2024 학년도/ 1 학기 강의 계획서

강좌명: 기후학 A　　학수번호-분반: GEOG1005-01　　이수구분: 전공필수
개설학과: 지리학　　학점: 3
강의시간/강의실: 월/수 12:00-13:15// 스 B201　　수업사용언어: 부분영어
교강사명: 이은걸　　연구실: 스 626　　이메일: eungul.lee@khu.ac.kr
홈페이지: e-campus　　전화: 02-961-9268
면담시간: 월/수 13:15-14:00　　추천선수과목:

수업개요: *Processes of **weather** and **climate** phenomena and their **interactions** with the coupled Earth system and human activities*-This course is designed to provide a broad introduction to *climatology*, the study of the prevailing state of *weather* on planet Earth. Weather and climate processes influence environmental processes and human activities, and vice versa.
**** The class will be mainly taught in English. However, if the subject was not clearly communicated with the majority of students, then it will be explained in Korean.***

수업목표:

- Describe *basic principles* of weather and climatic elements.
- Identify the *physical processes* in the interactions between atmosphere and other Earth spheres including biosphere and hydrosphere.
- Explain *weather and climate systems across the globe* with the principal concepts and physical processes in the Earth system.
- Relate the recent *human-induced activities* to changes in weather and climate systems.

수업유형: 이론강의 (75%), 실험/실습 (10%), 기타 (15%)

수업방법: 토의/토론(o), 팀별발표( ), 개별발표(o), 시청각(o), e-campus 활용(o), 이론강의(o), 실험/실습(o), 유인물(o)

교재 및 참고자료:
(주교재)

- 강의노트

(부교재)

- "Visualizing Weather and Climate", 2008, 1st edition, Wiley, ISBN: 978-0-470-14775-7 (Bruce T. Anderson and Alan Strahler).

평가항목/평가비율(%):　　*성적등급: A- 이상 45% 이내로 학점 부여*

출석/ 15%
중간고사/ 30%
기말고사/ 35%
과제보고서/ 20%
: Exercise #1 (5%), Exercise #2 (5%), Presentation (5%), Report (5%)

과제:

1. Exercise #1: Adiabatic Cooling and Heating (CH 5)
2. Exercise #2: Cyclonic and Anticyclonic Circulations (CH 6)
3. Presentation: Short talk on 'My story on climate change'
4. Report: TBA (To be announced)

Course Schedule

Week	Date	Topic	Reading	Assignments
1	3/4 (Mon)	Course introduction/ Introducing Weather and Climate	CH 1	
	3/6 (Wed)	The Earth's Atmosphere	CH 2	
2	3/11	The Earth's Global Energy Balance	CH 3	
	3/13			
3	3/18	Surface Temperature and its Variation	CH 4	
	3/20			
4	3/25	*Individual meeting (No class)*		
	3/27			
5	4/1	Atmospheric Moisture	CH 5	
	4/3	*Exercise #1*		Exercise #1 (due on **4/3**)
6	4/8	Winds	CH 6	
	4/10	*No class*		
7	4/15	*Exercise #2*	CH 6	Exercise #2 (due on **4/15**)
	4/17	*Preparing Mid-term (No class)*		
8	4/22	***Mid-term Exam (CHs 1-6)***		
	4/24	Global Atmospheric and Oceanic Circulation	CH 7	
9	4/29			
	5/1	*Presentation (Topic: My story on climate change)*		
10	5/6	*No class*		
	5/8	*Presentation (Topic: My story on climate change)*		Presentation (due on **5/8**)
11	5/13	Midlatitude Weather Systems	CH 8	
	5/15	*Special lecture (Topic: Climate data analysis): Online*		
12	5/20	Tropical Weather Systems	CH 9	
	5/22	Thunderstorms and Tornadoes	CH 10	
13	5/27	The Global Scope of Climate/ Climate of the World	CHs 11/12	
	5/29			
14	6/3	Climate Variability	CH 13	
	6/5			
15	6/10	*Report (Topic: TBD)*		
	6/12	Human Interaction with Weather and Climate	CH 14	Report (due on **6/10**)
16	6/17			
	6/19	***Final Exam (CHs 7-14)***		

The course schedule may be changed throughout the semester and the changes will be announced in *e-campus* or during the class. The dates with no classroom lecture were highlighted in red. The lecture in blue will be taught by graduate teaching instructor under the Khreative U+ FAST (Future fAculty SupporT) Program