Course Specifications

Course Title:	Graduation Project in Cyber Security (2)
Course Code:	**CSEC 420**
Program:	**Information and Computer Sciences**
Department:	**Computer Science and Information**
College:	**College of Science Al Zulfi**
Institution:	**Majmaah University**

Table of Contents

A. Course Identification

1. Credit hours:2
2. Course type **a.** University ☐ College ☐ Department ■ Others ☐ **b.** Required ■ Elective ☐
3. Level/year at which this course is offered: 7th
4. Pre-requisites for this course (if any)**:** CSEC 410
5. Co-requisites for this course (if any)**:** None

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	12	20 %
2	**Blended**	12	20 %
3	**E-learning**	12	20 %
4	**Correspondence**	12	20%
5	**Other**	12	20 %

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	**Lecture (Discussion with Students)**	8
2	**Laboratory/Studio**	32
3	**Tutorial**	0
4	**Others** (specify): Self learning	20
	Total	60
Other Learning Hours*		
1	**Study**	10
2	**Assignments (Task to complete in the concerned week)**	10
3	**Library**	40
4	**Projects/Research Essays/Theses**	40
5	**Others** (specify)	
	Total	100

* The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description: In this course, each group will continue developing their software systems started in IT420. The students are supposed to apply design and engineering skills in the accomplishment of a single goal. In this context the skills mentioned may be in the general area of design and engineering in its broadest sense, or may be very specifically related to particular tools. At the end of the semester, each group must submit a final report, which

documents completely the information system from the problem definition phase to the implementation phase and contains a user manual the information system .
Team work, leadership, communication and writing skills are all important ingredients for a successful project..

2. Course Main Objective:

1 Ensure that the graduate student is able to use his knowledge of his writing, rhetoric, research and organizational abilities.

2 Give the student a chance to apply what he has learned and implement it on the ground.

3 Give the student an opportunity to apply the ethics of the profession before actually joining the work.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge:**	
1.1	Learn new tools and technologies and understand of best practices and standards and their application	K3-CSEC
2	**Skills :**	
2.1	Design, implement, develop and evaluate the computer-based system of the project to meet desired needs	S3- CSEC
	Use and apply current technical concepts and practices in the core information technologies of human computer interaction, information management, programming, networking, web systems and technologies	
3	**Competence:**	
3.1	Function effectively on teams to accomplish a common goal and communicate effectively with a range of audiences.	C3- CSEC

C. Course Content

No	List of Topics	Contact Hours
1	Feasibility study: To produce a feasibility study document that evaluates the costs and benefits of the proposed computer based application	12
2	Planning and requirement analysis and specification: To produce an SRS document identifying the qualities required of the application, in terms of functionality, performance, ease of use, portability, and so on	12
3	Design and Specification: To produce an document to transform the requirements specified in the document into a structure that is suitable for implementation in some programming language	12
4	Coding, Module Testing, Integration and System Testing: The output of the coding and module testing phase is an implemented and tested collection of modules. During the integration and system testing phase, the modules are integrated in a planned manner. The objective of system testing is to determine whether the software system performs per the requirements mentioned in the document	16
5	Delivery and Making Corrective Maintenance: The system is distributed to the users. Corrective maintenance means repairing processing or performance failures or making changes because of previously uncorrected problems.	8

Total	60

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge**		
1.1	Knowledge of basic science to understand the principles of scientific analysis	Provide theoretical on the concepts of graduation project.	Degree for writing sample graduation project proposal.
1.2		Discussion with various real life examples.	The attendance of the introductory lectures for the project
1.3		Discussion with students for problem formulation and writing research proposal	The initial report of the graduation project presentation
2.0	**Skills**		
2.1	Learn the skilled needed by a System Analyst to be affective, professional and a successful individual	Practical application , Group Discussion, Lectures and definition of the graduation project.	Student attendance for course introductory lectures, Provide periodic reports on what has been achieved during those periods.
3.0	**Competence**		
3.1	Ability to plan the research project and start its implementation		Evaluation of the offer at the end of the semester

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Each group must identify a problem domain, define the problem, identify and specify the requirements	3	5 %
2	Document the current system, analyze it, propose alternative systems, and design a solution.	3	10 %
3	The design must include the definitions of all the required system models, such as the data model and the functional model.	3	10 %
4	At the end of the course, each group must submit a formal report documenting the complete process.	3	10 %
5	Showing initial outputs of the project	1	10 %

#	Assessment task*	Week Due	Percentage of Total Assessment Score
6	Final submission of the project	1	15 %
7	Presentation to the projects committee for arbitration	1	40 %
8	Total	15	100 %

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

- Determine meeting appointments for the weak' students to solve their problems and give them academic advices.
- One office hour daily
- Dealing a workshops.

Motivate students

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	Dennis P. Miller (Author), Building a Project Work Breakdown Structure: Visualizing Objectives, Deliverables, Activities, and Schedules (ESI International Project Management Series) 1st Edition, 2009-CRC Press.
Essential References Materials	Analysis and Design of Information Systems by Langer, Arthur M.
Electronic Materials	Determines as the course is going on.
Other Learning Materials	Videos and presentations are available with instructor

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Classrooms and Labs as those that are available at college of science Az Zulfi
Technology Resources (AV, data show, Smart Board, software, etc.)	Smart Board and required software
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	N/A

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Questionnaires (course evaluation) filled by the students and acquired electronically by the University	Students	Indirect Assessment
Students-faculty management meetings		
Departmental internal review of the course.	Department Council	Questionnaires
Discussion with the industrial partners to enhance the courses in order to meet their needs.	Stockholders	Meetings
Midterms and Final Exam	Course Coordinator Staff	Direct Assessment
Project Evaluation		

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	
Reference No.	
Date	