**Course Description Form**

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| 1. Course Name:
 |
| Principles of Industrial chemistry |
| 1. Course Code:
 |
| **303CHIC1** |
| 1. Semester / Year:
 |
|  First semester /Third year |
| 1. Description Preparation Date:
 |
| 1/10/2024 |
| 1. Available Attendance Forms:
 |
| Mandatory attendance |
| 1. Number of Credit Hours (Total) / Number of Units (Total)
 |
| 30 hours / 2 units |
| 1. Course administrator's name (mention all, if more than one name)
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| Name: 1- Asst. prof. Dr. Noor sabah ahmed noorsabah@uodiyala.edu.iq 2- Asst. prof. Dr. mohammed alwan farhan Mohammed.alwan@uodiyala.edu.iq  |
| 1. Course Objectives
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| **Course Objectives** | **Teaching the student about oil and polymer chemistry,** **knowledge of the petrochemical industries related to them,** **how to manufacture raw materials in the petrochemical industries, knowledge of corrosion and its types, pollution** **and its types, dyes and plastics and their practical applications aimed at developing and keeping pace with the scientific development of Yamiya Industrial.****Teaching and teaching students all the necessary and** **essential information related to industrial chemistry, which qualifies them to work and research in all fields of industrial chemistry.** |
| 1. Teaching and Learning Strategies
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| **Strategy** | Explanation and clarificationLecture method and questioning methodModel display method |
| 1. Course Structure
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| **Week**  | **Hours**  | **Required Learning Outcomes**  | **Unit or subject name**  | **Learning method**  | **Evaluation method**  |
| 1 | 2 | Introducing the student to industrial chemistry and its importance in our lives | Historical introduction - branches of chemistry -Types of chemical industries-Principles of chemical industries | Lecture using the blackboard and data show and discussion | Daily exams, homework, and monthly exams |
| 2 | 2 | Student knowledgeIn chemical industries | Definitions and important information in the chemical industry | Lecture using the blackboard and data show and discussion | Daily exams, homework, and monthly exams |
| 3 | 2 | Student knowledge of economicsChemical industries | Economics of chemical industries | Lecture using the blackboard and data show and discussion | Daily exams, homework, and monthly exams |
| 4 | 2 | The student knows the basics of choosing chemical reactions | The foundations of selecting chemical reactions and the technology of transferring them to the industrial level | Lecture using the blackboard and data show and discussion | Daily exams, homework, and monthly exams |
| 5 | 2 | The student’s knowledge of physical processes in chemical industries and separation methods | Physical processes in chemical industries and separation methods | Lecture using the blackboard and data show and discussion | Daily exams, homework, and monthly exams |
| 6 | 2 | The student’s knowledge of the distillation process | Industrial units/distillation process | Lecture using the blackboard and data show and discussion | Daily exams, homework, and monthly exams |
| 7 | 2 | The student’s knowledge of the chemical absorption process | Chemical absorption process | Lecture using the blackboard and data show and discussion | Daily exams, homework, and monthly exams |
| 8 | 2 | The student's knowledge of methods for the adsorption process | Adsorption process | Lecture using the blackboard and data show and discussion | Daily exams, homework, and monthly exams |
| 9 | 2 | The student’s knowledge of the extract ion process | Extraction process | Lecture using the blackboard and data show and discussion | Daily exams, homework, and monthly exams |
| 10 | 2 | The student’s knowledge of the nomination method | Filtration process | Lecture using the blackboard and data show and discussion | Daily exams, homework, and monthly exams |
| 11 | 2 | The student's knowledge of chemical reactions and chemical reactors | Chemical reactions and chemical reactors | Lecture using the blackboard and data show and discussion | Daily exams, homework, and monthly exams |
| 12 | 2 | Student definition of contributing factors (motivating factors) | Catalysts in the chemical industry | Lecture using the blackboard and data show and discussion | Daily exams, homework, and monthly exams |
| 13 | 2 | Introducing the student to how to calculate the balance of matter in the chemical industry | Calculating matter balance in the chemical industry | Lecture using the blackboard and data show and discussion | Daily exams, homework, and monthly exams |
| 14 | 2 | Material balance calculations in combustion processes | Material balance calculations in combustion processes | Lecture using the blackboard and data show and discussion | Daily exams, homework, and monthly exams |
| 15 | 2 | Student knowledge of fuel and energy/oil gas  | Introducing the student to fuel and energy/oil/gas | Lecture using the blackboard and data show and discussion | Daily exams, homework, and monthly exams |
| 1. Curse Evaluation
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| Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc  |
| 1. Learning and Teaching Resources
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| Required textbooks (curricular books, if any) | Foundations and applications in industrial chemistry / written by Dr. Latif Hamid Ali/University of Mosul |
| Main references (sources) | Foundations of industrial chemistry / written by Dr. Aziz Ahmed Amin |
| Recommended books and references (scientific journals, reports...) | www.chemicalprocessing.com/ |
| Electronic References, Websites | www.bytoco.com |