강의계획서

출력일시 : 2026-08-12 10:45:38

1. 교과목 정보

개설연도-학기	2026년	2학기	개설학과	토목공학과
교과목번호-분반번호	8935422	01	교과목명	공간정보와 딥러닝
이수구분	전공공통		학점/시수	3-3-0
강의시간/강의실	수 05 ,06 ,07 [E8-6-217(49-217)]			
수업방식	대면			
강의언어	영어		담당교수	송헌수(전임교원)
전화	043-261-2408		E-mail	hunsoo.song@cbnu.ac.kr
강의정원			학과전화	043-261-2377
선수과목			수강대상	통합(전학년)
강의 맛보기				

2. 교과목 개요

강의개요	Conducting research and practicing academic paper writing using geospatial artificial intelligence technologies A joint curriculum offered by the Phase 4 BK21 Regional University Consortium Education and Research Group, comprising Chungbuk National University, Daejeon University, Cheongju University, and Hanbat National University					
학습목표	This course aims to provide students with an understanding of the fundamental principles and methodologies for applying deep learning to the geospatial information field. It also seeks to enhance students' research capabilities through individual research projects.					
문제해결방법	A dedicated teaching assistant (TA) will be assigned to the classroom to ensure the stable operation of videoconferencing equipment. The TA will also provide ongoing technical support to remote students from participating universities, including assistance with setting up and accessing deep learning development environments such as Anaconda and PyTorch. Online quizzes for each instructional unit and reports on the implementation of geospatial-data-based deep learning models will be managed through the Learning Management System (LMS). The same objective evaluation criteria will be applied to both in-person and remote students. Detailed written feedback focusing on source code will be provided after grading. Real-time video chat and the LMS Q&A board will be used to provide continuous support for programming questions and source-code debugging. Regular online office hours will also be offered to minimize communication gaps arising from remote participation.					
수업진행방법	강의	토의/토론	실험/실습	현장학습	개별/팀별 발표	기타
	40%	10%	40%	0%	10%	0%
	상세정보	The course will combine lectures, hands-on exercises, presentations, and discussions.				
평가방법	중간고사	기말고사	출석	퀴즈	과제	기타
	35%	35%	10%	0%	20%	0%
	상세정보	Midterm and final examinations will account for a combined total of 70% of the final grade. Assignments will primarily consist of programming exercises and presentations.				
프로그램 학습성과의 평가	Assessment through assignments and examinations					
교재 및 참고문헌	1. 주교재 : Lecture slides, Hunsoo Song, GSEL, 2026					
핵심역량과 연계성						

3. 주별 강의계획

주차	수업내용	교재범위 및 과제물	비고
1	Course Overview		The course is planned to be conducted in person; however, depending on

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			circumstances, it may be delivered online through platforms such as YouTube or Zoom.
2	Fundamental Concepts of Geospatial Data and Deep Learning		The course is planned to be conducted in person; however, depending on circumstances, it may be delivered online through platforms such as YouTube or Zoom.
3	Structure of Academic Papers and How to Read Research Papers in the Geospatial Information Field		The course is planned to be conducted in person; however, depending on circumstances, it may be delivered online through platforms such as YouTube or Zoom.
4	Recent Research Trends in GeoAI and Major Research Topics		The course is planned to be conducted in person; however, depending on circumstances, it may be delivered online through platforms such as YouTube or Zoom.
5	Urban Environmental Issues and Geospatial Information-Based Analysis		The course is planned to be conducted in person; however, depending on circumstances, it may be delivered online through platforms such as YouTube or Zoom.
6	Concepts of Smart Cities and the Role of Geospatial Information Technologies		The course is planned to be conducted in person; however, depending on circumstances, it may be delivered online through platforms such as YouTube or Zoom.
7	Exploration of Research Topics and Problem Definition in the Geospatial Information Field		The course is planned to be conducted in person; however, depending on circumstances, it may be delivered online through platforms such as YouTube or Zoom.
8	Midterm Examination: Presentation of Research Topic and Research Plan		The course is planned to be conducted in person; however, depending on circumstances, it may be delivered online through platforms such as YouTube or Zoom.
			The course is planned to be conducted in person; however,

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9	Selection and Development of Spatial Data Appropriate for the Research Objective		depending on circumstances, it may be delivered online through platforms such as YouTube or Zoom.
10	Geospatial Research Methods and Design of Deep Learning-Based Analytical Approaches		The course is planned to be conducted in person; however, depending on circumstances, it may be delivered online through platforms such as YouTube or Zoom.
11	Research Methods and Data Description Techniques		The course is planned to be conducted in person; however, depending on circumstances, it may be delivered online through platforms such as YouTube or Zoom.
12	Implementation of the Research Project and Analysis of Spatial Data		The course is planned to be conducted in person; however, depending on circumstances, it may be delivered online through platforms such as YouTube or Zoom.
13	Interpretation of Research Findings and Visualization of Research Processes		The course is planned to be conducted in person; however, depending on circumstances, it may be delivered online through platforms such as YouTube or Zoom.
14	Review and Peer Evaluation of Draft Research Papers		The course is planned to be conducted in person; however, depending on circumstances, it may be delivered online through platforms such as YouTube or Zoom.
15	Final Examination: Submission of the Final Research Paper and Presentation of Research Outcomes		The course is planned to be conducted in person; however, depending on circumstances, it may be delivered online through platforms such as YouTube or Zoom.
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4. 장애학생을 위한 학습 및 평가지원 사항

Learning Support:
Course materials will be provided. Students may be permitted to use note-taking assistants or transcription services and to record lectures. Extensions for assignment deadlines may be granted to students with visual impairments or difficulties using their hands. The use of assistive devices is also permitted.

Assessment Support:
Alternative assessment methods may be provided in place of listening tests in English-language courses for students with hearing impairments. Depending on the type and severity of the disability, examination time may be extended by 1.5 to 1.7 times the standard duration. Separate examination rooms and appropriately formatted examination papers may also be provided. The use of necessary assistive learning equipment may be permitted when required.

5. 수강에 특별히 참고하여야 할 사항

This course is designed for master's and doctoral students affiliated with the Phase 4 BK21 Regional University Consortium Education and Research Group, comprising Chungbuk National University, Daejeon University, Cheongju University, and Hanbat National University.
This is an advanced-level course covering spatial data processing and the application of artificial intelligence algorithms. Completion of an undergraduate-level Python programming course is recommended as a prerequisite.
The course will be delivered in a hybrid format, combining in-person classes in a designated classroom with simultaneous live online instruction via Zoom.