

Hanno Kogaku II
Chemical System Engineering

- Instructors: Prof. S. Ted Oyama,
Dept. of Chemical System Engineering
Hongo 7-3-1, Bunkyo-ku Tokyo 113-8656
- Text: H. S. Fogler, Elements of Chemical Reaction Engineering, International 4th
Edition, Wiley, New York 2005
- Exams: All exams will be closed book and closed notes. However, you will be allowed to bring in one annotated A4 sheet. You should bring a scientific calculator to each exam. There will be no makeups without a written excuse from a doctor stating you were unable to attend the exam. Notes stating that you visited the infirmary will not be sufficient. If you have a valid reason for not taking an exam and you know ahead of time, contact the instructor at least a week in advance to plan a makeup.
- Grade: Your grade (A-F) will be determined by:
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| Quizzes | 10 % (Start of each class) |
| Participation | 5 % |
| Midterm test | 35 % |
| Final test | 50 % |
- Prerequisites: The prerequisites for this course are undergraduate level reactor design (Hanno Kogaku I), mass and energy balances, che simulations, thermodynamics, mass transfer, heat transfer, differential equations, physics, organic chemistry, and physical chemistry. Without any of these requirements see the instructor.
- Objective: This course follows on the content of Hanno Kogaku I. Among the topics covered will be analysis of simultaneous reactions, combination of reactors, analysis of kinetic data, derivation of kinetic expressions, energy balances, nonisothermal reactors, reactors with multiple reactions with temperature and pressure changes. Considerable emphasis will be placed on solving non-linear and differential equations using POLYMATH. You should bring a laptop to the classes with the POLYMATH program installed.
- Language: The course will be taught in English. Lecture notes will be in Japanese.