Course Name	**Web Intelligence**		**ذكاء الويب**	
Course Information	**Course Code**	**Course No.**	**Credit Hour**	**Prerequisite(s)**
	0911-1681	681	3 (3-0-6)	**Programing Techniques in AI**
Course Track	☐ Program Core		☒ Electives	

Course Description. This course introduces the basic roles as well as practical impacts of artificial intelligence and advanced information technology for the next generation of web-based systems, services, and environments. It covers Web mining methodologies (web usage mining, web structure mining, and web content mining), semantic web architecture, tools and ontology constructs such as resource description framework (RDF), web ontology language (OWL), and extensible markup language (XML). It also presents a generic architecture on the top of the semantic web for knowledge management and presents the application of semantic web technologies to the social web that forms a network of interlinked and semantically enabled content and knowledge. Different AI and machine learning methods concerning web security, privacy, and reliability issues of cyberspace are covered. Several topics related to human web interaction are also introduced such as interactive information search/retrieval, interactive query expansion, personalization, user profiling, visualization, user interfaces, usability, web adaptation and interactive authoring/annotation. Finally, it presents issues related to agent-based web such as agent typology, intelligent agents, agents for the Web and web services.

Course Outcomes. After the completion of this course, the student will be able to:

1. **Describe** the perspectives, characteristics and challenges of Web Intelligence. **[A]**
2. **Explain** the architectures of web crawling and **Identify** web information retrieval models. **[A]**
3. **Apply** different web mining methodologies. **[D]**
4. **Analyze** semantic web architectures and applications. **[B]**
5. **Understand** the different types of topology agents and the architecture of agent-based web. **[A]**
6. **Discuss** Web vulnerabilities, human web interaction styles, models and learn how to design an interaction. **[E]**

Assessment Policy (PC)	**Assignments**	15%	**Quiz**	---	**Capstone Project**	40 %
	Midterm	15%	**Final**	30%		
Textbook	Priti Srinivas Sajja, Rajendra Akerkar, "Intelligent Technologies for Web Applications", Taylor & Francis Group/CRC Press, 2012. ISBN-13: 978-1-4398-7164-5.					
References	1. Pablo E. Román, Juan D. Velásquez, "Advanced Techniques in Web Intelligence-2", Springer, 2013. ISBN: 978-3-642-33325-5. 2. Douglas McIlwraith, Haralambos Marmanis, Dmitry Babenko "Algorithms of the Intelligent Web", 2nd Edition, Manning Publications Co., 2016. ISBN: 9781617292583.					