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| Course Name [科目名] | Chemical Reaction Engineering |
| Instructor Name [教員] | Eika Qian, Yuichiro Nagatsu, Chihiro Fushimi, Makoto Sakurai, Chihiro Fushimi |
| Office Hours and Contact Information  [オフィスアワー、連絡先] | Office hours: encourage appointments by e-mail  Location: 4-317, e-mail: nagatsu@cc.tuat.ac.jp |
| Course Structure [授業形態] | Lecture |
| Course Credits [単位数] | 3 |
| Course Overview [概要] | This course provides students how to treat Kinetics of homogenous reaction, Reactor design, Basics of Non-ideal flow, and Solid Catalyzed reactions. |
| Course Key Words [キーワード] | Reaction design, Kinetics, Solid Catalyzed reactions |
| Academic Goal [目標] | 1. capable to understand how to operate homogeneous reactions in ideal reactors  2. capable to understand how to operate reactions catalyzed by solids |
| Course Schedule [授業内容] | 1. Overview of chemical reaction engineering  2. Kinetics of Homogeneous reactions  3. Interpretation of batch reactor data  4. Introduction to reaction design  5. Ideal reactors of a single reaction  6. Design for single reactions  7. Basics of Non-ideal flow  8. Compartment Models  9. Examination I  10. Heterogeneous reactions – Introduction  11. Solid catalyzed reactions I  12. Solid catalyzed reactions II  13. The Packed Bed Catalytic Reactor  14. Deactivation Catalysts  15. Examination II |
| Textbooks, References,  and Supplementary Materials  [テキスト、参考書、その他] | O. Levenspiel, Chemical Reaction Engineering 3rd Edition, John Wiley & Sons (1999). Handouts and materials given on or before the lectures. |
| Grading Philosophy  (Percentage / Criteria / Methodology)  [成績評価の方法] | Examinations |
| Other  (i.e. Expectations on Classroom  Conduct and Decorum etc.)  [その他] |  |