

<p>Kingdom of Saudi Arabia Ministry of Higher Education Qassim University College of Engineering</p>		<p>المملكة العربية السعودية وزارة التعليم العالي جامعة القصيم كلية الهندسة</p>
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CE 690 Selected Topics in Structural Engineering

College: College of Engineering (Qassim University)

Department: Department of Civil Engineering

First: Course Definition

1- Course Code: CE 690

2- Units: 3

3 – Semester:

4 -Prerequisite : Depends on the selected topic in Structural Engineering

5- Co-requisite: None

6- Location (if not on main Campus):

Second: Course Objectives

This course will be prepared to fit the students’ needs. Therefore, course objectives shall depend on the selected topics by the instructor. In general the following objectives may be set:
 To enhance students’ experience in specific Structural Engineering area.
 To keep up with the advancements in specific Structural Engineering research area which might be essential to students’ research work
 To enhance students’ capabilities in independent research

Third: Course Specifications

1- Topics to be covered		
Subject	No of Weeks	Units
Depends on the selected topics		

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2- Course components (Total hrs in the Semester): 56

Lecture	Exercise/lab	Other
Depends on the selected topics		

3- Intended Learning Outcomes of the Course (ILO's):

a. Knowledge

i) Description of the knowledge to be acquired:

Depends on the selected topics

ii) Teaching strategies to be used to develop that knowledge:

Class lectures
Term projects
Students' presentations
Group discussion
Seminars
Instructor-student face-to-face interaction

iii) Methods of assessment of knowledge acquired:

Examinations
Quizzes
Homework assignments
Term projects
Written reports
Oral Examinations and presentations

b- Cognitive (Intellectual) Skills

i) Description of the skills to be developed in this domain

Literature review and research
Problem analysis and modeling
Utilization of computer applications in finite element analysis and in the design of concrete and steel structures

ii) Teaching strategies to be used to develop these cognitive skills

Class lectures

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Term projects
Students' presentations
Group discussion
Seminars
Case studies analysis
Instructor-student face-to-face interaction

iii) Methods of assessment of students' cognitive skills:
Term projects
Written reports
Students' seminars and presentations

c. Interpersonal Skills and Responsibility:

i) Description of the interpersonal skills and capacity to carry responsibility to be developed
Decision making based on engineering analysis, modeling and design
Communication skills
Team work

ii) Teaching strategies to be used to develop these skills:
Class lectures
Term projects
Students' presentations
Group discussion
Seminars
Case studies analysis
Instructor-student face-to-face interaction

iii) Methods of assessment of students' interpersonal skills and capacity to carry responsibility
Quizzes and Examinations
Homework assignments
Term projects
Written reports
Oral Examinations, seminars and presentations

d. Communication, Information Technology and Numerical Skills

i) Description of the skills to be developed in this domain
Literature review and research
Problem analysis and modeling

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Utilization of computer applications in finite element analysis and in the design of concrete and steel structures

ii) Teaching strategies to be used to develop these skills:
Class lectures and term projects
Students' presentations
Group discussion
Seminars
Case studies analysis
Instructor-student face-to-face interaction

iii) Methods of assessment of students numerical and communication skills:
- Term project.
- Written reports.
- Students' seminars and presentations.

e. Psychomotor (if applicable) & Other Non-cognitive Skills:

i) Description of the psychomotor or other skills to be developed and the level of performance required
NA

ii) Teaching strategies to be used to develop these skills-
NA

iii) Methods of assessment of student's psychomotor skills
NA

4- Student Assessment Schedule:

Serial	Assessment tool (test, group project, examination etc.)	Week due	Weight
	Depends on the instructor		

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5- Student Support:

Providing electronic library of textbooks and scientific periodicals
Providing the necessary computer applications for the course

6- Learning Resources:

i) Essential Books (References)
Depends on the selected topics

ii) Course Notes
NA

iii) Recommended Books:
Depends on the selected topics

iv) Electronic Books & Web Sites:
Scientific journals and forums
Instructor's instruction

v) Periodicals:
ASCE scientific journals
British Structural Engineering journal
Canadian Journal of Structural Engineering

7- Course Evaluation and Improvement Processes:

i) Strategies for Obtaining Student Feedback on Effectiveness of Teaching
Students' survey questioners
Students' evaluation of course and instructor

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ii) Other Strategies for Evaluation of Teaching by the Instructor or by the Department:

Public faculty seminars
Assessment by external evaluators of student's achievements
Instructor (Course) Report

iii) Processes for Improvement of Teaching:

Assessment of students' work by external examiners
Analysis of students' evaluation of course and instructor
Seminars by industry professionals

iv) Process for verifying standards of student achievement:

Check marking by an independent faculty member of a sample of student work
Periodic exchange and re-marking of a sample of assignments/exams with a external evaluator

v) Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.

- Assessment and evaluation of the level of achieving the course outcomes through a continuous improvement process (part of a quality assurance system established by the university),
- Consequently, actions are to be taken to improve the course delivery when necessary.
- Review of the course objectives, outcomes and curriculum every 2 years.