

ATTACHMENT 5.

Kingdom of Saudi Arabia
**The National Commission for Academic Accreditation &
Assessment**

T6. Course Specifications (CS) of
“SWE 300 – Software Process and Modeling”

College of Computer and Information Systems

Al Yamamah University

Riyadh, KSA

March 31, 2016

Course Specifications

Institution: Al Yamamah University	Date: March 31, 2016
College/Department: Computer and Information System	

A. Course Identification and General Information

1. Course title and code: SWE 300 – Software Process and Modeling			
2. Credit hours: 3			
3. Program(s) in which the course is offered. (If general elective available in many programs indicate this rather than list programs)			
<ul style="list-style-type: none"> • Bachelor of Science in Software Engineering 			
4. Name of faculty member responsible for the course: Dr. Irfan Uddin			
5. Level/year at which this course is offered: Level 5/ Third Year			
6. Pre-requisites for this course (if any) SWE 202 – Introduction to Software Engineering			
7. Co-requisites for this course (if any)			
8. Location if not on main campus			
9. Mode of Instruction (mark all that apply)			
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"/>
Comments:			

B. Objectives

<p>1. What is the main purpose for this course?</p> <p>The course gives comprehensive knowledge about modeling using UML. It enables students to understand and evaluate the basic components of object-oriented modeling.</p>
<p>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)</p> <p>YU LMS (University Learning Management Systems)</p>

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

<p>Course Description:</p> <p>The course deals with Object-Oriented Modeling techniques for analysis and design. It provides tools and techniques needed to solve complex, real-world software engineering problems in an object-oriented manner, using the most effective elements of the Unified Process. The course covers the essential concepts and notation of the Unified Modeling Language (UML), the standard notation for object-oriented analysis and design.</p>
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1. Topics to be Covered		
List of Topics	No. of Weeks	Contact Hours
Introduction	1	3
A short tour of UML	2	6
The Use Case diagram	2	6
The class diagram	2	6
The state machine diagram	2	6
The sequence diagram	2	6
The Activity diagram	2	6
All together now	2	6
TOTAL	15	45

2. Course components (total contact hours and credits per semester):						
	Lecture	Tutorial	Laboratory or Studio	Practical	Other:	Total
Contact Hours	45					45

Credit	3					3
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3. Additional private study/learning hours expected for students per week.	6
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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
1.0	Knowledge After successful completion of the course students will be able to		
1.1	<u>Define</u> software processes.	<ul style="list-style-type: none"> Lecture Assignment Group Discussion Case studies Project 	<ul style="list-style-type: none"> Written exams (quizzes, mid term and final) Assignment Presentation Project
1.2	<u>Describe</u> different software modeling techniques using UML.		
1.3	<u>Recognize</u> right modeling methods for different applications.		
2.0	Cognitive Skills After successful completion of the course students will be able to		
2.1	<u>Summarize</u> object-oriented models in software engineering.	<ul style="list-style-type: none"> Lectures Assignments Group discussion Case studies Project 	<ul style="list-style-type: none"> Written exams (quizzes, mid term and final) Assignment Participation Presentation
2.2	<u>Analyze</u> different applications and design a system based on various models.		
3.0	Interpersonal Skills & Responsibility After successful completion of the course students will be able to		
3.1	<u>Demonstrate</u> working constructively in groups.	Students are required to perform presentations either individually or in groups to meet specific requirements of some assignments. Students will be exposed to ethical and professional issues throughout the course.	<ul style="list-style-type: none"> Presentations
3.2	<u>Illustrate</u> ethical and professional values and moral judgments.		
4.0	Communication, Information Technology, Numerical After successful completion of the course students will be able to		
4.1	<u>Demonstrate</u> working effectively in oral and written English.	<ul style="list-style-type: none"> Course Work 	<ul style="list-style-type: none"> Presentations

4.2	Effectively <u>research</u> the web using top rated search engines and verified searching techniques.	<ul style="list-style-type: none"> • Assignments • Online material 	• Observation and participation
5.0	Psychomotor After successful completion of the course students will be able to		
5.1	None	None	None
5.2			

5. Map course LOs with the program LOs. (Place course LO #s in the left column and program LO #s across the top.)

Course LOs #	Program Learning Outcomes (Use Program LO Code #s provided in the Program Specifications)												
	1.1	1.2	1.3	2.1	2.2	2.3	2.4	3.1	3.2	3.3	4.1	4.2	
1.1	P	-	-	I	P	P	P	P	P	P	P	P	I
1.2	P	-	-	I	P	P	P	P	P	P	P	P	I
1.3	P	-	-	I	P	P	P	P	P	P	P	P	I
2.1	P	-	-	I	P	P	P	P	P	P	P	P	I
2.2	P	-	-	I	P	P	P	P	P	P	P	P	I
3.1	P	-	-	I	P	P	P	P	P	P	P	P	I
3.2	P	-	-	I	P	P	P	P	P	P	P	P	I
4.1	P	-	-	I	P	P	P	P	P	P	P	P	I
4.2	P	-	-	I	P	P	P	P	P	P	P	P	I

6. Schedule of Assessment Tasks for Students During the Semester

	Assessment task (e.g. essay, test, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Project and presentation	14	20%
2	Quizzes	2, 4, 7, 10, 14	10%
3	Punctuality and Attendance		10%
4	Midterm exam	7, 8	20%
5	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)

All faculties are required to assign in average 8 office hours every week dedicated for individual student consultations and academic advice. The schedule of the office hours is posted on faculty office door.

E. Learning Resources

1. List Required Textbooks
<ul style="list-style-type: none">Martina Seidl, Marion Scholz, Christian Huemer, Gerti Kappel, UML @ Classroom: An introduction to object-oriented modeling, 2015 Edition, Springer (2015).
2. List Essential References Materials (Journals, Reports, etc.)
<ul style="list-style-type: none">Raul Sidnei Wazlawick, Object-Oriented Analysis and Design for Information Systems: Modeling with UML, OCL, and IFML, Morgan Kaufmann (2014).Michael R. Blaha, James R. Rumbaugh, Object-Oriented Modelling and Design with UML, 2nd Edition, Pearson (2004).H.S. Lahman, Model-based development: Applications, 1st Edition, Addison Wesley Professional (2011).
3. List Recommended Textbooks and Reference Material (Journals, Reports, etc)
4. List Electronic Materials, Web Sites, Facebook, Twitter, etc.
<ul style="list-style-type: none">Carnegie Mellon-Software Engineering Institute http://www.sei.cmu.edu/http://www.programsformca.com/2012_03_01_archive.html
5. Other learning material such as computer-based programs/CD, professional standards or regulations and software.
Google Quality tools are used to track the evolution of software systems.

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.)
One lecture room and one lab with 24 PCs and Internet connection. An overhead projector is normally installed in every class and lab throughout the university campuses.
2. Computing resources (AV, data show, Smart Board, software, etc.)
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)
PCs only are required.

G. Course Evaluation and Improvement Processes

<p>1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching</p> <p>During the course, students receive a feedback forms that covers all aspects relating to their learning experience. These forms will then be collected and analyzed by the Academic Advising and Counselling Department. Next, the Academic Advising and Counselling Department will conduct a meeting with the concerned faculty to discuss the students' feedback outcomes.</p>
<p>2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department</p> <p>Peer review visits are normally conducted among faculties wherever possible during academic year. During the lecture time Chair (Head)/ Dean of the department visits the classroom. At the end of each visit, faculties are usually set together to discuss related issues.</p>
<p>3. Processes for Improvement of Teaching</p> <p>Specialized workshops and seminars are conducted throughout academic year to address specific teaching strategies and improvements.</p>
<p>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)</p> <p>Peer review and discussion with course coordinator. There should be a strong liaison with teacher from some external university/institute in order to exchange ideas related to marking/ evaluating quizzes and assignments.</p>
<p>5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.</p> <p>At the end of each semester, Curriculum committee conducts a meeting with all faculty members in which surveys filled by the students and other feedbacks from faculty members are discussed. Effectiveness of the courses, mistakes done and weaknesses are discussed. These points are made basis for the planning for improvements for next semester/ year.</p>

Name of Instructor: Dr. Irfan Uddin

Signature: _____ Date Report Completed: 31/03/2016

Name of Field Experience Teaching Staff: Dr. Raed Amin Shatnawi

Program Coordinator: Dr. Raed Amin Shatnawi

Signature: _____ Date Received: 31/03/2016