**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) | | | | | | | | |
| Name: 1- Asst. prof. Dr. Noor sabah ahmed [noorsabah@uodiyala.edu.iq](mailto:noorsabah@uodiyala.edu.iq)  2- Asst. prof. Dr. mohammed alwan farhan [Mohammed.alwan@uodiyala.edu.iq](mailto:Mohammed.alwan@uodiyala.edu.iq) | | | | | | | | |
| 1. Course Objectives | | | | | | | | |
| **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 | | | | | | | | |
| **Strategy** | | Explanation and clarification  Lecture method and questioning method  Model display method | | | | | | |
| 1. Course Structure | | | | | | | | |
| **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 knowledge  In 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 economics  Chemical 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 | | | | | | | | |
| 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 | | | | | | | | |
| 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 | | |