The University of Jordan

Accreditation & Quality Assurance Center

COURSE Syllabus

1	**Course title**	Semantic Web
2	**Course number**	**1904453**
3	Credit hours (theory, practical)	3 theory
	Contact hours (theory, practical)	3 theory
4	Prerequisites/corequisites	1904371
5	Programtitle	Business Information Technology
6	Programcode	4
7	Awarding institution	The university of Jordan
8	Faculty	King Abdullah II School for Information Technology
9	Department	Business Information Technology Department
10	Level of course	3nd year
11	Year of study andsemester (s)	Any
12	Final Qualification	Bachelor(Bsc)
13	Other department(s) involved in teaching the course	none
14	Language of Instruction	English
15	Date of production/revision	production : 1-2-2015/ revision :17-5-2015
16	Required/ Elective	Required

17. Course Coordinator:

Office numbers
1-2 Sunday, Tuesday, Wednesday
22621
Hossam.faris@ju.edu.jo

18. Other instructors:

None

19. Course Description:

The Web Semantic course will introduce the notion of the Web Semantic, provide an overview of the underlying theory and technology, cover existing technologies and practices, and highlight current and potential applications.

20. Aims and outcomes

A- Aims:

The main goal of this course is to teach the student how to use the Semantic Web technologies in semantic representation and reasoning of data using ontologies. Therefore, the course will cover different aspects of Ontology representation, creation, design, reasoning, programming and applications.

B- Intended Learning Outcomes (ILOs):

Successfulcompletionofthiscourseshouldleadtothefollowinglearningoutcomes:

A- Knowledge and Understanding: Students should …

A 1. Have a clear idea about the semantic web vision and the motivation behind improving the current state of the World Wide Web.

A 2. Understand the main concepts of the semantic web including its explicit metadata, Ontologies, logic and inference and intelligent agents.

B-Intellectualskills:withtheabilityto…

B 1. Describe web resources in the Resource Description Framework

B 2. To know how to apply engineering methods and models and can judge the risks and typical problems encountered in developing semantic web projects.

C-Subjectspecificskills–withabilityto…

C 1. Able to use XML for the representation of structured information on the web.

C 2. Able to describe Web resources in Resource Definition Framework and it's Schema.

C 3. Learn how to use the Ontology Web Language (OWL) for describing the semantics of knowledge in a machine-accessible way.

D-Transferableskills–withability to

D1.Discussandworkinagroupinorder todesigna semantic web application

D2.Workina group inordertoimplementa semantic web application

D 3. Exercise systematic software engineering for a small system in small teams with a precise task description with tight time constraints

D4. Present the final work (project) and make a demo

21. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
1. Semantic Web Introduction/Vision **2. Web services** **3. Semantic Web and Business**	1-3	All	A1 A2	**T**: Lecture **L**: Reading lecture notes A: in Class questions	Reading from (Text book)
4. XML **5. Resource description framework** **6. RDF Schema**	4-6	All	B1 B2 C1 C2	**T**: Lecture and presentation **L**: Reading lecture notes A: in Class cases	Reading from (Text book)
Midterm Exam		All			
7. Web Ontology Language (OWL) **8. Ontology Design and Management using the Protege editor**	7-9		C3	**T**: Lecture and presentation **L**: Reading lecture notes	Reading from (Text book)

				A: Home work assignments	
Short Exam		All			
9. Ontology Querying with SPARQL **10. Ontology Programming with the Jena API**	10-12		C2 C3	**T**: Present examples **L**: Reading lecture notes A: Quiz	Reading from (Text book)
11. Developing and implementing Applications of the Semantic Web	13-15	All	C2 C3 D1 D2 D3 D4	**T**: Present examples **L**: Reading lecture notes A: Quiz	Reading from (Text book)
Final Exam		All			

22. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

Lecture, lab and presentation

23. Evaluation Methods and Course Requirements:

Teaching (T) Strategies
Class Contact is 3 Hoursper week. The Course will be delivered using different means like lecture, presentations, seminars, discussion and case studies.

Learning (L) Methods
Students attend classes, ask questions and participate in discussions, do the home works, present the assignments and demo their works. A student will use the lab and selectaprogramminglanguagetoimplementtheassignments.Studentswillaccess the e-learning platformfor more instruction and supported learning materials

Assessment (A) Methods

Therewillbeseveralassessmentmethods ofevaluationtheperformanceofthe students such as attending and class participation, grading the homework, quizzes and assignments;conductingtheMidterm andtheFinalExams.Everystudentisexpected to completely adhere to the assignments andprojectstrictdeadlines,absolutelyno exceptions will be given.

24. Course Policies:

A- Attendance policies:

Maximum allowable absence 15% of number of Lectures/Semester

B- Absences fromexams andhandinginassignmentson time:

It is the student's responsibility to ensure that he/she is aware of all assignments, announcements and contents of missed sessions

C- Health and safetyprocedures:

Practical sessions need labs which are suitable adjustable chairs, safe computers and wires should be well organized.

D- Honesty policy regarding cheating, plagiarism, misbehavior:

It is the student's responsibility to ensure that he/she is adhere with cheating, plagiarism, misbehavior

E- Grading policy:

Intended (Tentative) Grading Scale:

Range	LG	الحرف	Range	LG	الحرف	Range	LG	الحرف
91 - 100	A	أ	74 - 77	B-	ب-	56 - 60	D+	د+
86 - 89	A-	أ-	70 - 73	C+	ج+	50 - 55	D	د
82 - 85	B+	ب+	66 - 69	C	ج	45 - 49	D-	د-
78 - 81	B	ب	61 - 65	C-	ج-	0 - 44	F	هـ

Grading and Evaluation Criteria: 100 points distributed as follows:

Weight	Criteria	Comments
30%	MidTerm Exam (Automated)	TBA (in due course)
10%	Short Exam (Automated)	TBA (in due course)
10%	Seminar & Presentation	Class participation
50%	Final Exam	17 May, 2015

F- Available university services that support achievement in the course:

Computer Labs.

25. Required equipment:

1- Personal computers in a lab.

2- Data show

26. References:

A Semantic Web Primer, Grigoris Antoniou and Frank van Harmelen. 2012. , 3rd Edition The MIT Press.

Learning SPARQL, Querying and Updating with SPARQL 1.1, Bob DuCharme, 2013., 2nd Edition, O'Reilly Media

27. Additional information:

- Tardiness and/or absenteeism will have a negative impact on the course grade.
- الامتناع المدبر عن حضور المحاضرات أو الدروس أو عن الأعمال الاخرى التي تقضي الأنظمة بالمواظبة عليها ، وكل تحريض على هذا الامتناع سوف يؤدي الى حرمان الطالب من المادة المعنية.
- في حالة التغيب عن الامتحانين الأول و الثاني لن يكون هناك امتحان تعويضي الا في حالة وجود عذر وحالة طارئة من المستشفى. على الطالب براز العذر لمدرس المادة في فتره لا تتجاوز الثلاثة ايام من تاريخ الامتحان, وللمدرس الحق في قبول او رفض العذر , وحسب التعليمات.
- Concerns or complaints should be expressed in the first instance to the module lecturer; if no resolution is forthcoming then the issue should be brought to the attention of the module coordinator (for multiple sections) who will take the concerns to the module representative meeting. Thereafter problems are dealt with by the Department Chair and if still unresolved the Dean and then ultimately the Vice President.For the final complaints, there will be a committee to review grading the final exam.
- For more details on University regulations please visit http://www.ju.edu.jo/rules/index.htm

Name of Course Coordinator: ----------Signature: ---------- Date: ----------

Head of curriculum committee/Department: ---------- Signature: ----------

Head of Department: ---------- Signature: ----------

Head of curriculum committee/Faculty: ---------- Signature: ----------

Dean: ---------- -Signature: ----------

Copy to:
Head of Department
Assistant Dean for Quality Assurance
Course File