

Course Syllabi

1. INDU-00031 PROJECT ENGINEERING

2. Instructor:

- Isabel Cristina Leon Jaramillo

3. Bibliography

- Proyectos de inversión, Formulación y evaluación, Sapag Chain, Nassir, 2011
- Evaluación de Proyectos, Baca Urbina, Gabriel, 2016

4. Specific Course Information

- a. The subject aims mainly to provide students with a general understanding of the discipline of Project Engineering and its application in the professional field. Students will know tools and techniques to formulate, evaluate and manage projects, generating an optimal solution to a need or problem. The Project Engineering subject contributes to the following numerals of the Chemical Engineer's Egress Profile: 11. Evaluate and develop industrial projects with criteria 2. Communicating effectively in oral and written form using the appropriate technical language, whether working individually or in interdisciplinary and/or multi-ethnic teams. 14. Acting with professional ethics, considering the social and economic impact of their professional practice, in the regulatory areas related to quality, health and safety and the environment.

- b. Prerequisites:

- INGE-00025 Environmental management and technology
- INDU-00030 Energy management
- EDCA-00235 Organ. and direct. companies
- INGE-00024 Design - calculus plants ind.

5. Learning Objectives of the Course

- a. To provide students with the theoretical and practical knowledge necessary for the planning, design, implementation and management of projects in the field of chemical engineering, through tools and techniques of Project Engineering, in order to train professionals capable of managing projects effectively and efficiently. - To know the fundamental concepts of project engineering - To know and apply at the basic level tools and techniques of project engineering - Understanding the different stages of the projects

- b. Learning Outcomes

1. The student will be able to understand the different stages of the projects, including the identification of needs, planning, design, execution, evaluation and closure of the project.
2. The student will be able to apply basic project engineering tools and techniques, focused on project formulation, evaluation and management, when designing an academic project, applying the acquired knowledge by developing teamwork and leadership skills.
3. The student will be able to define and explain the fundamental concepts of project engineering.

6. Course Topics

1. Project management funds
2. Initiative and planning of projects
3. Project formation
4. Implementation and management
5. Evaluation and selection of projects

6. Final project