Course Specification
(Bachelor)

Course Title:	Safety in Construction Projects
Course Code:	CE 4404
Program:	Bachelor of Science in Civil Engineering
Department:	Civil Engineering Department
College:	College of Engineering and Architecture
Institution:	Umm Al Qura University
Version:	1
Last Revision Date:	31 January 2025

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A. General information about the course:

1. Course Identification

1. Credit hours: (3)					
2. Course type					
A.	☐University	☐College	☒ Department	☐Track	Others
B.	☐Required		☒ Elective		
3. Level/year at which this course is offered: (9, 10)					
4. Course General Description:					
This course covers fundamental principles of occupational safety and health in construction projects. It focuses on hazard identification, risk assessment, accident prevention, safety regulations, and best practices for ensuring safe construction sites.					
5. Pre-requirements for this course (if any)**:**					
Department Approval					
6. Co-requisites for this course (if any)**:**					
Non					
7. Course Main Objective(s):					
◦ Provide a comprehensive understanding of safety hazards and risks in construction projects. ◦ Develop the ability to apply safety regulations and standards effectively. ◦ Equip students with the knowledge to implement accident prevention strategies. ◦ Promote a culture of safety, ethics, and compliance in the construction industry.					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	45	100%
2	E-learning		
3	Hybrid • Traditional classroom • E-learning		
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	45
2.	**Laboratory/Studio**	
3.	**Field**	
4.	**Tutorial**	
5.	**Others (specify)**	
Total		45

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	Identify key safety hazards in construction projects.	K1, K2	Lectures, Case Studies	Written Exams, Quizzes
1.2	Explain occupational safety laws and regulations.	K2	Lectures, Practical Demonstrations	Assignments, Reports
2.0	**Skills**			
2.1	Apply risk assessment and hazard control techniques.	S1, S2	Group Projects, Lab Work	Project Reports, Presentations
2.2	Implement accident prevention measures in construction sites.	S3	Problem-Based Learning	Case Study Analysis, Reports
3.0	**Values, autonomy, and responsibility**			
3.1	Demonstrate ethical and professional responsibilities in safety management.	V1, V2	Interactive Discussions, Field Visits	Participation, Reports

C. Course Content

No	List of Topics	Contact Hours
1.	Introduction to Construction Safety	3
2.	Occupational Safety and Health Regulations	3
3	Hazard Identification and Risk Assessment	3
4	Safety Program Implementation	3
5	Personal Protective Equipment (PPE)	3
6	Fall Protection and Scaffolding Safety	3
7	Electrical Safety in Construction	3
8	Fire Prevention and Control Measures	3
9	Equipment and Machinery Safety	3
10	Emergency Preparedness and Response	3
11	Health Hazards in Construction	3
12	Safety Culture and Ethical Responsibilities	3
13	Case Studies in Construction Safety	3
14	Course Review and Final Assessment (1)	3
15	Course Review and Final Assessment (2)	3
Total		**45**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Written Exam 1	Week 5	10%
2.	Group Project	Week 8	15%
3.	Case Study Report	Week 12	15%
4.	Final Exam	Week 16	50%
5.	Written Exam 1	Week 5	10%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	▪ Goetsch, D. L. (8th Edition). Occupational Safety and Health for Technologists, Engineers, and Managers Pearson.
Supportive References	Hinze, J. (Latest Edition). *Construction Safety.* Prentice Hall.
Electronic Materials	Online resources, OSHA databases, safety training videos
Other Learning Materials	Instructor-prepared notes, case study documents

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Equipped with multimedia and projection systems. Safety training and simulation lab.
Technology equipment (projector, smart board, software)	Computers with safety analysis software, smart boards
Other equipment (depending on the nature of the specialty)	PPE samples, fire safety equipment

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Faculty, Students	Surveys, Peer Review
Effectiveness of Students assessment	Faculty	Exam Reviews, Rubric Analysis
Quality of learning resources	Faculty, Students	Feedback Forms, Resource Evaluation
The extent to which CLOs have been achieved	Program Leaders	Performance Reports
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	**CIVIL ENGINEERING COUNCIL**
REFERENCE NO.	**THE FIFTEENTH SESSION OF THE ACADEMIC YEAR 1446**
DATE	**30 APRIL 2025**

