product can be commercialized in another country. Document the export procedures in the program documents and marketing manual.	Nanotechnological product to market. Class documents, specialized databases and the internet. Videos. Digital format of the program and marketing manual. Computer. Projector.	6 hours

VII. WORK METHOD

Framing: The first day of class the teacher must establish the work form, evaluation criteria, quality of academic work, rights and obligations teacher-student.

Teaching activities:
Exhibition of the topics in class.
Audiovisual support
Advice on team work during the thematic units.
Guide in the design of the program and manual of commercialization of the nanotechnological product.

Students activities:
Reading of the material of the class and complemented with bibliographic searches in specialized databases and internet.
Teamwork to establish the best criteria in certain marketing issues.
Filling the program and marketing manual of the nanotechnological product.

VIII. EVALUATION CRITERIA

The evaluation will be carried out permanently during the development of the learning unit as follows:

Accreditation criterion

- 80% attendance to have the right to ordinary exam and 70% attendance to be entitled to extraordinary examination according to the School Statute articles 71 and 72.
- Scaled from 0 to 100, with a minimum approval of 60.

Evaluation Criterion

Partial exams 3

- 3 exams 20%
- Evidence of performance 80%

(Digital evidence portfolio of commercialization of a nanotechnological product that contains: the program and the manual that includes standardization, normativity, safety and hygiene)

Total……..……...100%

IX. BIBLIOGRAPHY

Required

Boucher P. (2008). Nanotechnology: Legal Aspects (Perspectives in Nanotechnology). United States of America. CRC Press Book.

Castellanos A. (2015). Logística Comercial Internaciona. Colombia. ECOE ediciones.

De Juan Vigaray M. D. (2011). Comercialización y retailing, distribución comercial aplicada. México. Pearson, Prentice Hall.

Harari Y. N. (2016). De animales a dioses. Una breve historia de la humanidad. México. Penguin Random House Grupo Editorial.

Martínez-López F. J. (2013). Distribución Comercial. México. Delta.

Sabria F. (2012). La cadena de suministro. 2da edición. México. Alfaomega. Marge books.

Sherton S. (2012). Nanotechnology: Bussiness Applications and Commercialization. United States of America. CRC Press Book.

Tsuzuki T. (2013). Nanotechnology Commercialisation. United States of America. CRC Press Book.

Suggested

Valdivia J. A. (2015). Comercialización de productos y servicios en pequeños negocios o microempresas. España. IC editorial.

Wim, H. E. (2012), Nanotechnology Commercialization for Managers. United States of America. Pan Stanford Publishing.

IX. PROFESSOR PROFILE

The teacher preferably having a graduate degree in nanotechnology or related to the learning unit. The teaching experience consists of having taught subjects related to the learning unit. The qualities are tolerant, empathetic, prudent.