

1.	Course Title	Information Retrieval System		
2.	Course Code	CCPS4543		
3.	Status	Elective Major		
4.	Credit Hour	3 (2+1) 2 lecture (2 hours lecture x 14 weeks) 1 tutorials (2 hours per x 14 weeks) Lab works-using simulator & emulator supervised by tutor		
5.	Semester/Year	-		
6.	Prerequisites	CCPS3513 Web Programming		
7.	Teaching method:	Distance Learning (Electronic)		
8.	Evaluation	Assessment and Marking Percentage: Participation5% Exercises10% Mid Sem Exam10% Project25% Final Examination50%		
9.	Lecturer			
10.	Objective of the Subject	This subject is designed to enable students to: - Understand the concepts, models and technologies for an information retrieval system - Survey the different models and technologies implemented in commercial IR systems and search engines - Apply the model and technologies for developing a Web-based information retrieval system including those for <i>Quranic</i> texts and <i>Hadith</i>, in the form of a prototype as a team		
11.	Learning Outcomes	Upon completion of this course, students should be able to: - Explain the concepts, models and technologies for an information retrieval system - Evaluate critically the existing models and technologies implemented in commercial IR systems and search engines - Develop a Web-based information retrieval system including those for <i>Quranic</i> texts and <i>Hadith</i>, in the form of a prototype as a team		
12.	Synopsis	This course covers an overview of information retrieval systems, IR models and utilities, Web retrieval engines, XML retrieval, multimedia information retrieval systems, evaluation of information retrieval systems and retrieval systems for <i>Quranic</i> texts.		
13.	Topics	Details	Lecture (Hrs)	Tutorial/ Practical (Hrs)
	Topic 1	Information retrieval (IR) systems: an overview - What is an information retrieval system? - User, matching and item representation - IR models - Technologies - Search engines - Ranking capability	2	2
	Topic 2	IR models and utilities - Boolean and extended Boolean - Vector for clustering - Probability for relevance feedback	2	2
	Topic 3	- Proximity and term masking - Stemming - Models implemented in commercial IR systems (e.g. <i>ACM</i>, <i>Engineering Village 2</i>, <i>IEEE Xplore</i>, <i>ScienceDirect</i> & <i>Ebscohost BSP</i>)	2	2

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	Topic 4	Web retrieval engines • Web basic search • Web crawling & indexes	2	2
	Topic 5	• Link analysis • Semantic Web • Models implemented in <i>Google, Yahoo, Answers.com, Swoogle</i>	2	2
	Topic 6	XML retrieval • Basic XML concepts	4	4
	Topic 7	• Web-based retrieval system design with XML in Flash	4	4
	Topic 8	Multimedia information retrieval systems • Image retrieval • Audio retrieval • Video retrieval	2	2
	Topic 9	Evaluation of information retrieval systems • Testing elements	2	2
	Topic 10	• Performance measures (system quality & user utility)	2	2
	Topic 11	<i>Quranic</i> texts • Retrieval techniques and utilities	2	2
	Topic 12	• Implementation: <i>Islamicity.com</i>	2	2
		Total contact hours	28	28
		Equivalent lecture hours	28	14
		Total lecture hours	42	
		Credit hours	3	
14.	Main reference: Textbook:	1. Christopher D. Manning, Prabhakar Raghavan & Hinrich Schütze. An Introduction to Information Retrieval, Cambridge University Press, 2008. 2. Sas Jacobs. Foundation XML for Flash, Springer-Verlag, 2005.		
15.	Additional References:	1. Craig Swann, Gregg Caines. XML in Flash, Sams Publishing, 2001. 2. Chris Sherman. Google Power: Unleash The Full Potential Of Google, McGraw-Hill Professional, 2005.		
	Other Materials:	All materials will be available to the students online.		