Akashi College	Year	2022	Course Title	Building Construction and Process B

Course Information

Course Code	4518	Course Category	Specialized / Compulsory
Class Format	Lecture	Credits	School Credit: 1
Department	Architecture	Student Grade	5th
Term	Second Semester	Classes per Week	2
Textbook and/or Teaching Materials	初学者の建築講座「建築施工」(第3版)、市ヶ谷出版社、中澤明夫、角田誠共著、(「建築工事施工管理指針、上下巻」社団法人建築協会　編集・発行、「ベーシック建築材料」彰国社、野口貴文ほか共著)		
Instructor	NAKAGAWA Hajime,YAMAGUCHI Shuichi		

Course Objectives

(1) Learn about the materials characteristics, construction methods and quality control regarding the finishing of construction work.
(2) To acquire basic engineering knowledge of each work in Japanese construction production on mainly building finishing.
(3) To understand the concept of process management by the network approach, and be able to create a simple network.

Rubric

	Excellent	Good	Insufficient
Achievement 1	The student can do a proper calculation of process chart (network, bar chart).	The student can do a calculation of process chart (network, bar chart).	The student can not do a calculation of process chart (network, bar chart).
Achievement 2	The student can fully understand the contents of waterproofing and roof construction can.	The student can understand the contents of waterproofing and roof construction can.	The student can not understand the contents of waterproofing and roof construction can.
Achievement 3	The student can sufficiently understand the contents of the interior, exterior work, and equipment work.	The student can understand the contents of the interior, exterior work, and equipment work.	The student can not understand the contents of the interior, exterior work, and equipment work.
Achievement 4	The student can sufficiently understand the contents of Hi-RC construction.	The student can understand the contents of Hi-RC construction.	The student can not understand the contents of Hi-RC construction.

Assigned Department Objectives

Teaching Method

Outline	In this course, the student acquires knowledge of the present situation of the Japanese construction industry, construction production, the temporary construction methods and construction works related to architectural structures, and the management methods are focusing on quality. To understand the network method for production control. The instructors (Taniguchi and Nakagawa) have experience in design supervision at construction sites of famous companies, and through the lectures and exercises transmit to the students their knowledge.
Style	Lectures and fieldwork at a construction site tours to deepen understanding. Yamaguchi is in charge of 12 weeks and exercises are conducted by Nakagawa, 3 weeks.
Notice	When architecture is actually built that the goal is achieved. Building production is a compilation of the knowledge acquired in the previews academic years: structures, materials, and design. This subject is a required course but, in principle, no supplementary instruction will be provided for absences. Students attendance is required, and only a maximum of 5 absences is excused.

Characteristics of Class / Division in Learning

☐ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☑ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	Network process (1) Progress management and the difference between a bar chart and network progresses. Network progress schedule, calculation of duration and C.P.M (critical pass method).	To understand and execute network progress schedule, calculation of duration and C.P.M (critical pass method).
		2nd	Network process (2) By using a real example of network progress schedule of buildings explains the cycle progress of the building work.	To understand the network progress schedule of buildings explains the cycle progress of the building work.
		3rd	Roofing and waterproofing works (1) Outline and types of roofing and waterproofing work.	To understand the types of roofing and waterproofing work.
		4th	Waterproofing work (2) Different kinds of roof asphalt waterproofing, surface preparation, curing and construction management essential points.	To understand the different kinds of roof asphalt waterproofing, surface preparation, curing and construction management essential points.
		5th	Finishing and Plastering work How to think about general finishing work and construction management important points, types of plastering work and construction management essential points.	To understand general finishing work and construction management important points, types of plastering work and construction management essential points.
		6th	Hi-RC construction Construction from the factory production of the precast structural elements of the super-high-rise reinforced concrete (Hi-RC) construction.	To understand construction from the factory production of the precast structural elements of the super-high-rise reinforced concrete (Hi-RC) construction.

		7th	Exercises (1) To solve the exercises about the contents learned from weeks 1 to 6, and a level 2 architect license test (subject IV) problems.	To review the contents learned from weeks 1 to 6.
		8th	Mid-term Exam	
	4th Quarter	9th	Tile and Masonry works Tile work: material characteristics, allocation, tiling system, and prefabricated tile system. Masonry work: wet and dry system, precast concrete (PCa) prefabricated system.	To understand the characteristics of tile and masonry works.
		10th	Fittings, Glazing and Metalworks Wood and metal fittings. Different types and characteristics of glass. Outline of Metalwork.	To understand the characteristics of Wood and metal fittings, the different types of glass, and Metalwork.
		11th	Interior finishing work Wall, floor, ceiling surface and interior finishing materials. Sick-buildings syndrome and construction management essential points.	To understand the characteristics of walls, floor, ceiling surface and interior finishing materials, sick-building syndrome, and construction management essential points.
		12th	Painting work Outline of painting work inside and outside of the building. Different kinds of painting, how to use them and construction management essential points.	To understand the characteristics of painting work inside and outside of the building, the different kinds of painting, how to use them, and construction management essential points.
		13th	Building services and equipment work Outline of building services and equipment work. Different kinds and the relationship between building services and equipment work.	To understand the characteristics of building services and equipment work, the different kinds and the relationship between building services, and equipment work.
		14th	Exercises (2) Students solve the exercises that learned from week 9 to 13 and level 2 architect license test (subject IV) problems.	To review the content learned from week 9 to 13.
		15th	Exercises (3) Students solve the exercises that learned and level 2 architect license test (subject IV) problems.	To review the content learned.
		16th	End-term Exam	

Evaluation Method and Weight (%)

	Examination	Assignments	Total
Subtotal	70	30	100
Basic Proficiency	0	0	0
Specialized Proficiency	70	30	100
Cross Area Proficiency	0	0	0