

المملكة العربية السعودية الهيئة الوطنيسة التقويم والاعتماد الأكاديمسي

## ATTACHMENT 2 (e)

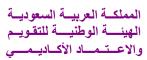
**Course Specifications** 

## Kingdom of Saudi Arabia

The National Commission for Academic Accreditation & Assessment

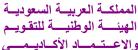
Course Specifications (CE)





# **Course Specifications**

Institution:	Umm Al-Qura Un	iversity		Date of Report: 10/06/1437				
College/Departm	nent: Computer Engine	ering Depa	ırtment					
A. Course Identi	fication and General I	nformatio	n					
Course title a     Professional a	nd code: Skills for Engineering I	Design 140	33403-3					
2. Credit hours:	2. Credit hours: 3 + 0							
•	which the course is off ective available in many gineering		indicate this rather th	nan list programs)				
	4. Name of faculty member responsible for the course Dr. Muhammad Rashid							
5. Level/year at	5. Level/year at which this course is offered: Level 9/10							
6. Pre-requisites 14032203-4	for this course (if any)							
7. Co-requisites N/A	for this course (if any)							
	ot on main campus a University, Abidiyyal	ı, Makkah	Al-Mukarammah					
9. Mode of Instr	ruction (mark all that ap	ply)						
a. Traditional	classroom	X	What percentage?	100				
b. Blended (tr	raditional and online)		What percentage?					
c. e-learning			What percentage?					
d. Correspond	lence		What percentage?					
f. Other			What percentage?					
Comments: N/A								





- 1. What is the main purpose for this course?
  - Technical skills.
  - Working in teams.
  - Project management.
  - Engineering ethics.
  - Oral presentations.
- 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)
  - Balancing visual and verbal elements in documents and oral presentations
  - They learn how to organize technical and managerial information, articulate and support ideas, and communicate with technical and nontechnical audiences
  - Lecture slides and tutorials to further clarify the theoretical concepts

# 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	Contact Hours
Technical writing skills: Project report (particularly the capstone design project), technical report, research paper, CV (Instructor is encouraged to use his professional experience as well as the material available on the internet (samples / best practices)	1-2	6
Guidance for effective team work	3-4	6
Traditional elements of project management such as the work breakdown structure, network diagrams and critical path estimation	5-6	6
Ethical considerations in system design as well as in professional practice	7-8	6
Contemporary issues in computer engineering	9-10	6
Students' preparation for oral presentation (especially for capstone design project)	11-14	12



2.	Course components	(total contact hours a	nd credits per semester):
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	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	42	N/A	N/A	N/A	N/A	42
Credit	42	N/A	N/A	N/A	N/A	42

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

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

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.

<u>First</u>, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). <u>Second</u>, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. <u>Third</u>, 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. <u>Fourth</u>, 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.



	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods		
1.0	Knowledge				
1.1	Technical writing skills	Assignments and solutions to the assignments, so that student	Assessment methods include two exams and a final exam, reading		
	Working in teams	can know their problems.	assignments.		
	Project management	Open-communication with students – show willingness to	Review outputs from the assignments and exam results.		
	Engineering ethics	assist and take questions from	ussignments and examines and		
	Oral presentations	students and clarify explanations in the class.			
		Students presentations			
2.0	Cognitive Skills				
2.1	Ability to write technical reports.	Practice of writing different technical reports.	Two midterm exams and a Final Exam.		
	Ability to prepare and present quality presentation.  Ability of understand the ethical	Demonstration of how to make good presentation			
	dimension of Computer Engineering.	Demonstration of how to present in effective and efficient way.			
3.0	Interpersonal Skills & Responsibility				
3.1	Understand and communicate to others the importance and relevance of technical reports in the industry.	Enticing students to participate by encouraging them to explain what they learned from the reading assignment.	Two Exams, and a Final Exam		
	Be an independent learner, able to acquire further knowledge with some guidance or support.	Students Presentations			
	Participate in group discussions	Presentation and Technical report making assignments.			
	Manage time and meet deadlines.				

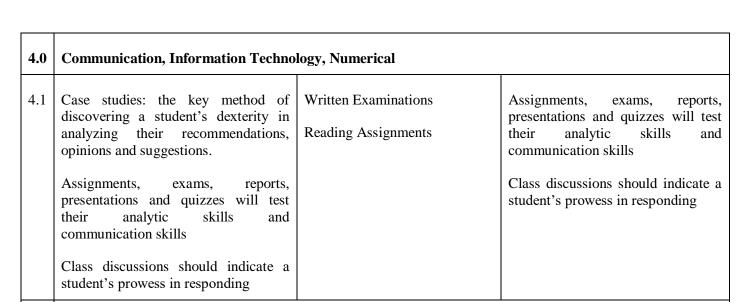
N/A

**5.0** 

5.1

**Psychomotor** 

N/A

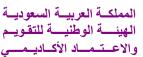


Suggested Guidelines for Learning Outcome Verb, Assessment, and Teaching

N/A

Suggested Stratemes for	Learning Outcome verb, Assessment, and Teaching			
NQF Learning Domains	Suggested Verbs			
Knowledge	list, name, record, define, label, outline, state, describe, recall, memorize, reproduce, recognize, record, tell, write			
Cognitive Skills	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			
Interpersonal Skills & Responsibility	demonstrate, judge, choose, illustrate, modify, show, use, appraise, evaluate, justify, analyze, question, and write			
Communication, Information Technology, Numerical	demonstrate, calculate, illustrate, interpret, research, question, operate, appraise, evaluate, assess, and criticize			
Psychomotor	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 task (e.g. essay, test, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Attendance and participation	Throughout semester	5
2	Assignments and Quizzes	Throughout semester	15
3	Mid Term 1	4	20
4	Mid Term 2	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)
  - For individual student consultations and academic advice teaching staff is expected to be available 10 hours per week.

#### E. Learning Resources

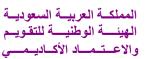
- 1. List Required Textbooks
  - Ralph M. Ford and Chris S. Coulston, Design for Electrical and Computer Engineers, McGraw-Hill. 2008
- 2. List Essential References Materials (Journals, Reports, etc.)
  - N/A
- 3. List Recommended Textbooks and Reference Material (Journals, Reports, etc)
  - N/A
- 4. List Electronic Materials (e.g. Web Sites, Social Media, Blackboard, etc.)
  - N/A
- 5. 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.)
  - A Lecture room having Multimedia projector and Internet for lectures and students presentation.





- 2. Computing resources (AV, data show, Smart Board, software, etc.)
  - Students are encouraged to bring in their laptops and use them in solving problems in the class room.
- 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
  - Course Survey and students Feedback for each learning outcome of the course.
- 2. Other Strategies for Evaluation of Teaching by the Program/Department Instructor
  - Faculty meetings to discuss best practices and issues related to the course.
  - Comparison of the course content with similar courses offered in others colleges.
  - Updating course curriculum according to latest research done in the field.
- 3. Processes for Improvement of Teaching
  - Departmental meetings.
  - Faculty trainings.
- 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)
  - N/A

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•	Departr	nental me	etings.							

Faculty or Teaching Staff:	
Signature:	Date Report Completed:
Received by:	Dean/Department Head
Signature:	Date: