

**ATTACHMENT 2 (e)**

**Course Specifications**

**Kingdom of Saudi Arabia**

**The National Commission for Academic Accreditation & Assessment**

**Course Specification**

**Graduation Project 2  
14024904-3**

## Course Specification

Institution	<b>Umm Al Qura University</b>	Date of Report: <b>07-1437 / 04-2016</b>
College/Department	<b>College of Computers and Information Systems Information Systems Department</b>	

### A. Course Identification and General Information

1. Course title and code:	<b>Graduation Project 2 14024904-3</b>																						
2. Credit hours	3 credits																						
3. Program(s) in which the course is offered.	<b>Information Systems, Bachelor of Science</b>																						
4. Name of faculty member responsible for the course	Dr Hassan Sallay																						
5. Level/year at which this course is offered	4 <sup>th</sup> year/10 <sup>th</sup> level																						
6. Pre-requisites for this course (if any)	<b>Graduation Project 1 14024903-3 Software Engineering II 14013304-3</b>																						
7. Co-requisites for this course (if any)																							
8. Location if not on main campus: Delivered in the four locations where the Information Systems BSc is given:	<ul style="list-style-type: none"> <li>- Al Abidiyya main campus boys section,</li> <li>- Al Zahir main campus girls section,</li> <li>- Al Qunfuda Boys section,</li> <li>- Al Qunfuda Girls section.</li> </ul>																						
9. Mode of Instruction (mark all that apply)	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;">a. Traditional classroom</td> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 40%;">What percentage?</td> <td style="width: 10%; text-align: center;"><input type="text" value="100%"/></td> </tr> <tr> <td>b. Blended (traditional and online)</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>What percentage?</td> <td style="text-align: center;"><input type="text"/></td> </tr> <tr> <td>c. e-learning</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>What percentage?</td> <td style="text-align: center;"><input type="text"/></td> </tr> <tr> <td>d. Correspondence</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>What percentage?</td> <td style="text-align: center;"><input type="text"/></td> </tr> <tr> <td>f. Other</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>What percentage?</td> <td style="text-align: center;"><input type="text"/></td> </tr> </table>			a. Traditional classroom	<input checked="" type="checkbox"/>	What percentage?	<input type="text" value="100%"/>	b. Blended (traditional and online)	<input type="checkbox"/>	What percentage?	<input type="text"/>	c. e-learning	<input type="checkbox"/>	What percentage?	<input type="text"/>	d. Correspondence	<input type="checkbox"/>	What percentage?	<input type="text"/>	f. Other	<input type="checkbox"/>	What percentage?	<input type="text"/>
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Comments:																							



## B Objectives

1. What is the main purpose for this course?

This course is a real-life like experience where students team up to solve a real-world information systems problem by applying agile software engineering approaches. The output of the graduation project 1 is completed to obtain a ready to deploy solution.

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)

An adaptation can be done when reviewing the program.

## C. Course Description (Note: General description in the form to be used for the Bulletin or handbook should be attached)

1 Topics to be Covered		
List of Topics	No of Weeks	Contacthours per week
Agile prototype development	16	48

2. Course components (total contact hours and credits per semester):						
	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours				48		48
Credit				3		3

3. Additional private study/learning hours expected for students per week.	8
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4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy
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Course Learning Outcomes, Assessment Methods, and Teaching Strategy work together and are aligned. They are joined together as one, coherent, unity that collectively articulate a consistent agreement between student learning, assessment, and teaching.

The *National Qualification Framework* provides five learning domains. Course learning outcomes are required. Normally a course has should not exceed eight learning outcomes which align with one or more of the five learning domains. Some courses have one or more program learning outcomes integrated into the course learning outcomes to demonstrate program learning outcome alignment. The program learning outcome matrix map identifies which program learning outcomes are incorporated into specific courses.

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. **Fourth**, if any program learning outcomes are included in the course learning outcomes, place the @ symbol next to it.

Every course is not required to include learning outcomes from each domain.

	<b>NQF Learning Domains And Course Learning Outcomes</b>	<b>Course Teaching Strategies</b>	<b>Course Assessment Methods</b>
<b>1.0</b>	<b>Knowledge</b>		
1.1	Ability to apply knowledge of mathematics, computing, science, and engineering appropriate to the discipline.	<ul style="list-style-type: none"> <li>• Team Project</li> <li>• Include Personal work</li> <li>• Weekly briefing with supervisor</li> </ul>	Assessment of Project Presentation and demonstration
1.2			
<b>2.0</b>	<b>Cognitive Skills</b>		
2.1	Ability to analyse a problem, and identify and define the computing requirements appropriate to its solution.	<ul style="list-style-type: none"> <li>• Team Project</li> <li>• Include Personal work</li> <li>• Weekly briefing with supervisor</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of Project</li> <li>• Assessment of project defence</li> </ul>
2.2	Ability to design, implement and evaluate a computer-based system, process, component or program to meet desired goal.	<ul style="list-style-type: none"> <li>• Team Project</li> <li>• Include Personal work</li> <li>• Weekly briefing with supervisor</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of Project</li> <li>• Assessment of project defence</li> </ul>
	Apply mathematical foundations, algorithmic principles, and computer science theory in the modelling and design of computer based systems in a way that demonstrates comprehension of the trade-offs involved in design choices.	<ul style="list-style-type: none"> <li>• Team Project</li> <li>• Include Personal work</li> <li>• Weekly briefing with supervisor</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of Project</li> <li>• Assessment of project defence</li> </ul>
	Ability to apply design and development principles in the construction of software systems of varying complexity.	<ul style="list-style-type: none"> <li>• Team Project</li> <li>• Include Personal work</li> <li>• Weekly briefing with supervisor</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of Project</li> <li>• Assessment of project defence</li> </ul>
<b>3.0</b>	<b>Interpersonal Skills &amp; Responsibility</b>		
3.1	Ability to function effectively on teams to accomplish a common goal.	<ul style="list-style-type: none"> <li>• Team Project</li> <li>• Include Personal work</li> <li>• Weekly briefing with supervisor</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of project defence</li> </ul>
3.2	Recognition of the need for, and an ability to engage continuing professional development.	<ul style="list-style-type: none"> <li>• Team Project</li> <li>• Include Personal work</li> <li>• Weekly briefing with supervisor</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of project defence</li> </ul>
<b>4.0</b>	<b>Communication, Information Technology, Numerical</b>		
4.1	Ability to communicate effectively.	<ul style="list-style-type: none"> <li>• Team Project</li> <li>• Include Personal</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of project defence</li> </ul>

		<ul style="list-style-type: none"> <li>work</li> <li>Weekly briefing with supervisor</li> </ul>	<ul style="list-style-type: none"> <li>Assessment of project report</li> </ul>
4.2	Ability to use the current techniques, skills, and tools necessary for computing practice.	<ul style="list-style-type: none"> <li>Team Project</li> <li>Include Personal work</li> <li>Weekly briefing with supervisor</li> </ul>	<ul style="list-style-type: none"> <li>Assessment of project defence</li> <li>Assessment of project report</li> </ul>
<b>5.0</b>	<b>Psychomotor</b>		
5.1	N/A		
5.2			

### Suggested Guidelines for Learning Outcome Verb, Assessment, and Teaching

NQF Learning Domains	Suggested Verbs
<b>Knowledge</b>	list, name, record, define, label, outline, state, describe, recall, memorize, reproduce, recognize, record, tell, write
<b>Cognitive Skills</b>	estimate, explain, summarize, write, compare, contrast, diagram, subdivide, differentiate, criticize, calculate, analyze, compose, develop, create, prepare, reconstruct, reorganize, summarize, explain, predict, justify, rate, evaluate, plan, design, measure, judge, justify, interpret, appraise
<b>Interpersonal Skills &amp; Responsibility</b>	demonstrate, judge, choose, illustrate, modify, show, use, appraise, evaluate, justify, analyze, question, and write
<b>Communication, Information Technology, Numerical</b>	demonstrate, calculate, illustrate, interpret, research, question, operate, appraise, evaluate, assess, and criticize
<b>Psychomotor</b>	demonstrate, show, illustrate, perform, dramatize, employ, manipulate, operate, prepare, produce, draw, diagram, examine, construct, assemble, experiment, and reconstruct

Suggested **verbs not to use** when writing measurable and assessable learning outcomes are as follows:

Consider      Maximize      Continue      Review      Ensure      Enlarge      Understand  
Maintain      Reflect      Examine      Strengthen      Explore      Encourage      Deepen

Some of these verbs can be used if tied to specific actions or quantification.

**Suggested assessment methods and teaching strategies are:**

According to research and best practices, multiple and continuous assessment methods are required to verify student learning. Current trends incorporate a wide range of rubric assessment tools; including web-based student performance systems that apply rubrics, benchmarks, KPIs, and analysis. Rubrics are especially helpful for qualitative evaluation. Differentiated assessment strategies include: exams, portfolios, long and short essays, log books, analytical reports, individual and group presentations, posters, journals, case studies, lab manuals, video analysis, group reports, lab reports, debates, speeches, learning logs, peer evaluations, self-evaluations, videos, graphs, dramatic performances, tables, demonstrations, graphic organizers, discussion forums, interviews, learning contracts, antidotal notes, artwork, KWL charts, and concept mapping.

Differentiated teaching strategies should be selected to align with the curriculum taught, the needs of students, and the intended learning outcomes. Teaching methods include: lecture, debate, small group work, whole group and small group discussion, research activities, lab demonstrations, projects, debates, role playing, case studies, guest speakers, memorization, humor, individual presentation, brainstorming, and a wide variety of hands-on student learning activities.

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

Assessment	Assessment task (eg. essay, test, group project, examination etc.)	Week due	Proportion of Final Assessment
1	Project Demonstration	15	20%
2	Project Report	15	30%
3	Project Defense	16	50%

#### D. Student Support

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

Office hours

#### E Learning Resources



1. Required Text(s) : None
2. Essential References
3- Recommended Books and Reference Material (Journals, Reports, etc) (Attach List)
4-.Electronic Materials, Web Sites etc
5- Other learning material such as computer-based programs/CD, professional standards/regulations

## F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (ie number of seats in classrooms and laboratories, extent of computer access etc.)
1. Accommodation (Lecture rooms, laboratories, etc.)  Projects lab
2. Computing resources
3. Other resources (specify --eg. If specific laboratory equipment is required, list requirements or attach list)

## G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching End-of-term course/teacher evaluation for is to be completed by students at the end of the semester, evaluating the organization and assessment methods.. The monitoring of these students feedback will allows the course quality improvement
2 Other Strategies for Evaluation of Teaching by the Instructor or by the Department N/A
3. Processes for Verifying Standards of Student Achievement (eg. check marking by an independent faculty member of a sample of student work, periodic exchange and remarking of a sample of assignments with a faculty member in another institution) <ul style="list-style-type: none"> <li>• Upon student request, his/her work might be remarked by another faculty member within the department.</li> </ul>
4 Processes for Improvement of Teaching <ul style="list-style-type: none"> <li>• (Self , Peer) Review, Identify, Analyse, and Revise</li> </ul>
5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement. <ul style="list-style-type: none"> <li>- Update project outcomes and organization</li> <li>- Use students feedback</li> </ul>

Faculty or Teaching Staff: \_\_\_\_\_

Signature: \_\_\_\_\_ Date Report Completed: \_\_\_\_\_

Received by: \_\_\_\_\_ Dean/Department Head: Dr. Skander Turki

Signature: \_\_\_\_\_ Date: 07-1437 / 04-2016