



# Course Specifications

Muharram 1437 H

Institution:	Majmaah University
Academic Department :	Civil and Environmental Engineering
Programme :	Civil Engineering (Structural Track)
Course :	Reinforced Concrete Design 2 (CE 318)
Course Coordinator :	Dr. Zafar Iqbal Baig
Programme Coordinator :	Dr. Sameh S Ahmed
Course Specification Approved Date :	10/05 / 1437 H



## A. Course Identification and General Information

1 - Course title :	Reinforced Concrete Design 2	Course Code:	CE 318
2 - Credit hours :	3		
3 - Program(s) in which the course is offered:	Civil Engg. (Structural Track)		
4 - Course Language :	English		
5 - Name of faculty member responsible for the course:	Dr. Zafar Iqbal Baig z.baig@mu.edu.sa		
6 - Level/year at which this course is offered :	Level 8 / Year 3		
7 - Pre-requisites for this course (if any) :	<ul style="list-style-type: none"> <li>Reinforced Concrete Design 1 (CE 217)</li> </ul>		
8 - Co-requisites for this course (if any) :	<ul style="list-style-type: none"> <li>None</li> </ul>		
9 - Location if not on the main campus :	Majmaah University Old Building		
10 - Mode of instructions (mark all that apply)			
A - Traditional classroom	<input checked="" type="checkbox"/>	What percentage?	100 %
B - Blended (traditional and online)	<input type="checkbox"/>	What percentage?	..... %
D - e-learning	<input type="checkbox"/>	What percentage?	..... %
E - Correspondence	<input type="checkbox"/>	What percentage?	..... %
F - Other	<input type="checkbox"/>	What percentage?	..... %
Comments :	.....		

## B Objectives

<p>What is the main purpose of this course?</p> <p>To learn the design of RC floor systems, study of structural components in RC buildings for torsion, to learn the structural design of footings, to learn the design of staircases, to learn the design of retaining walls, to have the concept of development length, anchorage and splicing of reinforcements in the reinforced concrete structures.</p>
<p>Briefly describe any plans for developing and improving the course that are being implemented :</p> <p>.....</p>





### C. Course Description:

#### 1. Topics to be covered:

List of Topics	No. of Weeks	Contact Hours
Continuous beams and one-way floor system.	1, 2, 3	15
Two-way slab system.	4, 5	10
Structural design of footings.	6, 7	10
Design of staircases.	8, 9	10
Design of retaining walls.	10, 11	10
Design of beams for torsion.	12, 13	10
Concept of development length, anchorage and splicing of reinforcement.	14, 15	10
<b>Total</b>	<b>15</b>	<b>75</b>

#### 2. Course components (total contact hours and credits per semester):

	Lecture	Tutorial	Laboratory	Practical	Other:	Total
<b>Contact Hours</b>	<b>45</b>	<b>30</b>	-	-	-	<b>75</b>
<b>Credit</b>	<b>3</b>	-	-	-	-	<b>3</b>

3. Additional private study/learning hours expected for students per week.

**2 – 3 Hours**





#### 4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
<b>1.0</b>	<b>Knowledge</b>		
1.1	An ability to apply knowledge of mathematics, science and engineering.	<ul style="list-style-type: none"> <li>Midterm and final exams.</li> <li>Assignments and quizzes.</li> </ul>	<ul style="list-style-type: none"> <li>See SLOs</li> </ul>
1.2	.....	.....	.....
1.3	.....	.....	.....
1.4	.....	.....	.....
1.5	.....	.....	.....
1.6	.....	.....	.....
<b>2.0</b>	<b>Cognitive Skills</b>		
2.1	An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.	<ul style="list-style-type: none"> <li>Midterm and final exams.</li> <li>Assignments and quizzes.</li> </ul>	<ul style="list-style-type: none"> <li>See SLOs</li> </ul>
2.2	.....	.....	.....
2.3	.....	.....	.....
2.4	.....	.....	.....
2.5	.....	.....	.....
2.6	.....	.....	.....
<b>3.0</b>	<b>Interpersonal Skills &amp; Responsibility</b>		
3.1	.....	.....	.....
3.2	.....	.....	.....
3.3	.....	.....	.....
3.4	.....	.....	.....
3.5	.....	.....	.....
3.6	.....	.....	.....
<b>4.0</b>	<b>Communication, Information Technology, Numerical</b>		
4.1	An ability to identify, formulate, and solve engineering problems.	<ul style="list-style-type: none"> <li>Midterm and final exams.</li> <li>Assignments and quizzes.</li> </ul>	<ul style="list-style-type: none"> <li>See SLOs</li> </ul>
4.2	.....	.....	.....
4.3	.....	.....	.....
4.4	.....	.....	.....
4.5	.....	.....	.....





	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
4.6	.....	.....	.....
<b>5.0</b>	<b>Psychomotor</b>		
5.1	.....	.....	.....
5.2	.....	.....	.....
5.3	.....	.....	.....
5.4	.....	.....	.....
5.5	.....	.....	.....
5.6	.....	.....	.....

### 5. Schedule of Assessment Tasks for Students During the Semester:

	Assessment task	Week Due	Proportion of Total Assessment
1	First Midterm Exam	6 <sup>th</sup>	15
2	Assignments	During the Term	15
3	Quizzes	During the Term	15
4	Second Midterm Exam	12 <sup>th</sup>	15
5	Final Exam	15 <sup>h</sup>	40
6	.....	.....	.....
7	.....	.....	.....
8	.....	.....	.....





## D. Student Academic Counseling and Support

Office hours are dedicated for the students in each week.

## E. Learning Resources

### 1. List Required Textbooks:

- Charles, G.S. and Chu-Kia W., “Reinforced Concrete Design”, 5th Edition, Harper and Row Pub., 1994.
- .....

### 2. List Essential References Materials :

- .....
- .....
- .....

### 3. List Recommended Textbooks and Reference Material :

- Steven H. Kosmatka, “Design and Control of Concrete Mixture, Portland”, Portland cement Association.
- El-Dakhakhni, W.M., “Modern of Reinforced Concrete”, Tthe Anglo Egyptian Bookshop, 1990.
- MacGregor, J. G., “Reinforced Concrete, Mechanics and Design”, Prentice Hall, 1992.

### 4. List Electronic Materials :

- Selected research papers, and video clips from U-tube and trustable web sites.
- .....
- .....

### 5. Other learning material :

- .....
- .....
- .....





## F. Facilities Required

<b>1. Accommodation</b> <ul style="list-style-type: none"><li>• .....</li><li>• .....</li><li>• .....</li></ul>
<b>2. Computing resources</b> <ul style="list-style-type: none"><li>• .....</li><li>• .....</li><li>• .....</li></ul>
<b>3. Other resources</b> <ul style="list-style-type: none"><li>• .....</li><li>• .....</li><li>• .....</li></ul>

## G Course Evaluation and Improvement Processes

<b>1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching:</b> <ul style="list-style-type: none"><li>• Confidential questionnaire.</li><li>• Discussion with the students.</li><li>• .....</li></ul>
<b>2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor :</b> <ul style="list-style-type: none"><li>• Observation of the students' performance.</li><li>• Observation of the faculty members.</li><li>• .....</li></ul>
<b>3 Processes for Improvement of Teaching :</b> <ul style="list-style-type: none"><li>• Teaching is improved by using innovative teaching methods and strategies to establish constructive and positive relations with all students in guiding them in their development of critical, analytical thinking and problem solving abilities.</li><li>• .....</li></ul>
<b>4. Processes for Verifying Standards of Student Achievement</b> <ul style="list-style-type: none"><li>• .....</li><li>• .....</li><li>• .....</li></ul>
<b>5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement :</b> <ul style="list-style-type: none"><li>• Review the course contents each year by a faculty committee.</li><li>• .....</li><li>• .....</li></ul>





**Course Specification Approved**  
**Department Official Meeting No (11) Date 10 / 05 / 1437 H**

**Course Coordinator**

**Name :** Dr. Zafar Iqbal Baig  
**Signature :** *Zafar Baig*  
**Date :** 02/ 04 / 1437 H

**Department Head**

**Name :** Dr. Abdullah AlShehri  
**Signature :** *AlShehri*  
**Date :** 10/ 05 / 1437 H

