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**Department of Chemistry**

**College of Science**

**University of Salahaddin-Erbil**

**Subject: Principles of Industrial Chemistry**

**Course Book – stage 2**

**Lecturer's name: Karim A. Younis**

**Academic Year: 2022 - 2023**

**Course Book**

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| **1. Course name** | **Principles of Industrial Chemistry** | |
| **2. Lecturer in charge** | **Karim A. Younis** | |
| **3. Department/ College** | **Chemistry/Science** | |
| **4. Contact** | [Karim.younis@su.edu.krd](mailto:Karim.younis@su.edu.krd) | |
| **5. Time (in hours) per week** | **2 hours/week** | |
| **6. Office hours** | **Monday 10:30 – 12:00, Tuesday 8:30 – 10:30** | |
| **7. Course code** | **Reactors, Material balance, Water treatment** | |
| **8. Teacher's academic profile** | **Kaim A. Younis**  **B. Sc. Chemistry, Salahaddin University, Iraq**  **M.Sc. Polymer Chemistry, Salahaddin University, Iraq** | |
| **9. Keywords** | **Industrial Pollution, Global Warming, Ozone depletion.** | |
| **10. Course overview:**  Industrial pollution has become a serious problem in many developing countries during the past two decades. Support for regulation of industrial pollution has remained lukewarm from many policymakers, despite research suggesting large benefits from pollution reduction even in very poor countries. Since 1993, a World Bank research team on the environment has worked in collaboration with pollution control agencies to understand existing regulatory practices, industry's environmental performance, and pollution abatement costs in developing countries. The researchers'ongoing work has already produced a large number of publicly‐available research papers and datasets, and is providing the Bank team with considerable expertise and insights into the design of effective pollution control policies. | | |
| **11. Course objective:**  This course aims to build the skills required by students to voice their ideas and findings in different subjects this could be achieved by:   1. Improving verbal communication and tolerance of opposite points of view through academic debate sessions. 2. Enhancing the ability of students to document scientific concepts and finding through writing of academic reports 3. Build the skills required for presenting at different academic events and conferences through preparation and design of power point presentations and poster | | |
| **12. Student's obligation**   * Students have to attend weekly academic debate sessions and they are required to participate in these sessions whether as speakers or as a member of the audience. * Students are required to write a report on a selected topic * Students are also obliged to prepare a poster presenting the main aspects of their selected topic * Students are expected to adhere to debate rules and ethics explained at the start of the course. They are also required to follow the basic guidelines for writing and poster preparation. | | |
| **13. Forms of teaching**  Learning resources in this course include white board, lecture notes, PowerPoint presentations and media files. | | |
| **14. Assessment scheme**   * Students are not required to take exams and marking criteria depends on completing specific tasks throughout the course as follows: * Preparing a presentation on a given topic and participating in an academic debate as a speaker [40 Marks] * Handing in a report on the selected topic (end of March) [20 Marks] * Preparing and presenting an academic poster (April) [20 Marks] * Actively participating in debates as a member of the audience [20 Marks] | | |
| **15. Student learning outcome:**   * The principal learning outcome of this course is * to build the background knowledge required at all later levels for communicating scientific findings and ideas * to help the student voice their ideas freely within the limits accepted in an academic environment * to familiarize the student with skills and techniques required in producing scientific reports, presentations and posters | | |
| **16. Course Reading List and References‌:**   * Nicholas Rowe, Academic & Scientific Poster Presentation: A Modern Comprehensive Guide, 2017, Springer. * Mary Helen Briscoe, Preparing Scientific Illustrations, A Guide to Better Posters, Presentations, and Publications. Second Edition, 2016, Springer | | |
| **17. The Topics:** | | **Lecturer's name** |
| Week 1: Presentation of scientific results  Week 2: Writing an academic report  Week 3: Poster preparation  Week 4 – Week 20: Academic debate sessions  Week 21: Poster session | | **Karim A. Younis** |
| **18. Practical Topics (If there is any)** | |  |
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| **19. Examinations:**  Not applicable to the course. | | |
| **20. Extra notes:** | | |
| **21. Peer reviewپێداچوونه‌وه‌ی هاوه‌ڵ**  ئه‌م کۆرسبووکه‌ ده‌بێت له‌لایه‌ن هاوه‌ڵێکی ئه‌کادیمیه‌وه‌ سه‌یر بکرێت و ناوه‌ڕۆکی بابه‌ته‌کانی کۆرسه‌که‌ په‌سه‌ند بکات و جه‌ند ووشه‌یه‌ک بنووسێت له‌سه‌ر شیاوی ناوه‌ڕۆکی کۆرسه‌که و واژووی له‌سه‌ر بکات.  هاوه‌ڵ ئه‌و که‌سه‌یه‌ که‌ زانیاری هه‌بێت له‌سه‌ر کۆرسه‌که‌ و ده‌بیت پله‌ی زانستی له‌ مامۆستا که‌متر نه‌بێت.‌‌ | | |