

Akashi College		Year	2022	Course Title	Introduction to building Construction
Course Information					
Course Code	4117		Course Category	Specialized / Compulsory	
Class Format	講義・演習		Credits	Academic Credit: 2	
Department	Architecture		Student Grade	1st	
Term	First Semester		Classes per Week	2	
Textbook and/or Teaching Materials	内田祥哉、他:「建築構法第五版」市ヶ谷出版日本建築学会編著:「構造用教材」丸善				
Instructor	HIRAISHI Toshihiro,SHOJO Naoya,KAKUNO Yoshinori,MOTOZUKA Tomoki				
Course Objectives					
(1)Understand the meaning of learning about the building structure (2)Understand the types of building structures and their respective characteristics (3)To be able to use architecture technical terminology, such as the name of the structural members: Column / Beam /Floor; and roof typology terms (4)Understand the relation between environment and architecture (5)Understand disaster preparation and the changes it causes on building technology.					
Rubric					
	Ideal Level		Standard Level		Unacceptable Level
Achievement 1	The student well understands the meaning of learning about building structure.		The student understands the meaning of learning about building structure.		The student doesn't understand the meaning of learning about building structure.
Achievement 2	The student well understands the different types of structure and its characteristics.		The student understands the different types of structure and its characteristics.		The student doesn't understand the different types of structure and its characteristics.
Achievement 3	The student can well use basic terms such as the name of the elements, types of structure, etc.		The student can use basic terms such as the name of the elements, types of structure, etc.		The student can't use basic terms such as the name of the elements, types of structure, etc.
Achievement 4	The student well understands the relationship between environment and architecture		The student understands the relationship between environment and architecture		The student doesn't understand the relationship between environment and architecture
Achievement 5	The student well understands disaster preparation and its relationship with building technology		The student understands disaster preparation and its relationship with building technology		The student doesn't understand disaster preparation and its relationship with building technology
Assigned Department Objectives					
Teaching Method					
Outline	The students will understand how buildings are built and learn the basic architecture technical. The course will also raise their interest in matters related to architecture. Through the assignments, the students will deepen their understanding of architecture practical knowledge and techniques.				
Style	Weeks 1 to 8, instructors: Shojo, Kakuno: Explanation of technical jargon in lecture format classes. Occasional group work and practical exercises for the students to empirically acquire knowledge about architectural structure. The course focuses on the architectural structure and gives the student opportunities to learn about the relationship between design and building structure, by showing examples of several structurally distinctive buildings. The students will be asked to do assignments related to the lectures. Weeks 9 to16, instructors: Hiraishi, Motozuka: As an introduction to specialized education, the students will analyze the buildings existent on campus, explore and think about the defects and possible improvements of the college's building, and organize this information in the format of personal and/or group assignments. The students will learn how to dialogue and share information. From the 13th week, so that the students understand the fundamental concepts about architecture, the students will learn about the relationship between building and the environment, and the relation between architecture and the natural disasters in lecture-style classes.				
Notice	This course requires 90 hours of self-study time, preparation for the lessons, review, assignment, etc. in addition to the classes. The self-study time ensures that the students understand the fundamental technical terms related to architecture. Also, self-study time is necessary for the students to acquire the ability to identify information that can be routinely obtained through observation of architecture and urban environment, and for them to compile and publish their ideas properly. Students attendance is required, and only a maximum of 5 absences will be excused.				
Characteristics of Class / Division in Learning					
<input checked="" type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input checked="" type="checkbox"/> Applicable to Remote Class <input type="checkbox"/> Instructor Professionally Experienced	
Course Plan					
			Theme	Goals	
1st Semester	1st Quarter	1st	How to prepare to learn about architecture. Why do we study building structure? About climate and architecture	To understand the significance of learning about building structures. To be able to explain the relationship between climate and architecture.	
		2nd	About the composition of Building Structure Fundamental knowledge about steel structure (S)	To be able to explain the formation of building structures, to classify different building structures, to describe the characteristics and types of the steel structure.	
		3rd	Fundamental knowledge about reinforced concrete structure (RC)	To be able to describe the characteristics and structural form of reinforced concrete structures.	

		4th	Fundamental knowledge about Steel Reinforced Concrete Structure (SRC), Concrete Filled Steel Pipe Structure (CFT S), Masonry (M)	To be able to explain the steel frame reinforced concrete structures, concrete filled steel pipe structures, and masonry characteristics and its structural forms.
		5th	Fundamental knowledge about wooden (W), its characteristics · structural form · basic bonding methods · elements name and terminology	To be able to explain the characteristics and forms of wooden structures, and basic bonding methods, and the name of each element.
		6th	Group work assignment about building structures	To be able to discuss and explain in teamwork how to construct structural elements.
		7th	About buildings and houses whose structural technology has been a prominent element of the design, and architectural structure designers	To be able to name architects and buildings that use outstanding architectural structure technology.
		8th	Mid-term Exam	To measure students achievement of the contents studied up to the 7th week.
	2nd Quarter	9th	Work related to architecture	To be able to explain the diversity of work related to architecture.
		10th	Analyze the buildings on campus. Search for places in the buildings that you think you are "funny or weird" and explain it.	To be able to record personal impressions about the building analyzed.
		11th	Analyze the buildings on campus. Search for places in the buildings that you think you are "funny or weird" and explain it.	To be able to explain personal impressions and ideas to the team.
		12th	Analyze the buildings on campus. Search for places in the buildings that you think you are "funny or weird" and explain it.	To be able to explain to the group the student's analysis of the building.
		13th	Environment and architecture	To be able to explain about environment and architecture.
		14th	Environment and architecture	To be able to explain about environment and architecture.
		15th	Natural Disaster and architecture	To be able to explain how to prepare for natural disaster and the relation with building technology.
		16th	End-term Exam	To measure students achievement of the contents studied.

Evaluation Method and Weight (%)

	Exams	Assignments	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	40	60	0	0	0	0	100
Basic Proficiency	0	0	0	0	0	0	0
Specialized Proficiency	40	60	0	0	0	0	100
Cross Area Proficiency	0	0	0	0	0	0	0