|  |  |
| --- | --- |
| 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-mailLocation: 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 data4. Introduction to reaction design 5. Ideal reactors of a single reaction 6. Design for single reactions 7. Basics of Non-ideal flow8. Compartment Models9. Examination I10. Heterogeneous reactions – Introduction11. Solid catalyzed reactions I12. Solid catalyzed reactions II13. 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] |  |