Module (Course Syllabus) Catalogue

2022-2023

College/ Institute	**Erbil Technology College**
Department	**Construction & materials technology**
Module Name	**Advanced material of construction**
Module Code	
Academic profile	- 1978 awarded his B.Sc in University of Mosul - Up to1989 worked as a civil engineer in supervising, execution of Projects. - Participated in various committees in final measurement and acceptance of projects. . - In 1985 awarded MSc in civil and structural ingineering in College of Engineering- Civil Engineering Department, University of Manchester.UK. -In 2019 awarded PhD in civil engineering/Turkey -1990 up-to-date: - Taught many subjects in all class years of Deploma and BSc students in Erbil And Shaklawa Technical colleages,. - .Taught many subjects in Cihan University,college of engineerin - - Published several papers - Presented several seminars - Participated in many Workshops), inside and outside the Region. -Participated many committees in department, college and university. -Chaired several committees (in the college and department)
Semester	**4**
Qualification	**PhD geotechnical engineering**

Scientific Title	**Ass. Prof.**	
ECTS (Credits)	**5**	
Module type	**Prerequisite** ☐ **Core** ▪ **Assist.** ☐	
Weekly hours	**4**	
Weekly hours (Theory)	**(2)hr Class**	
Weekly hours (Practical)	**(2)hr Class**	
Number of Weeks	**13**	
Lecturer	**Ferzand kamal ahmed medhat**	
E-Mail & Mobile NO.	Ferzand.medhat@epu.edu.iq	
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E-Mail & Mobile NO.	ferzand.medhat@epu.edu.iq	
Websites		

Course Book

Course Description	**General concepts of this subject is to explain in detail the various construction materials used in civil engineering projects, its specifications are also reviewed** **.**
Course objectives	**11. Course objective:** **The objective of this subject is to guide students advanced construction materials, and directing construction operations in a manner that will attain the best possible results. It will assist the student in more fully understanding the total construction process, from inception of the idea through start-up.**
Student's obligation	● **Attendance : :Students should make every effort to maintain good attendance in their classes.** ● **Participation: Each student should participate in the classroom. Discussing relevant subjects at appropriate times can spark new conversations and produce valuable debates.** ● **Questions: Asking questions about unclear material is an important part of the classroom experience. It is not uncommon for students to have similar difficulties, so speaking up will help everyone understand the discusse information. Teachers can also benefit from a student's questions.** ● **Respect: Students need to respect the ideas and opinions of their classmates in and outside of the classroom They should not ridicule someone for having a different viewpoint, and they should be willing to listen to alternative perspectives.** ● **Preparation: Instructors expect students to study outside of the classroom. Students should complete assignments**

	(submitting Homework and reports), • performing home works,, quizzes and exams in prespecified time. Conducting a field trips to the factories.
Required Learning Materials	• presenting lecturers by using white board, • Demonstration method implies presenting information with the help of visual aids. - data show - video • visiting project site as practical aid of teaching and applications, • Written method implies the following forms of activity: copying, taking notes, composing theses, writing essay etc. • E-learning implies using the Internet and multi-media means in the process of teaching. • Cooperative teaching is a teaching strategy in the process of which each member of a group not only has to learn the subject himself, but also to help his fellow-student to learn it better. • submitting reports and/or homework, • Quizzes and exams • Site visits to the projects. Conducting seminers in various civil engineering topics.
Specific learning outcome:	1- The student will be conversant with the properties of construction materials and their manufacture methods and the new alternative materials and their properties 2-The student will be able to deal with deferent tests for the construction materials to know how much they are compatible with the specifications and to decide the ability of using it in construction projects 3- The student will be able to write test reports and specification reports ,also how he is deal with the local and foreign standard specifications for construction materials
Assessment scheme	The method to evaluate the student understanding and reacts are to carry out two main examines, five quizzes, twohome works, reports,class tutorials and presentations. - Mid term exam 24% - Quizzes ,reports, seminers attendance and homework's36% - Final exam 40% ---------- Total 100%
Course References:	1-ASTMC856-14,standard practice for petrographic Examination of hardened concrete ASTO,2014, 2-BS 476-3;2004, Fire tests on building materials and structures.Classification and method of test for external fire exposure to roofs, 2004. 3-The concrete society, Assessment and repair of fire damaged structures technical report 33,1990.

Course topics	Week	Learning Outcome
Refractory linings /quiz1	1	
Glass / quiz2	2	
Light weight concrete/application s/quiz3	3	
Fiber reinforced concrete/applications	4,5	
Med term exam		
Scientific visit to the factories	6	
Ferrocement/applications/quiz4	7	
Insulations materials/kinds of thermal insulations	8	
Seminers and video presentations	9	
Asbestos/quiz5	10	
paints	11	
Asientific visit/debates	12	
Final exam	13	

Examinations

Q1; Explain the Refractories.

Q2; What are the major applications of Ferrocement.

Q3; Mention all kinds of Thermal insulation.

Answers

Q1; description of any material that resists heat,refractory concrete can with stand temperature from 300c to 1300c. they fail usually because they begin to shrink at some 80c below softening point of the aggregate.

Q2; are,

***FC structures are thin and light,therefore a cosederable reduction in the self weight of structure and hence in foundation costcan be achieved.**

*** FC is suitable for manufacturing the precast units.**

*** the construction technique is simple and does not require highly skilled labour**

Q3;loose fill,Blankets,Batts,Structural insulation board,Slab or block inaulation.

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