Chemical Engineering Calculations (DAA3230-01)
Sophomore level, 3 credit, major elective
1st semester, 2020

Instructor: Dr. Tai Gyu Lee (S502, 2123-5751, teddy.lee@yonsei.ac.kr)

Class Hours: T 11:00-11:50, T 12:00-12:50(Ex.), Th 11:00-12:50
Classroom: B038
Office Hours: by appointment

TA: Hyeontae Jang (A244, 2123-7780, htjang@yonsei.ac.kr)

Office Hours: by appointment

Textbook: Basic Principles and Calculations in Chemical Engineering, 8th Edition
By David M. Himmelblau & James B. Riggs, Prentice Hall

& Class Notes

Topics:

1. Dimensions, Units, and their Conversion
2. Moles, Density, and Concentration
3. Choosing a Basis
4. Temperature
5. Pressure
6. Introduction to Material Balances
7. A General Strategy for Solving Material Balance Problems
8. Solving Material Balance Problems for Single Units without Reaction
9. The Chemical Reaction Equation and Stoichiometry
10. Material Balances for Processes involving Reaction
11. Material Balance Problems involving Multiple Units
12. Ideal Gases
13. Energy: Terminology, Concepts, and Units
14. Introduction to Energy Balances for Processes without Reaction
15. Calculation of Enthalpy Change

Grading:

Midterm Exam	30%
Final Exam	30%
Term Project	20%
Participation	20%

*Note: Classroom, topics, and times are subject to change