University: ***Fayoum University***
Faculty: ***Computers and Information***
Department: ***Information System***
PhD

Course Specification

1- Basic Information		
BSC 701	**Course Title:** seminar	
Program: ***Information System PhD***	**Number of units: 3**	

2- Aims of Course:	1. The general aim of the seminar is to allow each student to integrate all the disciplines he has studied in a unified chunk of knowledge. 2. On the behavioral side, students are allowed to work in a team so as to practice working in a collaborative environment. 3. This emphasizes also a proper documentation and presentation procedure.

3- Intended Learning Outcomes	
A- Knowledge and Understanding:	a1) Providing all students with a culminating activity that demonstrates the skills of combining research, a2) Providing all students with writing, implementation and oral presentation/demonstration in a multidisciplinary seminar. a3) Giving students an opportunity outside the classroom to integrate their various courses of study with their individual interests.
B- Intellectual Skills:	b1) Challenge the student to go beyond his/her educational program. b2) Expand his/her personal knowledge to real life situations that will promote lifelong learning.
C- Professional and Practical Skills:	c1) Complete a project in one or more areas of concentrated study under the guidance and supervision of the faculty. c2) demonstrate self-initiative : initiate any request for support
D- General and transferable Skills	d1) Work in team to exchange data from different analytical techniques d2) Generate various an suitable reports d3) Prepare the student for future endeavors in post-secondary education or work. d4) Know the computing environment and installation

	procedure

4-Course Content:	Students are allowed to choose among a number of projects suggested by the different staff members. The main items which should be fulfilled are: 1. Selecting a topic, team and supervisor 2. Scheduling time to complete the project 3. Completing requirements on time. 4. seminar design and architecture 5. seminar documentation 6. Seeking help when needed. 7. Utilize the resources available at the Faculty

5- Teaching and Learning Methods:	1. Tutorials 2. Computer-lab Sessions 3. Practical lab work 4. Class discussions 5. Internet searches 6. Independent Work 7. Problem-based Learning

6- Teaching and Learning Methods for handicapped students :	-

7- Student Assessment	
A- Assessment Methods:	1. Year work evaluation 2. Oral exam
B- Assessment schedule:	Year work evaluation: All the year Oral Examination: At the end of the semester
C- Weighting of assessments:	Year work evaluation: 40% Oral Examination: 60%

8- Books and References	
A- Notes:	-
B- Essential Books (Text Books):	-
▪ C- Recommended Books:	-
D- Periodicals, Web sites, … etc	-

Course Professor: …… Department Head:

University: ***FayoumUniversity***
Faculty: ***Computers and Information***
Department: P.H(information System)

1- Basic Information		
Code: IS 715	**Course Title: Advanced Database Systems**	**Year/Level: Post Graduate**
Programme : PhD of Information Systems	**Number of units:** **Lecture:** 2 hrs/ week **Tutorial:** 0 hrs/ week **Practical:** 2 hrs/ week	

2- Aims of Course:	• 1.This course aims to provide students with the advanced concepts of relational databases. • 2. Students will gain knowledge to: • Understand transaction management and concurrency control • Understand file organization, indexing and hashing • Understand query processing and query optimization • Understand recovery systems. • Understand Database Security and Authorization • Understand distributed databases and client/server architecture • Understand object-oriented databases • Understand emerging database technologies and Applications

3- Intended Learning Outcomes

A- Knowledge and Understanding:	A1 Locate and classify the Theories, fundamentals and modern knowledge in the field of **Information System** and related fields a1.Understand file organization, indexing and hashing a2. understand of fundamental concepts and issues of transaction management, concurrency control, and recovery systems a3.Understand query processing and query optimization a4.Discuss the concepts of query optimization, concurrency control, recovery management and distributed processing a5. Explain relational, semantic, and object-oriented data models a6.Understand distributed databases and client/server architecture a7.Understand emerging database technologies A4. Recognize Principles and basics of quality in professional practice in the field of **Information System** a8. Explain relational, semantic, and object-oriented data models a9. learn different database model. A5. Recognize concerning the effects of professional practices on the environment and ways of developing and maintaining the environment a10.understand the problems and potentials of current database systems
B- Intellectual Skills:	B1.Analysis and evaluation of information in the field of specialization and measurement and extraction b1.analyze and evaluate information in database organization b2.analyze the performance of database systems using test collections b3.Characterize Schedules based on Recoverability/ Serializability b4.analyze the recovery schemes b5. analyze the recovery in multi-database system

	B2. Solving specialized problems based on available data b3. Resolve a wide range of database systems problems B6. Planning to develop performance in the field of **Information system** b4.link different knowledge to solve professional problems. b5. evaluate different database model.
C- Professional and Practical Skills:	C1. Practice the professional, basic and modern skills in the field of **Computer science** c1. Support transaction in SQL C3 Evaluation and development of existing methods and methods in the field of **Computer science** c2 Demonstrate the existing methods and algorithms in concurrency control/ recovery c3 Demonstrate database security and authorization c4 Perform database experiments in which they transform theoretical models to a working system c5 Testing and evaluating database experiments c6 Examine and analyze the result C5 Planning to develop professional practice and develop the performance of others c7.link different knowledge to solve professional problems. c8. evaluate different database model
D- General and transferable Skills	D1 Recognize the Effective communication of various types D2 Use of Computer science to serve professional practice D3 Use to Educate others and assess their performance D4 Use to Self-assessment and continuous learning D5 Use different sources to obtain information and knowledge D6 Practice Work in a team, and lead teams D7 Practice Managing scientific meetings and the ability to manage time

4-Course Content:	1. File Organization 2. Internal Design of a Mini Database Engine 3. Object-Oriented Databases 4. Query Processing and Query Optimization 5. Transaction Management and Concurrency Control 6. Concurrency control techniques 7. Database Recovery Techniques 8. Database security and authorization 9. Data Warehousing and Data Mining 10. Distributed Databases and Client/Server Architecture 11. Advanced database concepts and emerging applications 12. Advanced database models, systems, and applications

5- Teaching and Learning Methods:	8. Lectures 9. Tutorials 10. Class discussions 11. Internet searches 12. Independent Work 13. Group projects 14. Problem-based Learning

6- Teaching and Learning Methods for handicapped students :	-

7- Student Assessment	
A- Assessment Methods:	1. Assignments 2. Practical exam 3. Oral exam 4. Final written exam
B- Assessment schedule:	Practical Examination: Week 13

	Oral Examination: Week 14 Final Examination: Week 15
C- Weighting of assessments:	Practical Examination: 20% Oral Examination: 20% Final-term Examination: 60%

8- Books and References

A- Notes:	-
B- Essential Books (Text Books):	▪ Fundamentals of Database Systems. Ramez Elmasri, and Shamkant B. Navathe , Sixth Edition, Boston:Addison-Wesley , 2011.
C- Recommended Books:	▪ Fundamentals of Database Management Systems. Mark L.Gillenson, 2012
D- Periodicals, Web sites, … etc	-

Course Professor: …… Department Head: ……

University: ***Fayoum University***
Faculty: ***Computers and Information***
Department: P.H (Information Systems)

Course Specification

1- Basic Information		
Code: IS 709	**Course Title:** Advanced E-Commerce	**Year/Level: Pre Ph.D. (Information Systems)**
Programme :	**Number of units:** **Lectu** 3 hrs/ week **Tutorial:** **Practi** 2 hrs/ week	

2- Aims of Course:	
	1. The main objective of the course is to explain to students the role of information technology as a business enabler in advanced model 2. Identify and explain to students the meaning and importance of electronic commerce in which transactions take place over networks such as buying and selling services and goods via the internet. 3. Allow the student to study and evaluate different e-commerce models and applications. 4. Allow the student to study and evaluate the organizational fit and suitability of business applications and interpret the interaction between information technology, customers, processes, data, infrastructure, participants, and environment in an organization. 5. Allow students to relate and integrate the e-commerce methodologies with recent social networks techniques and study the importance of social network in improving the e-commerce value

3- Intended Learning Outcomes	
A- Knowledge and	A1. Identify quality criteria that enable future development

Understanding:	of computer-based systems. a1) Understand the basic concepts of e-commerce and e-marketplaces a2) Understand the importance of e-commerce and its applications A6. Explain essential concepts, principles, and theories related to computer-application development such as: databases, information systems development. a3) Understand the different e-commerce models and applications a4) Understand the ethical and social issues in e commerce A12. Selects advanced topics to 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 a5) Describe the role of information technology and different methodologies used in the design,
B- Intellectual Skills:	B1. Analyze real problems, and appropriate problem solving methods that satisfy commercial or industrial constraints and analyze results b1) Discuss different concepts of e-commerce and the relation between information and business. B3. Generate a range of innovative design patterns and solutions to solve a computer science problem containing a range of commercial and industrial constraints. b2) Describe the different development methods used to build business information systems. b3) Identify problems facing different organizations in various fields when they convert some or all of their work to e-commerce and put solutions to these problems. 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 . b4) Discuss e-payments methods B8. Identify criteria to measure and interpret the appropriateness of a computer system for its current deployment and future evolution. b5) Determine ROI for ecommerce applications B10. Generate innovative designs to solve a problem containing a range of commercial and industrial constraints. b6) Measuring Impact of e-commerce on business processes, improving marketing and sales and transforming of organizations B11. Evaluate a range of innovative design patterns and solutions to solve a computer science problem containing a range of commercial and industrial constraints.

	b7) Discuss E-government as a e-commerce application
C- Professional and Practical Skills:	C1. Analyze and improve organizational processes from an ICT perspective. c1) Use current studies to address business needs for information systems C2. Negotiate effectively with clients, other stakeholders and peers. c2) Analyze given information to decide the correct e commerce application to be used. 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. c3) Searching the web for e-commerce ethics and rules 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. c4) Designing e-commerce application as a pilot system
D- General and transferable Skills	D3. Work as a member of a development team, recognizing the different roles within a team and different ways of organizing teams. d1. Applying teamwork project D6. Demonstrate skills in team work, team management, time management and organizational skills. d2 Introducing the project for other students

4-Course Content:	1. Overview of electronic commerce includes objectives, fundamentals, components and its relation to e-business. 2. E-commerce models and applications, strategies and implementations. 3. E-marketplaces, structures, types, mechanisms and impacts.E-Commerce opportunities. Service quality and cost effectiveness. 4. Internet service Providers, Intranets, marketing. Basics of marketing a site on the Net 5. Extranet and e-commerce applications 6. Electronic purchasing and shopping models using search engines, electronic catalog, shopping carts and information portals. 7. Customer relationship management, Suppliers management and security considerations. 8. Impact of e-commerce on business processes, improving marketing and sales and transforming of organizations 9. Consumer behavior, market research and different types of advertising via the web 10. Security from the information technology perspective including protocols, and transactions 11. Web-copyright issuers, ethic markets, Growth of business to business commerce 12. Developing E-commerce Websites Using Joomla and WordPress

	13. Getting Started with Woo-Commerce 14. How to Setup Shop using Woo-Commerce 15. Payment Gateways, Shipping Options 16. Adding Products, Store Customization, Sales Management

5- Teaching and Learning Methods:	1. Lectures 2. Tutorials 3. Computer-lab Sessions 4. Practical lab work 5. Class discussions 6. Internet searches 7. Independent Work 8. Group projects 9. Research studies

6- Teaching and Learning Methods for handicapped students :	-

7- Student Assessment	
A- Assessment Methods:	1. Midterm written exam 2. Oral exam 3. Practical exam 4. Final written exam
B- Assessment schedule:	Midterm Examination: Week 7 Practical Examination: Week 13 Oral Examination: Week 14 Final Examination: Week 15
C- Weighting of assessments:	Mid-Term Examination: 10% Oral Examination: 10% Practical Examination: 20% Final-term Examination: 60%

8- Books and References	
A- Notes:	Handed out will be given to the students part by part
B- Essential Books (Text Books):	King, Mckay,Marshall and Lee, "Electronic Commerce", Pearson publisher.
C- Recommended Books:	Kenneth Laudon, et al , “E-Commerce”. Janice Reynolds, "The Complete E-Commerce Book: Design, Build & Maintain a Successful Web-based

	Business ".
D- Periodicals, Web sites, … etc	-http://www.wordpress.org

Course Professor: Assoc. Prof. Dr. Haytham Alfeel Department Head: Prof.Dr. Nabila Hassan

University: ***Fayoum University***
Faculty: ***Computers and Information***
Department: P.H (Information Systems)

Course Specification

1- Basic Information		
Code: IS 701	**Course Title:** Advanced Topics in Information Retrieval	**Year/Level: Post Graduate**
Programme : PhD of Information Systems	**Number of units:** **Lecture:** 2 hrs/week **Tutorial:** 0 hrs/week **Practical:** 2 hrs/week	

2- Aims of Course:	• Understand the principles, techniques and methods behind advanced techniques associated with information retrieval. • apply principles, techniques and methods from the information retrieval domain on advanced applications • understand approaches for efficient indexing in addition to the querying approaches are studied. • understand modern techniques for crawling data from the web, and support functions selection of advanced application areas such as document summarization, cross-lingual retrieval, and image search • understand the underlined problems related to IR • Acquire the necessary experience to design, and implement real applications using Information Retrieval systems

3- Intended Learning Outcomes	
A- Knowledge and Understanding:	A1 Locate and classify the Theories and fundamentals related to the field of learning as well as **Information system** a1) Demonstrate the basic theories and analysis tools as they apply to information retrieval a2) understand the different models of IR a3) understand the common algorithms and techniques for information retrieval A4 Recognize Principles and basics of quality in professional practice in the field of **Information System** a4) learn and evaluate different retrieval algorithms and systems A5 Recognize concerning the effects of professional practices on the environment and ways of developing and maintaining the environment a5) understand the problems and potentials of current IR systems a6) Show a critical understanding of the efficient text indexing within which IR is constructed
B- Intellectual Skills:	B1 Analysis and evaluation of information in the field of specialization and measurement to solve problems b1) Describe the measures of IR systems b2) analyze the performance of retrieval systems using test collections b3) evaluate IR systems B2 Solving specialized problems with some lake of data b4) Resolve a wide range of IR problems B6 Planning to develop performance in the field of **Information system** b5) Analyze different models and algorithms and produce the right architecture b6) Describe and clarify how do we answer and process a query using different IR models b7) Discuss how the search engine could be improved

C- Professional and Practical Skills:	C1 Practice the professional, basic and modern skills in the field of **Information System** c1 Apply various indexing, matching, organizing, and evaluating methods to IR problems c2 deploy efficient techniques for the indexing of document objects that are to be retrieved C3 Evaluation and development of existing methods and methods in the field of **Information System** c3 apply information retrieval principles to locate relevant information in large collections of data c4 Perform IR experiments in which they transform theoretical models to a working system c5 Testing and evaluating IR experiments c6 Examine and analyze the result c7 implement advanced techniques for information retrieval
D- General and transferable Skills	D1 Recognize the Effective communication of various types D2 Use of Computer science to serve professional practice D3 Use to Educate others and assess their performance D4 Use to Self-assessment and continuous learning D5 Use different sources to obtain information and knowledge D6 Practice Work in a team, and lead teams D7 Practice Managing scientific meetings and the ability to manage time

4-Course Content:	• Boolean and vector-space retrieval models • Dictionaries and tolerant retrieval, Term vocabulary, Word statistics, Text preprocessing, Term weighting, Similarity function, Indexing, • Efficient text indexing • Index compression • Evaluation of retrieval • Relevance feedback, Query expansion, and the impact of document normalization. • IR techniques for the web, including crawling, link-based algorithms, and metadata usage • Document clustering and classification • Probabilistic information retrieval • Latent Semantic Indexing

5- Teaching and Learning Methods:	1. Lectures 2. Tutorials 3. Class discussions 4. Internet searches 5. Independent Work 6. Group projects 7. Problem-based Learning

6- Teaching and Learning Methods for handicapped students :	-

7- Student Assessment	
A- Assessment Methods:	1. Assignments 2. Practical exam 3. Oral exam 4. Final written exam
B- Assessment schedule:	Practical Examination: Week 13 Oral Examination: Week 14 Final Examination: Week 15
C- Weighting of assessments:	Practical Examination: 20% Oral Examination: 20% Final-term Examination: 60%

8- Books and References	
A- Notes:	-
B- Essential Books (Text Books):	C.D. Manning, P. Raghavan, H. Schütze. Introduction to Information Retrieval, Cambridge UP, 2008. (available in the Web, http://nlp .stanford.edu/IR-book/)
C- Recommended Books:	• R. Baeza-Yates, B. Ribeiro-Neto, Modern Information Retrieval, Addison-Wesley, 2011 (2nd Edition). • B. Croft, D. Metzler, T. Strohman, Search Engines: Information Retrieval in Practice, Addison-Wesley, 2009. • Ricci, F.; Rokach, L.; Shapira, B.; Kantor, P.B. (Eds.), Recommender Systems Handbook. 1st Edition., 2011, 845 p. 20 illus., Hardcover, ISBN: 978-0-387-85819-7 (a new edition is going to be published on 2015)
D- Periodicals, Web sites, … etc	- http://nlp.stanford.edu/IR-book/pdf/irbookonlinereading .pdf - http://nlp.stanford.edu/IR-book/newslides.html

Course Professor: …… Department Head: ……

University: ***Fayoum University***
Faculty: ***Computers and Information***
Department: P.H (information System)

1- Basic Information		
Code: IS 703	**Course Title: Advanced Topics in Information Systems**	**Year/Level: Pre Ph.D.**
Programme :	**Number of units:** **Lecture:** 3 hrs/ week **Tutorial:** 0 hrs/ week **Practical:** 2 hrs/ week	

2- Aims of Course:	This Course develop students capabilities to undertake research in the information systems field. Students will learn various research methods and study published research papers in which these research methods have been used. In particular, students will learn to evaluate how well the research methods have been used in published research papers. Students will also develop an understanding of some of the exciting, leading-edge research in the information systems field. This understanding may enable students to identify research topics that they would like to pursue, perhaps in an honors, masters, or PhD thesis

3- Intended Learning Outcomes	
A- Knowledge and Understanding:	A2. List the Fundamental topics in Computer Science and Information systems related to software engineering principles, computer organization and architecture. - a1) Understand the main information system concepts and fundamentals of information system. A6. Explain essential concepts, principles, and theories related to computer-application development such as: databases, information systems development. - a2) Student gets insights about recent developments in the field of information systems. They will deepen their knowledge about specific topics in information systems and are required to communicate the outcome to other course participants. The student should be able to critically review the assigned

	research papers, identify the main contributions and communicate the content in the form of a presentation as well as in a written report. - a3) Know the different classifications and types of information systems. - a4) Understand the main methodologies used in information system development. A10. Identify and explain the fundamental concepts, principles, and techniques needed for the analysis, development, validation, verification, deployment, and operations of computer-based and information systems. - a4) understand the different concepts & Principles of information systems. A11. Describe main concept of operating systems, information system and databases. - a5) understand the different components and applications of information systems. 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. - a6) understand the ethical principles and harmful attitudes related to information systems.
B- Intellectual Skills:	B4) understand the different tools and techniques used to deliver an information system. B12. Define the standard methodologies for solving information systems problems. - b1) Use information technologies to improve business process, business decision making, and gain competitive advantage. - b2) Have the ability to analyze information technology problems. B.15 Define the required tools and techniques to deliver the intended solutions for information systems problems - b3) Have the ability to analyze the requirements of a range of information systems and examine the design of alternatives based on the constraints imposed by society, organizations, and technology.

C- Professional and Practical Skills:	C10.Evaluate computer-based systems from various perspectives. - c1) became comfortable with fundamentals of information systems. - c2) be aware of different information technologies, and computer systems. - C3) the student has the necessary knowledge to independently investigate a given research topic based on specific research papers and other resources.
D- General and transferable Skills	D3. Work as a member of a development team, recognizing transferable Skills the different roles within a team and different ways of organizing teams. - d1) Practice working in teams through group projects. - d2) Oral communication skills through the assignments presentations. D5. Communicate effectively through oral, written, and visual means. - d3) Develop self-professional, scientific, and personal attitude towards continuous education - D6. Demonstrate skills in team work, team management, time management and organizational skills. - d4) Apply team management principles for the tasks given through the course. - d5) Apply time management for the task given and how to respect time issue
4-Course Content:	- Web information systems - Cross-media information systems - Web search - Web services - NoSQL databases - Mobile information systems - Collaborative information systems - Information system interaction - Information visualization - Human-information interaction - Security, privacy and trust

5- Teaching and Learning Methods:	1. Lectures 2. Tutorials 3. Class discussions 4. Internet searches

6- Teaching and Learning Methods for handicapped students :	-

7- Student Assessment	
A- Assessment Methods:	1. Assignments and Quizzes 2. Mid-Term written exam 3. Oral exam 4. Practical exam 5. Final written exam
B- Assessment schedule:	1. Mid-Term Examination: Week 7 2. Practical Examination: Week 13 3. Oral Examination: Week 14 4. Final Examination: Week 15
C- Weighting of assessments:	• Assignments and Quizzes: 0% • Mid-Term Examination: 10% • Practical Examination: 20% • Oral Examination: 10% • Final-term Examination: 60%

8- Books and References	
A- Notes:	-
B- Essential Books (Text Books):	- Advanced Topics in Information Technology Standards And Standardization Research Hardcover – December 13, 2005 - - Interactive Collaborative Information Systems, March 22, 2010, Editor: Frans C.A. Groen - NoSQL For Dummies, 2015, Author: Adam Fowler - Fundamental Concepts for Interactive Paper and Cross-Media Information Spaces Kindle Edition, 2017
C- Recommended Books:	-
D- Periodicals, Web sites, … etc	-

Course Professor: **Assoc. Prof. Dr. Haytham Al-Feel**

Department Head: **Prof.Dr. Nabila Hassan**

University: ***Fayoum University***
Faculty: ***Computers and Information***
Department: P.H (information System)

Course Specification

1- Basic Information		
Code: IS 713	**Course Title:** Selected Topics1 semantic web	**Year/Level: Pre Ph.D.**
Programme :	**Number of units:** **Lecture:** 3 hrs/ week **Tutorial:** 0 hrs/ week **Practical:** 2 hrs/ week	

2- Aims of Course:	The purpose of this course is to give a complete picture for the Semantic Web as a new emerging field that makes the content available to be read and used by human and intelligently by machines. In addition to that establishes meaning to data to be shared, automatically reasoned and reused via machine-readable applications. This course will give a brief history of the web and explains the meaning and the importance of the "Semantic Web." Then will cover the different technologies used for building the Semantic Web including Ontology representation, creation, design, reasoning, programming and applications. Start from URIs and namespaces, and then move to XML, XML Schema, RDF, RDF/XML, RDFS, Individuals, OWL, SPARQL, LoD techniques, SWRL, Modelling, Reasoning, and developing IoT applications based on semantic Web technologies.

3- Intended Learning Outcomes	
A- Knowledge and Understanding:	A7. Demonstrate essential facts, concepts, principles and theories relating to computing information & computer applications as appropriate to the program of study. a1) Study the concepts and principles relating to the

	Semantic web. a2) Define the differences between web2.0 and web3.0 A12. Selects advanced topics to 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. a3) Study of ontology engineering as an advanced topic related to the semantic web. a4) study of advanced vocabularies used on the web3.0 that extends the current web. A17. Demonstrate the new concepts and techniques that represent the future of information systems such as semantic web and Linked Open Data (LOD) *a5*) Demonstrate RDF,RDF Schema, and OWL as technologies representing ontologies via the semantic web *a6*) Study the principles of open data, linked open data and to represent the future of data through the web
B- Intellectual Skills:	B9. Compare between the classifications of (data, results, methods, techniques, algorithms... etc.). *b1*) Define the different methodologies used for building an ontology. *b2*) Apply the principles of ontology engineering for the ontology used in the course using RDF & OWL.
C- Professional and Practical Skills:	C8.Deploy appropriate tools for the construction and documentation of computer-based systems that are used to solve practical problems. c1) Apply the different tools used in this course such as portage and Jena to solve practical problems. c2) Compare between different tools used according to their capabilities, needs and when to use. C9.Deploy different modeling techniques to model and analyze real life computing problems. c3) Apply the ontology principles and life cycle to model real life problems.
D- General and transferable Skills	D3. Work as a member of a development team, recognizing the different roles within a team and different ways of organizing teams. d1) Identify the roles of the teamwork, how they can work with each other and how can distribute the tasks between team members. d2) Measure the team performance, and how they

	collaborate with each other. D5. Communicate effectively through oral, written, and visual means. d3) concentrate on the communication between the tutor and students in addition to the communication between the team itself. d4) Giving a chance to Students to present their work and negotiate with each other. D6. Demonstrate skills in team work, team management, time management and organizational skills. d5) Focus on how Students respect time , deadline and time management
4-Course Content:	▪ Introduction to Knowledge Representation and the Semantic Web o RDF o RDFS o SPARQL o Linked Data ▪ Introduction to the Web Ontology Language OWL ▪ Methods for developing and evaluating ontologies. ▪ Introduction to the Semantic Web Modelling and reasoning ▪ Developing Applications of the Semantic Web ▪ Introduction to Annotation and its tools ▪ Methods of how to build querying endpoints ▪ Studying the role of Semantic web in IoT
5- Teaching and Learning Methods:	1. Lectures 2. Tutorials 3. Class discussions 4. Internet searches

6- Teaching and Learning Methods for handicapped students :	

7- Student Assessment	
A- Assessment Methods:	6. Assignments and Quizzes 7. Mid-Term written exam 8. Oral exam 9. Practical exam 10. Final written exam
B- Assessment schedule:	5. Mid-Term Examination: Week 7

	6. Practical Examination: Week 13 7. Oral Examination: Week 14 8. Final Examination: Week 15
C- Weighting of assessments:	• Assignments and Quizzes: 0% • Mid-Term Examination: 10% • Practical Examination: 20% • Oral Examination: 10% • Final-term Examination: 60%

8- Books and References

A- Notes:	- Handed out to the students part by part.
B- Essential Books (Text Books):	• Semantic Web for Dummies. (2009) • Semantic Web Primer, Snellenburg JJ, van Stokkum IHM (2012). • Linked Open Data -- Creating Knowledge Out of Interlinked Data: Results of the LOD2, 2014 Sebastian Tramp, Volha Bryl, Sören Auer • Learning SPARQL: Querying and Updating with SPARQL 1.1 - 2011,Author: Bob DuCharme • Annotation for the Semantic Web, 2007, Handschuh, S., Staab, S. • Internet of Things: Converging Technologies for Smart Environments and Integrated Ecosystems, MARINA RUGGIERI HOMAYOUN NIKOOKAR, 2013
C- Recommended Books:	- Semantic Web Programming (Recommended) (2009) ▪ Owl: Representing Information Using the Web (2006) ▪ Ontology Language – Lee Lacy (2006)
D- Periodicals, Web sites, … etc	-

Course Professor: **Department Head:**

Assoc. Prof. Dr. Haytham Al-Feel **Prof.Dr. Nabila Hassan**

1- The attributes of the Information System PhD graduate & the ILO's: :

The attributes of the Information System PhD graduate	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	B8	B9	C1	C2	C3	C4	C5	D1	D2	D3	D4	D5	D6	D7
1. Mastering the applying of the basics and methodologies of scientific research.		√						√	√																	
2. Continuous work on the addition of knowledge in the field of specialization.	√																									
3. Integrating specialized knowledge with relevant knowledge and developing environmental relationships between them.					√			√					√	√	√		√	√			√			√		
4. Demonstrate deep awareness of current problems and modern theories in the area of specialization	√				√	√	√			√			√		√			√	√					√		
5. Identify professional problems and find innovative solutions.						√	√											√								
6. Mastering a wide range of specialized professional skills in the field of specialization	√					√	√	√					√	√	√	√		√		√	√	√			√	√
7. To develop new methods, tools and methods for practicing professionally.								√							√	√	√	√	√							
8. Use appropriate technological to serve his professional practice															√			√			√					
9. Communicate effectively and lead a team in different professional contexts														√								√			√	√
10. Utilizing and developing available resources efficiently and working to find new resources							√				√					√	√							√		√
11. Awareness of his role in community development and environmental conservation					√																					
12. Act to reflect the commitment to integrity, credibility and adherence to the rules of the profession		√	√	√								√							√							
13. Commitment to continuous self-development and the transfer of his work and experience to others													√				√					√	√		√	√

Program coordinator: Dr. Rasha Badry Department Head: Prof.Nabila Hasan