

Akashi College		Year	2021		Course Title	Disaster Prevention System II
Course Information						
Course Code	0036			Course Category	Specialized / Elective	
Class Format	Lecture			Credits	Academic Credit: 2	
Department	Architecture and Civil Engineering			Student Grade	Adv. 2nd	
Term	Second Semester			Classes per Week	2	
Textbook and/or Teaching Materials						
Instructor	SUMIO Hiroyuki					
Course Objectives						
(1) Understand and can explain the basic concepts of disaster prevention and reduction against natural disasters, etc., approaches to town planning with disaster prevention in mind, and methods for developing social infrastructure facilities. (F, H)						
(2) Understand and can explain the need and process of developing social infrastructure facilities that support towns, and the disaster prevention and reduction efforts in developing such facilities. (F, H)						
(3) Can think of the development of safe and secure towns and urban systems. (F)						
Rubric						
	Ideal Level		Standard Level		Unacceptable Level	
Achievement 1	Understand and can explain the approaches to town planning with disaster prevention in mind, and methods for developing social infrastructure facilities in concrete terms.		Understand and can explain the approaches to town planning with disaster prevention in mind, and methods for developing social infrastructure facilities.		Do not understand and cannot explain the approaches to town planning with disaster prevention in mind, and methods for developing social infrastructure facilities.	
Achievement 2	Can explain the disaster prevention and reduction efforts in concrete terms.		Can explain the disaster prevention and reduction efforts.		Cannot explain the disaster prevention and reduction efforts.	
Achievement 3	Can explain the development of safe and secure towns and urban systems in concrete terms.		Can explain the development of safe and secure towns and urban systems.		Cannot explain the development of safe and secure towns and urban systems.	
Assigned Department Objectives						
学習・教育目標 (E) 学習・教育目標 (F) 学習・教育目標 (H)						
Teaching Method						
Outline	This course will be taught by an instructor who was engaged in planning, construction, and management of social infrastructure facilities in Hyogo Prefecture for 33 years based on his experience. The lessons will explain the approaches to town planning with disaster prevention in mind to minimize the damage of natural disasters, etc. that hit cities and regions, and the development of social infrastructure facilities that support towns. (1) Explain comprehensively both hard and soft approaches regarding natural disasters, etc. and town planning to mitigate and prevent damage, and the development of social infrastructure facilities. (2) Explain practical approaches such as planning and development in accordance with the process of developing social infrastructure facilities and their characteristics.					
Style	Classes will be provided mainly in a lecture-style format. Liaison for this course at National Institute of Technology, Akashi College: Takao Miyoshi					
Notice	This course's content will amount to 90 hours of study in total. These hours include the learning time guaranteed in classes and the standard self-study time required for pre-study / review, and completing assignment reports. The course is open to students from any department. Classes will be taught as simply as possible. Read the materials that will be distributed in advance, and understand the content well. Taking advantage of a small class size, lessons will focus on dialogs. Students who miss 1/3 or more of classes will not be eligible for a passing grade.					
Characteristics of Class / Division in Learning						
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced
Course Plan						
			Theme	Goals		
2nd Semester	3rd Quarter	1st	Know the dangers and disasters of cities and regions (1) Know man-made and natural disasters. Learn the experiences of and lessons from earthquake disasters such as the Great Hanshin Earthquake and the Great East Japan Earthquake.	Can explain the experiences of and lessons from earthquake disasters.		
		2nd	Know the dangers and disasters of cities and regions (2) Learn the experiences of and lessons from natural disasters such as floods caused by heavy rain, which occur more frequently than earthquakes. In light of disasters in cities and regions, exchange views on disaster prevention and reduction.	Can explain the experiences of and lessons from natural disasters such as floods caused by heavy rains.		
		3rd	Learn about safe and secure town planning with disaster prevention, etc. in mind (1) Learn about physical plans for town planning (land use planning and space development) and the development of social infrastructure facilities. Exchange opinions on these hard measures.	Can explain the hard measures for safe and secure town planning with disaster prevention, etc. in mind.		

		4th	Learn about safe and secure town planning with disaster prevention, etc. in mind (2) Learn about soft measures such as information, public relations, and community development for strengthening human disaster prevention capabilities. Exchange opinions on these soft measures.	Can explain the soft measures for safe and secure town planning with disaster prevention, etc. in mind.
		5th	Design safe and secure cities and towns Study physical plans for new urban development cases on landfills in coastal areas, made land in urban suburban areas, and space development cases in established urban areas, and exchange opinions.	Can explain the design of safe and secure cities and towns.
		6th	Development of social infrastructure facilities that support safe and secure cities and towns (1) Learn about hard and soft measures against earthquakes and other disasters at water facilities, which are representative of lifeline facilities. Exchange opinions on these measures.	Can explain the development of social infrastructure facilities that support safe and secure cities and towns.
		7th	Development of social infrastructure facilities that support safe and secure cities and towns (2) Learn about hard and soft measures for flood disaster prevention and reduction at river facilities, which are representative of disaster prevention facilities. Exchange opinions on these measures.	Can explain the development of social infrastructure facilities that support safe and secure cities and towns.
		8th	The process of developing social infrastructure facilities Learn about the concept of social infrastructure facilities, operationalization and operating bodies, planning and decision-making, construction, and management. Touch on business profitability, cost-benefit ratio, and environmental assessment.	Can explain the process of developing social infrastructure facilities.
	4th Quarter	9th	River facilities (1) Learn and exchange opinions about practical approaches to river planning, development, and maintenance with disaster prevention and the environment in mind. Invite practitioners and experts as guest speakers as necessary.	Can explain river planning, development, and maintenance.
		10th	River facilities (2) Learn and exchange opinions about concepts of and approaches to general water control and practical approaches such as how to draw possible flood zones and create hazard maps. Invite practitioners and experts as guest speakers as necessary.	Can explain the concepts of and approaches to general water control.
		11th	Road facilities Learn and exchange opinions about practical approaches to road planning, development, and maintenance with disaster prevention and the environment in mind. Invite practitioners and experts as guest speakers as necessary.	Can explain the planning, development, and maintenance of road facilities.
		12th	Water facilities Maintenance is important for social infrastructure facilities to work. Learn and exchange opinions about practical approaches to asset management planning for water facilities that provide a sustainable supply of water.	Can explain water facility asset management.
		13th	Ports, fishing ports, and coastal facilities Learn and exchange opinions about practical approaches to port planning and development with measures against longshore drift and disaster prevention in fishing ports and coasts in mind. Invite practitioners and experts as guest speakers as necessary.	Can explain port and coastal facility construction and measures against tsunamis.
		14th	Residential land, Kansai International Airport (landfill) As the most familiar ground, learn about residential land safety, and exchange opinions. As a large-scale social infrastructure facility, introduce the construction process of Kansai International Airport.	Can explain residential land safety and the construction of made land.
		15th	For construction engineers who will lead society in the future Talk about career paths by future course and organization, and messages for underclassmen. Explain the assignment report details.	Can explain the role of construction engineers who will lead society in the future.
		16th	No final exam	

Evaluation Method and Weight (%)

	Examination	Efforts	Report	Behavior	Portfolio	Other	Total
Subtotal	0	50	50	0	0	0	100

Basic Proficiency	0	0	0	0	0	0	0
Specialized Proficiency	0	50	50	0	0	0	100
Cross Area Proficiency	0	0	0	0	0	0	0