Course Specifications (2010 - 2011)

A. Basic Information

Course Title	Reinforced Concrete (3)				Course Code:	CVS 411	
Lecture:	3	Tutorial:	3	Practical	0	Total	6
Programme (s) on which this course is given:				B.Sc. Civil Engineering (Structures)			
Major or minor element of program:			Major				
Department offering the program:			Civil Engineering				
Department offering the course:			Civil Engineering				
Academic Year of program:	Fourth			Level of program:		First Semester	
Date of specifications approval:				16/3/2010			

B. Professional Information

1. Overall aims of course

By the end of the course the students will be able to:

Understand the analysis, design and detailing of different statically systems of rectangular and circular water tanks, deep beams and surfaces of revolutions. In addition, seismic analysis and design of concrete structures should be fully understood.

2. Intended Learning outcomes of Course (ILOs)

a. Knowledge and Understanding:

a.1) Recognize concepts and theories of mathematics and sciences, appropriate to the discipline.
a.4) Understand principles of design including elements design, process and/or a system related to specific disciplines.
a.5) Recognize methodologies of solving engineering problems, data collection interpretation.
a.13) Apply Engineering principles in the fields of reinforced concrete and metallic structures analysis and design, geo-

b. Intellectual Skills

b.1) Select appropriate mathematical and computer-based methods for modeling and analyzing problems.

b.2) Select appropriate solutions for engineering problems based on analytical thinking.
b.7) Solve engineering problems, often on the basis of limited and possibly contradicting information.

c. Professional and Practical Skills

c.4) Practice the neatness and aesthetics in design and approach.
c.6) Use a wide range of analytical tools, techniques, equipment, and software packages pertaining to the discipline and develop

d. General and Transferable Skills

d.1) Collaborate effectively within multidisciplinary team.
d.2) Work in stressful environment and within constraints.
d.3) Communicate effectively.

3. Contents

Week #	Topics	No. of Hours	ILOS	Teaching / learning methods and	Assessment method
1	Limit state of cracks-Design of deep beams	3	a1,a4	Lectures	Assignments
			b1,b2	Lectures	Assignments
			c4,c6	Class activity	Assignments
			d1,d2	Class activity	Assignments

2	Design of water sections	3	a1,a4	Lectures	Assignments
			b1,b2	Lectures	Assignments
			c4,c6	Class activity	Assignments
			d1,d2	Class activity	Assignments
3	Design and analyses of elevated rectangular water tanks	3	a4,a5	Lectures	Assignments
			b2,b7	Lectures	Assignments
			c4,c6	Class activity	Assignments
			d1,d2	Class activity	Assignments
4	Design and analyses of elevated rectangular water tanks	3	a4,a5	Lectures	Assignments
			b2,b7	Lectures	Assignments
			c4,c6	Class activity	Assignments
			d1,d2	Class activity	Assignments
5	Design and analyses of elevated rectangular water tanks	3	a,4,a5,a13	Lectures	Assignments
			b1,b2,b7	Lectures	Assignments
			c4,c6	Class activity	Design Project
			d1,d2,d3	Class activity	Design Project
6	Design and analyses of rested rectangular water tanks	3	a,4,a5,a13	Lectures	Assignments
			b1,b2,b7	Lectures	Assignments
			c4,c6	Class activity	Assignments
			d1,d2,d3	Class activity	Assignments
7	Design and analyses of underground rectangular water tanks	3	a,4,a5,a13	Lectures	Assignments
			b1,b2,b7	Lectures	Assignments
			c4,c6	Class activity	Design Project
			d1,d2,d3	Class activity	Design Project
8	Midterm Exam		a,4,a5,a13		Mid-term exam
			b1,b2		Mid-term exam
			c4,c6	Class activity	Mid-term exam
			d1,d2	Class activity	Mid-term exam
9	Design and analyses of circular water tanks	3	a5	Lectures	Assignments
			a13	Lectures	Assignments
			b2	Class activity	Assignments
			b7	Class activity	Assignments
			a,4,a5,a13	Lectures	Assignments

10	Design and analyses of circular water tanks	3	b1,b2	Lectures	Assignments
			c4,c6	Class activity	Assignments
			d1,d2	Class activity	Assignments
11	Design of surface of revolutions	3	a,4,a5,a13	Lectures	Assignments
			b1,b2	Lectures	Assignments
			c4,c6	Class activity	Assignments
			d1,d2	Class activity	Assignments
12	Seismic design of concrete structures	3	a,4,a5,a13	Lectures	Assignments
			b1,b2	Lectures	Assignments
			c4,c6	Class activity	Assignments
			d1,d2	Class activity	Assignments
13	Seismic design of concrete structures	3	a,4,a5,a13	Lectures	Assignments
			b1,b2	Lectures	Assignments
			c4,c6	Class activity	Design Project
			d1,d2	Class activity	Design Project
14	Seismic design of concrete structures	3	a,4,a5,a13	Lectures	Assignments
			b1,b2	Lectures	Assignments
			c4,c6	Class activity	Report
			d1,d2	Class activity	Report
15	Final Exam		a,4,a5,a13		Final exam
			b1,b2		Final exam
			c4,c6		Final exam
			d1,d2		Final exam
Total		**39**			

4- Teaching and Learning Methods:

Check using the symbol √

√	Lectures
	Practical training / laboratory
	Seminar / workshop
√	Class activity
√	Case study
	Project work
	Tutorial

	Computer based work
	Other :

5- Student Assessment Methods:

Check using the symbol √

√	Assignments	to assess	a1,a4,a5,a13	b1,b2,b7	c4,c6	d1,d2,d3
	Quiz	to assess				
√	Mid-term exam	to assess	a4,a5,a13	b1,b2	c4,c6	d1,d2,d3
	Oral exam	to assess				
√	Final exam	to assess	a1,a4,a5,a13	b1,b2,b7	c4,c6	d1,d2,d3
√	Design Project	to assess	a1,a4,a5,a13	b1,b2,b7	c4,c6	d1,d2,d3
√	Report	to assess	a1,a4,a5,a13	b1,b2,b7	c4,c6	d1,d2,d3
	Experimental write up	to assess				
	Informally assessment	to assess				
	Other	to assess				

6. Assessment schedule

Assessment 1 Assignments on weeks	1,2
Assessment 2 Assignments on weeks	3,4,5,6,7
Assessment 3 Mid-term exam on week	8
Assessment 4 Assignments on weeks	9,10
Assessment 5 Assignments on weeks	11,12
Assessment 6 Design Project on weeks	5,7,13
Assessment 7 Report on weeks	14
Assessment 8 Final exam on week	
Assessment 9 Informally assessment	

7. Weighting of Assessments

Assignments	10%
Quiz	
Mid-term exam	20%
Oral exam	
Final exam	60%
Design Project	5%
Report	5%
Experimental write up	
Informally assessment	
Other	

Total	100%

8. List of References

8.1 Course Notes

course notes & solved examples

8.2 Essential Books (Text Books)

Egyptian Code of Practice for analysis and design of R.C structures ECP-203

8.3 Recommended Books

Park & Paulay "Reinforced concrete structures"

8.4 Periodicals Web sites, etc

To be sited during the course lectures

9. Facilities Required for Teaching and learning

White board
Computer
Data show
Portable display screen

Course Coordinator:	Prof. Ibrahim Galal Ibrahim Shaaban	Associate Prof. Maher AdbulRahman Ibrahim Adam
Course instructor:	Associate Prof. Maher AdbulRahman Ibrahim Adam	
Head of department:	Prof. Ahmed AdbulFattah Mahmoud Ahmed	

Signature:

	D	M	Y
Date:	20	12	2011