1. Course Name:	
Materials Technology	
2. Course Code:	
CIV12206	
3. Semester / Year:	
1st /first	
4. Description Preparation Date:	
9-12-2025	
5. Available Attendance Forms:	
Weekly (Theory: 2 hours, Lab. 2 hours)	
6. Number of Credit Hours (Total) / Number of Units (Total)	
Theory: 45 Hours Tutorial: 15 hours Total: 60 hours Total Units: 5	
7. Course administrator's name (mention all, if more than one name)	
Name: Dr. Maloof mahmood **Email: maloof.mahmood@muc.edu.iq**	
8. Course Objectives	
Course Objectives	**1.** Providing the student with the necessary skills and mechanisms to deal with the latest developments in scientific and technical progress in their field of specialization. **2.** Special care for outstanding students and enabling them to put and forward their ideas. **3.** Providing the student with high skill and the ability to solve problems and teamwork. **4.** Instilling the spirit of diligence and perseverance and encouraging them to create and innovate.
9. Teaching and Learning Strategies	
Strategy	**1.** Introduce students to materials technology. **2.** Self-regulated learning (i.e., planning, monitoring and evaluating one's own learning process in the classwork / Class team wo. **3.** Practice testing (short question answers and exams). **4.** Self-explanation (i.e., explaining to oneself how new information is related to old information or explain steps taken when solving a problem or a task).

1. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	Learning about the properties of materials	Properties of Materials, Mechanical properties, Thermal Strains and stresses	Theoretical	Homework
2	5	Understanding of the concepts of strain.	Tensile Stress –Strain curve, Elasticity and stiffness, Yield strength	Theoretical	Homework
3	5	Learning about ductility of materials and other properties	Ductility and Brittleness, Toughness, Creep, Fatigue.	Theoretical	Report
4	5	Understanding the classification of raw materials	Bricks, Classification of brick according to constituent raw materials, Raw Materials,	Theoretical	Quiz
5	5	Learning about harmful materials in brick.	Harmful Ingredients in clay brick Manufacture of brick	Theoretical	Homework
6	5	Learning about mix proportion of brick.	Sand - Lime brick, Raw materials, mix proportion,	Theoretical	Homework
7	5	Learning about properties of concrete brick	Properties of sand-lime brick, Concrete brick, Uses, Properties of concrete brick	Theoretical	Exam
8	5	Learning about bonding some materials	Bonding Materials, Gypsum plaster, Manufacture of gypsum plaster, Raw materials (Gypsum rocks),	Theoretical	Homework
9	5	Learning about gypsum products.	Gypsum products Plaster of Paris, Uses, Chemical requirements in according with Iraqi standard.	Theoretical	Quiz

10	5	Further study of gypsum products..	Gypsum products Technical plaster, Uses, Chemical requirements, Physical requirements.	Theoretical	Exam
11	5	Learning about lime properties.	Lime, Definition and classification, Quick lime, Hydrate lime, Manufacturing of lime,	Theoretical	Report
12	5	Further information about lime.	Uses of quick lime, Properties of quick lime, Hydrate lime, Process of manufacture, Uses, Properties.	Theoretical	Quiz
13	5	Learning about classification of some materials.	Metals, Classification of metals Classification of metals, Ferrous metals, Cast Iron,	Theoretical	Homework
14	5	Learning about steel composition.	Steel, Composition, Low carbon steel (Mild steel), Properties, Uses, High carbon steel, Properties.	Theoretical	Quiz
15	5	Preparatory	Preparatory week before the final exam	Theoretical	

2. Course Evaluation

The grade distribution is as follows:
Assessment: Formative 40 marks, Mid-term exam 10 marks
Final exam: Theory 50 marks.

3. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Iraqi Standard Specifications
Main references (sources)	British specifications
Recommended books and references (scientific journals, reports…)	

Electronic References, Websites	

Course Description Form

(Materials Technology)