

ATTACHMENT 2 (e)

Course Specifications

Kingdom of Saudi Arabia

The National Commission for Academic Accreditation & Assessment

**Course Specifications
(CS)**

Course Specifications

Institution :- Najran University	Date of Report
College/Department : Faculty of Science and Arts, Sharourah/Computer Science Department	

A. Course Identification and General Information

1. Course title and code: Title: System Analysis and Design Code: 603IS-3 (٣-٦٠٣-٣)			
2. Credit hours : 3 hours			
3. Program(s) in which the course is offered. (If general elective available in many programs indicate this rather than list programs) The computer science program			
4. Name of faculty member responsible for the course Dr. Mohammed Mahdy Bard			
5. Level/year at which this course is offered: 6 th Level/ 3 rd year			
6. Pre-requisites for this course (if any) 301IS-3 (Fundamentals of IS)			
7. Co-requisites for this course (if any)			
8. Location if not on main campus Male and Female Branches			
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: We still teach this course using traditional methods but there is a plan to transform all course into electronic format using E-learning			

B Objectives

<p>1. What is the main purpose for this course? Students are expected to be able to:</p> <ul style="list-style-type: none"> • Understand the principles and tools of systems analysis and design. • Identify problems in the information systems and formulate appropriate solutions. • Discuss in depth system modelling, design and implementation in the context of life cycle phases. • Apply concepts learned from class to a real life systems development project of their choice.
<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>

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

Provides the opportunity to design, implement, and document the system development cycle. This course starts with an introduction to systems analysis and design with description about different sources of software. The course will include the different phases for system analysis and design: determining and structuring system requirements, system design, system implementation and operation.

1. Topics to be Covered		
List of Topics	No. of Weeks	Contact Hours
System concepts and Introduction to Systems Analysis and Design	1	2
Information system environments, and Sources of Software	2	4
Determining System Requirements	1	2
Structuring System Requirements: Process Modeling	2	4
Structuring System Requirements: Data Modeling	2	4
System Design: Human interfaces	2	4
System Implementation and Operation	2	4
Project discussions	3	6

1. Topics to be Covered in Lab		
List of Topics	No. of Weeks	Contact Hours
Lab: selecting topics for the projects	1	2
Review of DBMS (lab)	2	4
Review a programming language (lab)	2	4
Link between the programming language and Database (lab)	2	4
Design and implement an project for every student group (lab)	7	14

2. Course components (total contact hours and credits per semester):						
	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	30	-	30			60
Credit	30	-	15			45

3. Additional private study/learning hours expected for students per week.	
	<input type="text"/>

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.

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.

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge		
1.1	Remember the principles and basic knowledge on the concept of the system, especially in information systems	Lecture and Discussion	Achievement Test, Home Duties
1.2	Define the responsibilities of each person in the building of the system	Lecture and Discussion	Achievement Test, Home Duties
1.3	Retrieve the foundations of moral and professional to be enjoyed by those in charge of building the system	Lecture and Discussion	Achievement Test, Home Duties
1.4	List the basic information needed to build and evaluate the computer system	Lecture and Discussion	Achievement Test, Home Duties
2.0	Cognitive Skills		
2.1	Analyze the problem using the appropriate analysis tools	Lecture, Discussion, and Laboratory	Achievement Test, Home Duties, testing in laboratory
2.2	Design the system or part of it using the appropriate design tools	Lecture, Discussion, and Laboratory	Achievement Test, Home Duties, testing in laboratory
2.3	Apply the system stages by using software modeling languages appropriate for each stage	Lecture, Discussion, and Laboratory	Achievement Test, Home Duties, testing in laboratory
2.4	Evaluate the system, especially in the field of information systems	Lecture, Discussion, and Laboratory	Achievement Test, Home Duties, testing in laboratory
3.0	Interpersonal Skills & Responsibility		
3.1	Contribute to the production of the project in collaboration with others	Discussion and laboratory	Achievement Test, Home Duties, testing in laboratory
3.2	Implement what it costs in the framework of the action plan for the production or improve the system	Discussion and laboratory	Achievement Test, Home Duties, testing in laboratory
4.0	Communication, Information Technology, Numerical		
4.1	Prepare the required documentation or part of it and for the construction of the system according to the standards writing documents	Discussion and laboratory	Home Duties, observation in laboratory
4.2	Use the foundations of mathematics at the expense of time and the course of action and the cost to produce the necessary system.	Discussion and laboratory	Home Duties, observation in laboratory
5.0	Psychomotor		
5.1	NaN		
5.2	NaN		

Suggested Guidelines 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	Mid-term exam	8	20
2	Quizzes and Assignments	During the semester	10
3	Mid-Tem Lab Exam	10	10
4	Final Lab Exam	15	10
5	Final Exam	At the end of semester	40
6	Attendance	During the semester	10

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)

E. Learning Resources

1. List Required Textbooks

- Essentials of Systems Analysis and Design. Valacich, George, and Hoffer, Pearson, 2012.
- Systems Analysis and Design. Kendall K. E. and Kendall J. E. Pearson, 2011.

2. List Essential References Materials (Journals, Reports, etc.)

3. List Recommended Textbooks and Reference Material (Journals, Reports, etc)

4. List Electronic Materials (eg. Web Sites, Social Media, Blackboard, etc.)

5. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

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.)
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)

G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching <ul style="list-style-type: none">✓ Distribution of a questionnaire for students to know how to achieve the goals in the theoretical and practical side.
2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor <ul style="list-style-type: none">✓ Discussions with colleagues who specialize in teaching methods and means of learning.✓ Self-evaluation of the performance of the teacher.✓ Discussions with other colleagues who taught this course.
3 Processes for Improvement of Teaching <ul style="list-style-type: none">✓ Diagnose weaknesses and turn them into strengths.✓ Discussions about the decision and methods of teaching✓ Study the needs of the labor market of college graduates
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)
5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.

Faculty or Teaching Staff: Dr. Mohammed Mahdy Bard

Signature: _____ **Date Report Completed:** _____

Received by: _____ **Dean/Department Head**

Signature: _____ **Date:** _____