

SYLLABUS

Course Number and Title: M2794.007900 Advanced Thermodynamics (고급열역학)							
Credit	Provided by	Professor					
		Title	Name	e-mail			
3	Dept. of Mechanical and Aerospace Eng.		KIM, Min Soo	minskim@snu.ac.kr			
Attachment (Korean)				Attachment (English)			
Prerequisite Course							
1. Purpose of Course	This course is aiming at extending fundamental knowledge on the laws of thermodynamics to various applications and at understanding statistical approach to diverse problems. Starting from the classical thermodynamics, basic principles and related topics will be dealt with. Statistical modeling of gas, solid, and liquid phases will be made, and behaviors of materials will be intensively studied.						
2. Materials and Reference	Classical and Statistical Thermodynamics-Ashley H. Carter-Prentice-Hall-2001						
3. Evaluation Method	Attendance(%)	Task(%)	Final Exam.(%)	Random Evaluation(%)	Attitude(%)	Other(%)	Total(%)
	0%	10%	40%	0%	0%	10%	100%
Other Remarks :							
4. Lecture Plan	(English)	[1 Week] Introduction [2 Week] Nature of Thermodynamics, Equation of State [3 Week] The First Law of Thermodynamics, Applications [4 Week] The Second Law of Thermodynamics, Applications [5 Week] Chemical Potential, Kinetic Theory of Gases [6 Week] Classical and Quantum Statistics [7 Week] Classical Statistical Treatment of Ideal Gas [8 Week] Mid-term Exam. [9 Week] Heat Capacity of Diatomic Gases [10 Week] Heat Capacity of Solid [11 Week] Bose-Einstein Gases (1) [12 Week] Bose-Einstein Gases (2) [13 Week] Fermi-Dirac Gases (1) [14 Week] Fermi-Dirac Gases (2) [15 Week] Final wrap-up					
5. References to Course Registration							