Course Specifications

General Information

Course name	Graduation Project II
Course number	ITCS4331
Faculty	
Department	
Course type	Major Needs
Course level	4
Credit hours (theoretical)	3
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - Applying, during a significant period and in a relevant context, the knowledge and academic skills that have been acquired during the program study
2 - Enlarging the knowledge domain by specialized study and engage more practical skills
3 - Understanding and evaluating risks and issues surrounding information systems projects
4 - Basic and more advanced techniques and concepts associated with project management, as how to develop their own
5 - Integration of management techniques in a Software Development Life Cycle
6 - Understanding the diverse organizational and managerial aspects of software projects
7 - Create management plans for technology projects
8 - Complete projects on schedule and within budget while meeting performance and quality objectives

Intended Learning Outcomes

Knowledge and Understanding	* a1. Demonstrate basic knowledge and understanding of a core of analysis, algebra, applied mathematics and statistics * a2. Demonstrate strong knowledge of information systems * a3. Demonstrate strong skills of database management systems * a4. Discuss the principles and techniques of a number of application areas informed by the research directions of the subject, such as data mining, information engineering, and geographical information systems * a5. Explain the broad context within which Computer information Science including issues such as quality, reliability, enterprise, employment law, accounting and health * a6. Discuss the challenges inherent in the maintenance and evolution of software systems, and the techniques and best practices currently available for dealing with them * a7. Provide a deeper understanding of some aspects of the subject, such as Unified Process, object-oriented analysis and design, e-commerce technologies, and Decision support systems * a8. Interpreting and analyzing data qualitatively and/or quantitatively * a9. Identify tools, practices and methodologies used in the specification, design, implementation and critical evaluation of information and computer systems * a10. Identify methods used in defining and assessing criteria for measuring the extent to which an information system is appropriate for its current deployment and future evolution * a11. Outline research fields across a range of knowledge areas
Intellectual Skills	* b1. Define traditional and nontraditional information systems problems, set goals towards solving them, and. observe results * b2. Perform comparisons between (methods, techniques...etc) * b3. Identify attributes, components, relationships, patterns, main ideas, and errors * * b4. Summarize the proposed solutions ad their results * b5. Restrict solution methodologies upon their results * b6. Establish criteria, and verify solutions * b7. Identify a range of solutions and critically evaluate and justify proposed design solutions * b8. Solve computer science problems with pressing commercial or industrial constraints * * b9. Generate an innovative design to solve a problem containing a range of commercial and industrial constraints * b10. Perform problem analysis from written descriptions; derive requirements specifications from an understanding of problems (analysis, synthesis) * b11. Create and/or justify designs to satisfy given requirements (synthesis, evaluation, application)
Professional Skills	* c1. Use appropriate programming languages, web-based systems and tools, design methodologies, and database systems * c2. Apply the principles of effective information management, information organization, and information-retrieval skills to information of various kinds, including text, images, sound, and video * c3. Apply the principles of human-computer interaction to the evaluation and construction of a wide range of materials including user interfaces, web pages, and multimedia systems * c4. Identify any risks or safety aspects that may be involved in the operation of computing equipment within a given context

Professional Skills	* c5. Deploy effectively the tools used for the construction and documentation of software, with particular emphasis on understanding the whole process involved in using computers to solve practical problems * c6. Commercialize knowledge and skills to computing community and industry
General Skill	* d1. Collaborate effectively within multidisciplinary team * d2. Work in stressful environment and within constraints * d3. Communicate effectively * d4. Demonstrate efficient IT capabilities * d5. Lead and motivate individuals * d6. Manage tasks and resources * d7. Search for information and adopt life-long self-learning * d8. Acquire entrepreneurial skills * d9. Develop a range of fundamental research skills, through the use of online resources, technical repositories and library-based material

Course Contents

1 - - Introduction
2 - - System design
3 - - System implementation
4 - Product
5 - Testing
6 - Documentation
7 - Presentation and Discussion

Teaching and Learning Methods

1 - Graduation Project Guides

Students Assessment

Assessment Method	TIME	MARKS
Supervisor(s)	During the 16 weeks	50
Discussion Committee(2 Members)	16th week	50

Books and References

Essential books	Suggested by the advisor of each group
Recommended books	Suggested by the advisor of each group

Knowledge and Skills Matrix

Main Course Contents	Study Week	Knowledge and Understanding	Intellectual Skills	Professional Skills	General Skill
Introduction	1	a1-a8,a11	b1-b11	c1-c5	d1-d9
System design	2-3	a1-a9	b1-b11	c1-c5	d1-d8
System implementation	4-10	a1-a9	b1-b11	c1-c5	d1-d8
Product	11-12	a1-a8	b1-b11	c1-c6	d1-d8
Testing	13	a1-a10	b1-b11	c1-c5	d1-d8
Documentation	14-15	a11			d1-d9
Presentation and Discussion	16				d1-d8