

Course Syllabi

1. INDU-00008 RESEARCH AND DEVELOPMENT OF NEW PRODUCTS

2. 144 credits hours.

3. Bibliography

- La planeacion y desarrollo de productos, Salame, H. , 2013
- Diseño de producto: métodos y técnicas. México, , Marzal, J., Ms, J. & Ez, M. , 2004
- Innovation management and new product development, Trott, P., 2017
- Product design and development, Ulrich, K. & Eppinger, S, 2004
- Desarrollo de nuevos productos. Creatividad, innovacion y marketing, Alejandro Snarch., 2014

4. Specific Course Information

a. Research and Development currently corresponds to one of the fundamental areas of an administrator to drive companies in a highly competitive environment in a search to meet the growing needs of consumers. It allows to identify innovation opportunities in the productive sector of goods and services. The student taking this course will be in the ability to develop new quality products/services from different perspectives such as marketing, d iseño, manufacturing, among others. It contributes to the following learning results: RA1. Troubleshooting Identify, formulate and solve complex engineering problems by applying RA2 engineering, science and mathematics principles. Design Applied engineering design to produce solutions that meet specific needs taking into account public health, safety and well-being, as well as global, cultural, social, environmental and economic factors.

b. Prerequisites:

- INDU-00009 PROCESS ENGINEERING

5. Learning Objectives of the Course

- a. General objective: To promote in the student the skills necessary for the management of the innovation and development of new products within the organizations, including technical, market, economic and context aspects to be validated within an objective market.
- To know the importance of the processes of research and development of new products and services as a tool of competitiveness in the market.
 - To identify opportunities for the development of new product
 - Understand the systematic process of developing new products or services that minimizes risk factors at launch.
 - Know the necessary guidelines for the management of a project for the development of new products.

b. Learning Outcomes

- Rda1. understands the importance of research and development in business management as a tool for the creation of competitive advantages in search of customer satisfaction. ra1
- Rda3. design new product concepts based on the results of the customer needs identification process. ra2
- Rda2. knows and proposes a systematic process for the design and development of new products and/or services in a given context. ra1
- Rda3. build prototypes of new products based on additive manufacturing technology, devastated and molded. ra2

6. Course Topics

- Unit 1: funds of research and development
- Unit 2: planning – front end for the development of new products/services
- Unit 3: process for the development of new products and/or services
- Unit 4: prototy