

Class title	Dynamic Meteorology I (대기역학 I)	Credit	3
Lecturer	In-Sun Song (송인선)	Affiliation	Dept. Atmos. Sci. (대기과학과)
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Level	Undergraduate students in atmospheric science major		
Objectives	Understanding fundamental physical laws that govern the atmospheric motions, learning how to express the fundamental laws in mathematics, and understanding the evolution of vortex in fluid.		
Pre-requisites	Advanced engineering mathematics (required), Mechanics (recommended)		
References	R1: 대기역학, 제5판, 시그마프레스, 2014. James R. Holton, Gregory J. Hakim 지음. 한국기상학회 (권혁조, 김정우, 민경덕, 안중배, 이동규, 이재규, 이태영, 전종갑, 정형빈) 옮김 R1: An introduction to dynamic meteorology (The 5th edition), Academic Press (Elsevier) by James R. Holton and Gregory J. Hakim.		

Week	Contents
1	Chapter 1. Introduction (1.1–1.4)
2	Chapter 1. Introduction (1.5–1.6)
3	Chapter 2. Basic conservation laws (2.1–2.3)
4	Chapter 2. Basic conservation laws (2.4–2.5)
5	Chapter 2. Basic conservation laws (2.6–2.7)
6	Chapter 3. Elementary application of the basic equations (3.1–3.2)
7	Chapter 3. Elementary application of the basic equations (3.4)
8	Mid-term exam
9	Chapter 4. Circulation and vorticity (4.1)
10	Chapter 4. Circulation and vorticity (4.2–4.3)
11	Chapter 4. Circulation and vorticity (4.4–4.5)
12	Chapter 4. Circulation and vorticity (4.6)
13	Chapter 8. The planetary boundary layer (8.1–8.2)
14	Chapter 8. The planetary boundary layer (8.3)
15	Chapter 8. The planetary boundary layer (8.4)
16	Final exam