COURSE FILE SUMMARY

COURSE INFORMATION			
College / Institute / Center:	Management & Technology	**Department:**	E-Commerce
Program Title:	Bachelor of E-Commerce	**Program Code:**	ECR
Course Title:	**Intelligent Computing for Business**	**Course Code:**	**CR417**
# Hours:	------- 32 hr ---------	------ 28 hr -------	------- 3 hr ---------
	Lecture	Lab / Tutorial	Credit
Pre Requisites: CR315, and CR325			

COURSE AIM
This Course aims to introduce students to the Semantic Web which is Referred to as Web 3.0. As the Semantic Web is based on Description Logics (DLs), the course starts by introducing DL formalisim, syntax, and semantics. It then introduces the conceptual modeling of a domain using DLs. Finally, an introduction to the Resource Description Framework (RDF) and the Ontology Web Language (OWL).

COURSE OBJECTIVES
This course provides students with solid skills in modeling a domain using the OWL language which is based on Description Logics. Through the conceptual lectures and hands on practice in the Lab, the student should be able to create an Ontology (a knowledge base model of a domain). Then through integrating this ontology with a reasoner, the student should be able to infer new knowledge. Ultimately, this should be a viable tool for advance E-Commerce applications.

STAFF REQUIREMENTS

	Qualifications	Special Skills	Number
Lectures	Ph.D. CS or MIS		1
Tutorials	B.Sc. or M. Sc. CS or MIS		1
Laboratories / Workshops			

LECTURE SCHEDULE

#	Lecture Week	Hrs	Description
1	1st.	2	Course Overview, How Intelligent Computing can benefit E-Commerce
2	2nd.	2	Review of Propositional Logic
3	3rd.	2	Review of Predicate Logic
4	4th.	2	Review of Sets
5	5th.	2	Basic Components of Description Logics: Concepts, Individuals, Roles, and Operators.
6	6th.	2	Description Logics Syntax and Semantics
7	7th	2	**7th Week Exam.**
8	8th.	2	Reasoning in Description Logics
9	9th.	2	Conceptual Modeling Using Description Logics: Concepts and Subconcepts
10	10th.	2	Conceptual Modeling Using Description Logics: Roles
11	11th.	2	Conceptual Modeling Using Description Logics: Part-of and Materialization
12	12th.	2	Introduction to the Resource Description Framework (RDF)
13	13th.	2	RDF Syntax and Semantics
14	14th.	2	The Web Ontology Language (OWL)
15	15th.	2	Representing DL Ontologies using OWL
16	16th.	2	**Final Exam.**

TEXT BOOKS

Code*	Description
TB	The Semantic Web Primer, 2nd Edition by Grigoris Antoniou, and Frank van Harmelen, MIT Press.

REFERENCE BOOKS

Code*	Description
RB	Description Logics Handbook, Edited by Franz Baader, Diego Calvanese, Deborah McGuinness, Daniele Nardi, and Peter Patel-Schneider.

TUTORIAL SCHEDULE

#	Tutorial Week	Hrs	Topic
1	2nd.	2	Propositional Logic, and Logical Operators
2	3rd.	2	Implication and Double Implication
3	4th.	2	Logical Equivalence
4	5th.	2	Translating English Sentences and Bit Operations
5	6th.	2	Predicates and Quantifiers
6	7th	2	Sets
7	8th.	2	Set Operations
8	9th.	2	Functions
9	10th.	2	Relations and their Properties
10	11th.	2	n-ary Relations and their applications
11	12th.	2	Representing relations
12	13th.	2	Introduction to Graphs
13	14th.	2	Trees
14	15th.	2	Revision

LABORATORY WORKSHOP SCHEDULE

#	Laboratory Week	Hrs.	Code	Description

COMPUTER USAGE

GRADING AND ASSESSMENT METHOD
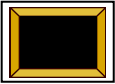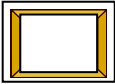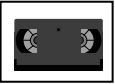
Week #	Points	Written	Oral	Term Paper	Continuous	Thesis	Practical		
7	30	30							
12	0	0							
1-15	30				30				
16	40	40							

READING MATERIAL

Code*	Description

* TB : Text Book   RB: Reference Book   ST: Standards / Codes   LN: Lecture Notes

SUPPLEMENTARY MATERIAL

Code*	Description

*PR: Periodical   SW: Software   VT: Video Tape   OS: Overhead Slide Projector
MD: Model   AC: Audio Cassette   NC: Notebook Computer

EDUCATIONAL RESOURCES

Prepared by:

Designation: Course Coordinator
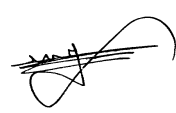
Name: Dr. Mahmoud Youssef

Sign:

Date: 21/1/2009

Approved by:

Designation. Program Manager

Name: Dr. Mahmoud Youssef

Sign:

Date: 21/1/2009