

<p style="text-align: center;">TISHK INTERNATIONAL UNIVERSITY FACULTY OF ENGINEERING Department of ARCHITECTURE, 2021-2022 Spring Course Information for ARCH 222 BUILDING CONSTRUCTION TECHNOLOGY II</p>					
Course Name:		BUILDING CONSTRUCTION TECHNOLOGY II			
Code ARCH 222	Regular Semester 4	Theoretical 2	Practical 2	Credits 3	ECTS 6
Name of Lecturer(s)- Academic Title:		Carol Kharbosh - MSc			
Teaching Assistant:		Dania Idrees & Fatimah Omar			
Course Language:		English			
Course Type:		Main			
Office Hours		2 hrs			
Contact Email:		carol.kharbosh@tiu.edu.iq Tel:+9647504148626			
Teacher's academic profile:		Assistant Lecturer at the Department of Architectural Engineering BSc in Architectural Engineering - Salahaddin University Erbil (2017) MSc in Architecture - Specializing in Architectural and Interior Design - Budapest University of Technology and Economics (2020)			
Course Objectives:		Building Construction is an introduction to the techniques, materials, and structural systems used in the construction process of any Building. Building Construction classes will focus on the main components of the building and their connections. The classes of Building Construction course have two parts, the first part is Theoretical class where all the required information for the practical part will be provided, and the second part is Practical class where the students will be asked to design and draw in the Drawing studios what they have learned during the Theoretical class. Topics of this course include Components, Materials and Techniques used in Building Construction process which include (Masonry walls (Brick & Block), Floors and Slabs (Concrete and Reinforced Concrete), Opening (Doors and Windows), Finishing Materials, and Connection Techniques). During the Course the students will be asked to visit material stores and Construction sites to have a clear idea about the available materials and techniques in the Local Market.			
Course Description (Course overview):		A continuation of ARC 212 emphasizing more on materials and methods of building construction asserting more on wood, concrete, unit masonry, and light steel construction. Laboratory projects may include working drawings interpretation, sketching construction details, or field trips to construction sites and fabricant plants. Designed primarily as the initial materials and methods course for architectural transfer students.			
COURSE CONTENT					
Week	Hour	Date	Topic		
1	1	6-10/2/2022	Introduction		
2	1	13-17/2/2022	Arches		
3	1	20-24/2/2022	Vaults & Domes		
4	1	27/2-3/3/2022	Skeleton Frame		
5	1	6-10/3/2022	Slabs		
6	1	27-31/3/2022	Portal Frame		
7	1	3-7/4/2022	Truss		
8	1	10-14/4/2022	Midterm Exam		
9	1	17-21/4/2022	Drainage system		
10	1	24-28/4/2022	Foundation system		
11	1	8-12/5/2022	Connection Details 1		

12	1	15-19/5/2022	Connection Details 2
13	1	22-26/5/2022	DPC
14	1	29/5-2/6/2022	Cladding System
15	1	5-9/6/2022	Final Exam
16	1	12-16/6/2022	Final Exam
COURSE/STUDENT LEARNING OUTCOMES			
1	Understanding the engineering behavior of different types of building materials.		
2	Professionally prepare Construction Drawings.		
3	Have an idea about the available materials in the local construction market.		
4	Building construction classes will help students master the control of their realization process.		
COURSE'S CONTRIBUTION TO PROGRAM OUTCOMES (Blank : no contribution, I: Introduction, P: Profecient, A: Advanced)			
Program Learning Outcomes			Cont.
1	Apply problem-solving skills in the architectural context.		P
2	Demonstrate knowledge of architectural history, theory, and practice in solving architectural design problems.		I
3	Utilize freehand drawing, architectural graphics, and model building skills in solving architectural design problems.		P
4	Utilize the computer as a tool in a wide range of documentation and presentation applications, using CAD, 3-D visualization and rendering, electronic image composition and editing software.		I
5	Apply knowledge of mathematics, science, engineering and technology in solving architectural design problems.		P
6	Develop designs that meet desired needs within realistic economic, social, political, and cultural constraints.		I
7	Develop designs that fulfill the environmental, health & safety, and sustainability considerations.		P
8	Demonstrate team-working skills and show the ability to work collaboratively with various design teams involved in the building industry, and collaborate and negotiate with clients.		I
9	Demonstrate the necessary knowledge for applying laws, codes, regulations, standards and practices in relation to building construction systems.		A
10	Show their ideas through high quality drawing skills and artistic sense.		P
11	Utilize their skills to address professional and ethical responsibilities, diversity and commitment to the work field.		P
12	Suggest solutions and techniques for engaging in life-long learning and knowledge about contemporary issues.		P
Prerequisites (Course Reading List and References):		Francis D.K.Ching-Building construction illustrated-5th Edition(2019) Francis D.K.Ching-Building Structures Illustrated: Patterns, Systems,and Design(2013) B.C.Punmia- Building construction (2005) Edward Allen & Joseph Iano-The Architect's Studio Companion	
Student's obligation (Special Requirements):		The attendance of students in the lectures will have extra credit. He / she is required to continuously follow the lectures, submits Classwork, Homework and Assignments.	
Weekly Laboratory/Practice Plan:		Week	Hour
		Date	Topics
		1	3
		6-10/2/2022	Introduction
		2	3
		13-17/2/2022	Arches
		3	3
		20-24/2/2022	Vaults & Domes
		4	3
		27/2-3/3/2022	Skeleton Frame
		5	3
		6-10/3/2022	Slabs
		6	3
		27-31/3/2022	Portal Frame
		7	3
		3-7/4/2022	Truss

	8	3	10-14/4/2022	Midterm Exam	
	9	3	17-21/4/2022	Drainage System	
	10	3	24-28/4/2022	Foundation System	
	11	3	8-12/5/2022	Connection Details 1	
	12	3	15-19/5/2022	Connection Details 2	
	13	3	22-26/5/2022	DPC	
	14	3	29/5-2/6/2022	Cladding System	
	15	3	5-9/6/2022	Final Exam	
	16	3	12-16/6/2022	Final Exam	
Course Book/Textbook:	Francis D. K. Ching - Building construction illustrated - 5th Edition - John Wiley & Sons (2019). Francis D. K. Ching - Building Structures Illustrated: Patterns, Systems, and Design- Wiley (2013). B.C. Punmia; Ashok Kumar Jain; Arun Kumar Jain, Firewall Media - Building construction (2005). Edward Allen & Joseph Iano - The Architect's Studio Companion_ Rules of Thumb for Preliminary Design Wiley (2017). Edward Allen, Joseph Iano - Fundamentals Of Building Construction_ Materials And Methods, 7th Edition John Wiley & Sons (2019).				
Other Course Materials/References:	https://www.wicon.com/en/int/				
Teaching Methods (Forms of Teaching):	Lectures, Practical sessions, Project, , ,				
COURSE EVALUATION CRITERIA					
Method			Quantity	Percentage (%)	
Homework			8	2	
Project			1	15	
Midterm Exam			1	15	
Classwork(s)			7	2	
Final Exam			1	40	
Total				100	
Examinations: Short Answers, Drawing, Calculation,					
Extra Notes:					
ECTS (ALLOCATED BASED ON STUDENT) WORKLOAD					
Activities			Quantity	Workload Hours for 1 quantity*	Total Workload
Theoretical Hours			16	2	32
Practical Hours			16	2	16
Final Exam			1	24	24
Homework			8	3	24
Project			1	30	30
Midterm Exam			1	12	12
Classwork(s)			7	3	21
Total Workload					159
ECTS Credit (Total workload/25)					6.36

Peer review

Signature:
Name:
Lecturer

Signature:
Name:
Head of Department

Signature:
Name:
Dean