



2018학년도 1학기 강의계획안 (Syllabus)

교과목명 Course Title	Applited Geostatistics (응용 지구통계학)	학수번호-분반 Course No.	G17604-01
개설전공 Department/Major	Climate and Energy Systems Engineering	학점/시간 Credit/Hours	3.0 / 3.0
수업시간/강의실 Class Time/ Classroom	Wednesday 4, 5 : 12:30 ~ 15:15, B155		
담당교원 Instructor	Name : Baehyun Min (민 배 현)	Department(소속): Climate & Energy Systems Engineering	
	E-mail: bhmin01@ewha.ac.kr	Phone: 02-3277-6946	
면담시간/장소 Office Hours/ Office Location	Hours: Please make an appointment via email or cyber campus Location: JinSunMiGwan Office #237 (진선미관 237호)		

I. 교과목 정보 Course Overview

1. 교과목 개요 Course Description

This course covers basic statistics for spatial analysis in the first half. Then, students will learn variogram and its modeling for spatial data analysis with separation distance, and several geostatistical kriging and non-kriging methods. Each student or team will have a class project and presentation.

2. 선수학습사항 Prerequisites

N/A

3. 강의방식 Course Format

강의 Lecture	발표/토론 Discussion/Presentation	실험/실습 Experiment/Practicum	현장실습 Field Study	기타 Other
100%	0%	0%	0%	0%

(위 항목은 실제 강의방식에 맞추어 변경 가능합니다.)

강의 진행 방식 설명 (explanation of course format): Powerpoint & Writing on the Blackboard

4. 교과목표 Course Objectives

This class delivers key principles of spatio-temporal geostatistics including probability, random variable, variogram, kriging, and sequential simulation.



5. 학습평가방식 Evaluation System

중간고사 Midterm Exam	기말고사 Final Exam	발표 Presentation	리포트 Report	과제물 Assignments	참여도 Participation	기타 Others
35%	35%	%	%	20%	5%	5%

(위 항목은 실제 학습평가방식에 맞추어 변경 가능합니다.)

You are expected to attend all class sessions. If you have any situation which prevents you from attending class (e.g., illness, family or personal issues, etc.), please let me know your absence via email or message at the Cyber Campus before class. Two absences will not significantly affect your grade. If you miss three days or more, however, your attendance grade will drop accordingly. Three late arrival to class is equivalent to one absence. More than six absences will force you to be given F grade by the university regulation. Note that your achievement is assessed based on two exams.

II. 교재 및 참고문헌 Course Materials and Additional Readings

1. 주교재 Required Materials

M. Kelkar, 2002. Applied Geostatistics for Reservoir Characterization. SPE.
최종근, 2013. 지구통계학, 시그마프레스.

2. 부교재 Supplementary Materials

N/A

3. 참고문헌 Optional Additional Readings

N/A

III. 수업운영규정 Course Policies

* For laboratory courses, all students are required to complete lab safety training.



IV. 주차별 강의계획 Course Schedule (최소 15주차 강의)

Week	Date	Topics & Class Materials, Assignments (주요강의내용 및 자료, 과제)
1주차	07 Mar. (Wed.)	Introduction to Statistics and Geostatistics
2주차	14 Mar. (Wed.)	Probability distribution and statistical terms
3주차	21 Mar. (Wed.)	Data generation and visualization
4주차	28 Mar. (Wed.)	Conditional probability and Expectation
5주차	04 Apr. (Wed.)	Variance and Covariance
6주차	11 Apr. (Wed.)	Probability density functions
7주차	18 Apr. (Wed.)	Spatial correlation types and definitions
8주차	25 Apr. (Wed.)	<i>Midterm Examination</i>
9주차	02 May (Wed.)	Variogram and Stationarity
10주차	09 May (Wed.)	Variogram modeling
11주차	16 May (Wed.)	Simple Kriging
12주차	23 May (Wed.)	Ordinary Kriging
13주차	30 May (Wed.)	Co-Kriging and Block Kriging
14주차	06 Jun. (Wed.)	Memorial Day (no class)
15주차	13 Jun. (Wed.)	South Korean local elections (no class)
16주차	20 Jun. (Wed.)	<i>Final Examination</i>
보강1 Makeup Classes	(요일, 장소) (Date, Place)	Other point estimation methods (TBD)
보강2 (필요시) Makeup Classes	(요일, 장소) (Date, Place)	TBD

V. 참고사항 Special Accommodations

* 학칙 제57조에 의거하여 장애학생은 학기 첫 주에 교과목 담당교수와의 면담을 통해 출석, 강의, 과제 및 시험에 관한 교수학습지원 사항을 요청할 수 있으며 요청된 사항에 대해 담당교수 또는 장애학생지원센터를 통해 지원받을 수 있습니다.

According to the University regulation #57, students with disabilities can request special accommodation related to attendance, lectures, assignments, and/or tests by contacting the course professor at the beginning of semester. Based on the nature of the students' requests, students can receive support for such accommodations from the course professor and/or from the Support Center for Students with Disabilities (SCSD).

- * 강의계획안의 내용은 추후 변경될 수 있습니다.
- * The contents of this syllabus are not final—they may be updated.