Syllabus (Spring Semester, 2017)

Course Number	458.501	#		Course Title	Transport Phenomena	Credit	3
Professor	Name	Lee, Won Bo (office: 302-814)		Homepage	eTL		
	E-mail	wblee@snu.ac.kr		Tel.	02-880-7076		
	Office Hour	TTh 16:00-17:00 (302-814) or by appointments					
Attachment	(Korean)						
	(English)						

Prerequisite	Engineering Mathematics I and II, Fluid Mechanics
* 1. Course Description	This course will provide an overview of Transport Phenomena and its role for analyzing processes encountered in engineering practice, including momentum, heat and mass transfers. Basic balance equations and advanced topics as well as some details of mathematics will be discussed.
* 2. Text and References	Main Text: "Transport Phenomena" 2nd ed., R.B. Bird, W.E. Stewart, E.N. Lightfoot References: "Fundamentals of heat and mass transfer" Incropera, DeWitt, Bergman, Lavine "Fundamentals of momentum, heat, and mass transfer" Welty, Wicks, Wilson, Rorrer "Diffusion: mass transfer in fluid systems" Cussler "Numerical Methods for Engineers" Chapra, Canale

* 3. Evaluation

Attendance	Mid-term1	Mid-term2	Final				
5	25	25	45	0	0	0	0

Other : ※ Possible to change

* 4. Course Schedule

Course Outline

Week	Course Outline
1	Introduction
2	Fluid statics
3	Control volume approach
4	Conservation equations
5	Laminar flow
6	Turbulent flow
7	Fundamentals of heat transfer
8	Conduction (Mid-term exam)
9	Convective heat transfer
10	Boiling and condensation
11	Radiation heat transfer
12	Fundamentals of mass transfer
13	Steady molecular diffusion
14	Unsteady molecular diffusion
15	Convective mass transfer (Final exam)

5. Special Accommodation