



University: *Fayoum University*
 Faculty: *Computers and Information*
 Department: *Computer Science*



Course Specification

1- Basic Information								
Code: CSC 400	Course Title: Project	Year/Level: Fourth year – First term						
Programme: B.Sc degree in Computer Science	Number of units:	<table border="1"> <tr> <td>Lecture:</td> <td>0 hrs/ week</td> </tr> <tr> <td>Tutorial:</td> <td>1 hrs/ week</td> </tr> <tr> <td>Practical:</td> <td>4 hrs/ week</td> </tr> </table>	Lecture:	0 hrs/ week	Tutorial:	1 hrs/ week	Practical:	4 hrs/ week
Lecture:	0 hrs/ week							
Tutorial:	1 hrs/ week							
Practical:	4 hrs/ week							

2- Aims of Course:	The general aim of the project is to allow each student to integrate all the disciplines he has studied in a unified chunk of knowledge. On the behavioral side, students are allowed to work in a team so as to practice working in a collaborative environment. This emphasizes also a proper documentation and presentation procedure
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3- Intended Learning Outcomes	
A- Knowledge and Understanding:	<p>A1. Identify quality criteria that enable future development of computer-based systems.</p> <p>A7. Demonstrate essential facts, concepts, principles and theories relating to computing and information and computer applications as appropriate to the program of study</p> <p>A9. Identify programming fundamentals and languages, algorithms analysis, and data structures</p> <p>A10. Identify and explain the fundamental concepts, principles, and techniques needed for the analysis, development, validation, verification, deployment, and operations of computer-based systems</p> <p>A12. Selects advanced topics to provide a deeper understanding of some aspects of the subject</p> <p>A13. Define the mapping of real-world problems to algorithmic solutions</p> <p>A14. List the professional, moral and ethical issues involved in the exploitation of computer technology and be guided by the appropriate professional, ethical and legal practices relevant to the computing and information industry</p> <p>A15. Demonstrate the extent to which a computer-based system meets the criteria defined for its current use and future development</p> <p>A16. Demonstrate the life cycle principles of the information systems applications</p>

	<p>On completing the project, the students should be able to:</p> <ul style="list-style-type: none"> a1. Establishing contacts with the industry/community a2. Practicing how to identify current real problems in the industry/community and how to formulate the problem in the form of "An Essential Question" a3. List the main objectives of the project
<p>B- Intellectual Skills:</p>	<ul style="list-style-type: none"> B1. Analyze real problems, and appropriate problem solving methods that satisfy commercial or industrial constraints and analyze results B2. Determine different computer- system application attributes, components, relationships, patterns, architecture, and source of errors. B3. Generate a range of innovative design patterns and solutions to solve a computer science problem containing a range of commercial and industrial constraints B4. Apply solutions to a computer science problem, follow-up on solution to verify it, and if necessary restrict the solution methodologies upon the results. B5. Discuss factors other than computational efficiency that influence the choice of algorithms, such as programming time, maintainability, and the use of application-specific patterns in the input data. B6. Analyze the extent to which a computer-based system meets the criteria defined for its current use and future development B7. Determine goals for problem solving and test the result of the solution of the problems B8. Identify criteria to measure and interpret the appropriateness of a computer system for its current deployment and future evolution B10. Generate innovative designs to solve a problem containing a range of commercial and industrial constraints. B11. Evaluate a range of innovative design patterns and solutions to solve a computer science problem containing a range of commercial and industrial constraints. B12. Define the standard methodologies for solving computer-based and information systems problems B14. Identify the substituted solutions for the commercial, time, and industrial problems that faces computer-based and information systems applications B15. Define the required tools and techniques to deliver the intended solutions for computer-based and information systems problems <p>On completing the project, the students should be able to:</p> <ul style="list-style-type: none"> b1. Define the problem

	<p>b2. Demonstrate the motivation of work</p> <p>b3. Demonstrate the system design process</p>
C- Professional and Practical Skills:	<p>C1. Analyze and improve organizational processes from an ICT perspective</p> <p>C2. Negotiate effectively with clients, other stakeholders and peers</p> <p>C3. Investigate the professional, economic, social, environmental, moral and ethical issues involved in the sustainable exploitation of computer technology and be guided by the adoption of appropriate professional, ethical and legal practices</p> <p>C4. Outline basic designs for data storage conceptual schemes</p> <p>C6. Employ the statistical, probabilistic and mathematical techniques in analyzing data and interpreting experimental results</p> <p>C7. Plan, schedule, control, and lead ICT projects</p> <p>C8. Deploy appropriate tools for the construction and documentation of computer-based systems that are used to solve practical problems</p> <p>C9. Deploy different modeling techniques to model and analyze real life computing problems</p> <p>C10. Evaluate computer-based systems from various perspectives.</p> <p>C11. Develop a range of fundamental research skills that enable the graduate to continuously increase his knowledge, advance his career and pursue graduate studies.</p> <p>C12. Design, implement, maintain, and manage software systems. Assess the implications, risks or safety aspects involved in the operation of computing equipment within a specific context</p> <p>C13. Handle a mass of diverse data, assess risk and draw conclusions</p> <p>C14. Write concise, comprehensible and cognitively efficient business communications' media</p> <p>On completing the project, the students should be able to:</p> <p>c1. Ability to solve real problems and implement designed solutions</p> <p>c2. Work coherently and successfully as a part of a team in assignments</p> <p>c3. Modify ideas and sharing with others</p>
D- General and transferable Skills	<p>D1. Edit and review a professional report or document and design its storage, distribution and retention standards.</p> <p>D2. Use effective information-retrieval skills (including the use of browsers, search engines and catalogues) and general IT facilities</p> <p>D3. Work as a member of a development team, recognizing</p>

	<p>the different roles within a team and different ways of organizing teams.</p> <p>D4. Demonstrate independent critical thinking and problem solving skills</p> <p>D5. Communicate effectively through oral, written, and visual means</p> <p>D6. Demonstrate skills in team work, team management, time management and organizational skills.</p> <p>D7. Prepare technical reports to a professional standard</p> <p>On completing the project, the students should be able to:</p> <p>d1. Practicing proper technical writing and oral presentation skills</p> <p>d2. Applying the knowledge and skills earned throughout the program</p> <p>d3. Work cooperatively and effectively in a group</p>
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4-Course Content:	<ol style="list-style-type: none"> 1. Discussion with students the method of selecting the graduation project 2. Determine the subject of the project 3. State the project aim and objectives 4. Formulation / definition of the problem 5. Motivation and Applications 6. Literature Survey 7. Project Time Planning 8. System design process 9. Oral presentation
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5- Teaching and Learning Methods:	<ol style="list-style-type: none"> 1. Tutorials 2. Practical lab work 3. Class discussions 4. Internet searches 5. Independent Work 6. Group projects 7. Problem-based Learning 8. Seminars 9. Report writing
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6- Teaching and Learning Methods for handicapped students :	-
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7- Student Assessment	
A- Assessment Methods:	<ol style="list-style-type: none"> 1. Proposal 2. Presentations 3. Individual Discussion
B- Assessment schedule:	Proposal Submission: Week 3

	Presentation Week 13
C- Weighting of assessments:	Semester Work: 40% Documentation and CD: 30% Final Presentation and Discussion: 30%

8- Books and References	
A- Notes:	To be determined by Project Supervisor
B- Essential Books (Text Books):	To be determined by Project Supervisor
C- Recommended Books:	To be determined by Project Supervisor
D- Periodicals, Web sites, ... etc	To be determined by Project Supervisor

Course Professor: Dr Mohamed Khafagy Department Head: Dr Amera Idres

Course Content Intended Learning Outcomes Matrix

Course Title: Project

Course Code: CSC 400

Course Content	Week	Knowledge & Understanding			Intellectual Skills			Professional & Practical Skills			General & Transferable Skills		
		a1	a2	a3	b1	b2	b3	c1	c2	c3	d1	d2	d3
1. Discussion with students the method of selecting the graduation project	1		x					x	x	x		x	x
2. Determine the subject of the project	2		x		x			x	x	x		x	x
3. State the project aim and objectives	3	x	x	x	x			x	x	x	x	x	x
4. Formulation / definition of the problem	4		x		x			x	x	x		x	x
5. Motivation and Applications	5			x		x			x	x		x	x
6. Literature Survey	6:8	x							x	x		x	x
7. Project Time Planning	9								x	x		x	x
8. System design process	10:12	x					x		x	x		x	x
9. Oral presentation	13								x	x		x	x

Course coordinator: Dr. Mohamed Khafagy

Head of Department: Dr. Amara Idres