

Course Syllabi

1. INDU-00047 ORGANIC SYNTHESIS IN INDUSTRY

2. Instructors:

- Daniela Alexandra Albuja Arias
- Jaime Estuardo Cuenca Leon

3. Bibliography

- Química orgánica técnica: fundamentos de química orgánica industrial/ Biblioteca Campus Central/ estantería 547/ código 74396, Alfred Rieche, null
- Procesos industriales de síntesis orgánica, P. H. Groggins; Angel Vian y Gabriel Conde/ Biblioteca Campus Central/ Estantería 660.28 / Código 73652, 1953
- Química Orgánica/ Biblioteca Campus Central/ Estantería 547/ Código 34284635, Leroy G. Wade, 2017

4. Specific Course Information

- a. The ORGANIC SYNTHESIS IN THE INDUSTRY has basic knowledge for the synthesis and application of different industrial organic compounds through the use of the principles of Organic Chemistry, as well as its main routes of synthesis, industrial processes and technological applications. It is framed in respect and commitment for the care of the environment. The subject contributes to the Chemical Engineer's Egress Profile in the following: Recognize the value of ancestral knowledge, enabling its incorporation in professional practice, to develop new products, innovate and optimize traditional productive practices (number 8 of the discharge profile). Implement technologies related to the physical and chemical transformation of materials, effectively, incorporating technological improvements or innovations (number 9 of the discharge profile). Act with respect and commitment to the environment, applying management practices and technologies, that allow it to minimize the environmental impact generates (number 13 of the exit profile).

b. Prerequisites:

- CCFF-00040 Inorganic chemistry
- CCFF-00042 Organic chemistry II
- EDUC-00024 Scientist's book and met. inve.

5. Learning Objectives of the Course

- a. Apply the knowledge and skills acquired in organic chemistry for the synthesis of products of interest, from plant or animal raw materials by appropriate industrial processes. - Apply the basics of organic synthesis, to identify basic raw materials, product development and main applications in the organic chemical industry. - Get the active principles of plants by applying different extraction and purification methods, in order to to apply them in the generation of new products. - To know the technological applications of organic compounds, relating their properties to such applications.

b. Learning Outcomes

1. It applies the fundamentals of organic synthesis, to identify basic raw materials, product development and main applications in the organic chemistry industry.
2. It applies the fundamentals of organic synthesis, to identify basic raw materials, product development and main applications in the organic chemistry industry.
3. It knows the technological applications of organic compounds, relating their properties to such applications.

4. It knows the technological applications of organic compounds, relating their properties to such applications.
5. It applies the fundamentals of organic synthesis, to identify basic raw materials, product development and main applications in the organic chemistry industry.
6. It obtains the active ingredients of plants by applying different extraction and purification methods, in order to apply them in the generation of new products.
7. It knows the technological applications of organic compounds, relating their properties to such applications.
8. It obtains the active ingredients of plants by applying different extraction and purification methods, in order to apply them in the generation of new products.
9. It applies the fundamentals of organic synthesis, to identify basic raw materials, product development and main applications in the organic chemistry industry.
10. It knows the technological applications of organic compounds, relating their properties to such applications.
11. It obtains the active ingredients of plants by applying different extraction and purification methods, in order to apply them in the generation of new products.
12. It obtains the active ingredients of plants by applying different extraction and purification methods, in order to apply them in the generation of new products.

6. Course Topics

1. Introduction
2. Industrial process of organic synthesis.
3. Methods of extraction of active substances in plants.
4. Synthesis of materials for vegetative or animal primary materials
5. Synthesis of industrial interest products