



**المركز الوطني للتقويم والاعتماد الأكاديمي**  
National Center for Academic Accreditation and Evaluation

**ATTACHMENT 5.**

## **T6. COURSE SPECIFICATIONS (CS)**



## Course Specifications

Institution: Al Yamamah University	Date: 6-1-2019
College/Department: College of Engineering and Architecture/ Architecture	

### A. Course Identification and General Information

1. Course title and code: ARC 314 Introduction to Building Technology			
2. Credit hours: 3			
3. Program(s) in which the course is offered. Architecture			
4. Name of faculty member responsible for the course. Dr. Majdi Alkhresheh			
5. Level/year at which this course is offered: Third Year			
6. Pre-requisites for this course (if any): ARC 311			
7. Co-requisites for this course (if any): N/A			
8. Location if not on main campus			
9. Mode of Instruction (mark all that apply):			
a. traditional classroom	<input checked="" type="checkbox"/>	percentage?	<input type="text" value="100%"/>
b. blended (traditional and online)	<input type="checkbox"/>	percentage?	<input type="text"/>
c. e-learning	<input type="checkbox"/>	percentage?	<input type="text"/>
d. correspondence	<input type="checkbox"/>	percentage?	<input type="text"/>
f. other	<input type="checkbox"/>	percentage?	<input type="text"/>
Comments:			

### B Objectives

1. What is the main purpose for this course? The aim of the course is to introduce the students to field of building technology and its development starting from the traditional methods to the application of recent/new technologies (mechanization and prefabrication, building technology).	
2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web-based reference material, changes in content as a result of new research in the field) NA	

### C. Course Description (Note: General description in the form used in Bulletin or handbook)

The course covers the definition of the difference between science and technology in both theory and practice. The difference between the concept of structure and concept of construction. The course presents a brief review of different systems of construction technology.	
1. Topics to be Covered	



List of Topics	No. of Weeks	Contact hours
Course introduction & class conduct policies	1	3
Introduction to building technology (connection between Science and Technology)	1	3
Traditional concrete construction systems	1	3
New technologies in concrete construction systems	1	3
Prefabrication (Precast- Modular)	1	3
Mechanization (Tilt up construction /Slip form/Table system/ Tunnel system)	1	3
Traditional steel construction systems (frames/Light gauge)	1	3
New technologies in steel construction systems (Space frame/truss/portal frame)	1	3
Long Span Structures (Tensile/Membrane/Shell/Vaults/Arch)	1	3
Nano-Technology & Materials	1	3
New trends in building technology	1	3
Research discussion and presentation	2	6
Exams/field visit	1	3

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

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other:	Total
Contact Hours	Planned	45					45
	Actual	45					45
Credit	Planned	N/A					3 cr .hr. /Week
	Actual	N/A					3 cr .hr. /Week

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

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

**On the table below are the five NQF Learning Domains, numbered in the left column.**

**First**, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
<b>1.0</b>	<b>Knowledge</b>		
1.1	Recognize different construction systems	Lectures Group Discussions	Exams, Quizzes, Assignments on Class to assess their recognitions of construction systems



1.2	Outline new technologies in materials and systems	Lectures Research Group Discussions	Research is required from students to assess their abilities to outline the new materials and technologies
<b>2.0</b>	<b>Cognitive Skills</b>		
2.1	Relate science with innovations in building technology	Projects demonstrations Lectures	Exams, Quizzes, Assignments on Class to assess their recognitions of architecture dimensions
2.2	Distinguish the impact of technology on recent trends in architecture and construction	Research Discussions Lectures	Exams and Quizzes is required to assess their ability to distinguish the impact of technology Research was required from students to assess their abilities to distinguish the impact of technology
<b>3.0</b>	<b>Interpersonal Skills &amp; Responsibility</b>		
3.1	Grounding self-learning and professional relationships	Research	Research to assess student's interpersonal skills
3.2	Act responsibly in a personal and professional manner; display of ethical and high moral standards	Research	
<b>4.0</b>	<b>Communication, Information Technology, Numerical</b>		
4.1	Respond, verbally and in writing, to questions regarding building technology	Research Discussions	Oral presentation for their research to assess student's verbal communication skills. Midterm and Final Exam to assess their written communication skills
4.2			
<b>5.0</b>	<b>Psychomotor</b>		
5.1	N/A	N/A	N/A

5. Schedule of Assessment Tasks for Students During the Semester			
	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
	Quiz1	5	10%
	Quiz 2	13	10%
	Term Paper	11	20%
	Mid-Term Exam	8	20%
	Final exam	16	40%

#### D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)

Two periods of office hours; of 2 hours each.

#### E Learning Resources

1. List Required Textbooks



- Stephen Emmitt and Christopher A. Gorse, Barry's Advanced Construction of Buildings, Blackwell Publishing, 2006.
2. List Essential References Materials (Journals, Reports, etc.) - Journal of Building Engineering-( <a href="http://www.journals.elsevier.com/journal-of-building-engineering/">ps://www.journals.elsevier.com/journal-of-building-engineering/</a> )
3. List Electronic Materials, Web Sites, Facebook, Twitter, etc. <ul style="list-style-type: none"> <li>• <a href="https://lms.yu.edu.sa/course/view.php?id=5400">https://lms.yu.edu.sa/course/view.php?id=5400</a></li> <li>• <a href="http://explore.tandfonline.com">http://explore.tandfonline.com</a></li> </ul>
4. Other learning material such as computer-based programs/CD, professional standards or regulations and software. N/A

### F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)
1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.) Classroom equipped with data show, speakers and sufficient electricity plugs for student's personal laptops.
2. Technology resources (AV, data show, Smart Board, software, etc.) Data show
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) N/A

### G Course Evaluation and Improvement Processes

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching <ul style="list-style-type: none"> <li>- Questionnaires on Student's course evaluations held online</li> <li>- Students' feedback and off-class chats.</li> <li>- Feedback from consequent courses of design</li> </ul>
2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department Peer evaluation
3. Processes for Improvement of Teaching - Updating with new trends in Building technology.
4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution) <ul style="list-style-type: none"> <li>- Cross examining with results from previous students in other universities and matching grades curve and distribution with certain shift due to different outcomes of high schools.</li> </ul>
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement. <ul style="list-style-type: none"> <li>- Comparing students' outcome to previous years will inform about improvement or otherwise. What will make sure continuous improvement is the snowball effect of end-of-semester results in the course and the ability to use the knowledge accomplished in upper design studios.</li> </ul>

Name of Course Instructor: Dr. Majdi Alkhresheh

Signature: \_\_\_\_\_ Date Specification Completed: 6-1-2019

Program Coordinator: Dr. Majdi Alkhresheh

Signature: \_\_\_\_\_ Date Received: \_\_\_\_\_