



The University of Jordan

Accreditation & Quality Assurance Center

COURSE Syllabus

1	Course title	Information Retrieval
2	Course number	1904382
3	Credit hours (theory, practical)	3 practical
	Contact hours (theory, practical)	3 practical
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	Department of Business Information Technology
10	Level of course	3 rd 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	
16	Required/ Elective	Elective

17. Course Coordinator:

Officenumbr: 305
22640
b.shboul@ju.edu.jo

18. Other instructors:

None

19. Course Description:

The course aims at studying the theory, design, and implementation of text-based information systems. The course introduces IR core concepts on an abstract level, in addition to a design and an implementation of an IR system utilizing the acquired knowledge from the course. The course introduces several state-of-the-art IR concepts, as well as, trendy case studies in modern IR.

After this course, students are expected to be able to design and implement a fully functional text-based retrieval system utilizing the acquired knowledge from this course.

20. course aims and objectives**Intended Learning Outcomes:**

Successful completion of this course should lead to the following learning outcomes:

A. Knowledge and Understanding: students should

- A1. Understand the basic concepts of the information retrieval.
- A2. Understand the involvement of the information retrieval in modern life style & social media
- A3. Understand data pre-processing, indexing, retrieval methods and concepts.
- A4. Understand how to evaluate the effectiveness and efficiency of different information retrieval methods

B. Intellectual Skills: students should be able to:

- B1. Compare between the different indexing and retrieval methods
- B2. Compare memory requirements of different search and indexing algorithms

21. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
Introduction to Information Retrieval & Text Mining	1-3		A1, A2, A3,	T: Lecture L: Reading lecture notes A: in class questions	Lecture Notes
Text Processing Information Retrieval & Text Mining	4-5		A1, A2, A3, A4, B2	T: Lecture and presentation L: Reading lecture notes A: In class questions	Lecture Notes
Text Mining Tools	6		A1, B2	T: Lab practice	Lecture Notes
Text Categorization & Clustering	7-9		A1, B1, B2	T: Lecture and presentation L: Reading lecture notes and Chap 3 A: Home work assignments	Lecture Notes
Mid-Term Exam					
Evaluation Link Analysis	10-12		A1, A2, A4, B1, B2	T: Present Examples L: Reading lecture notes and Chap 4 A: Quiz	Lecture Notes
Information Extraction & Summarization	13-15		A1, A2, A3, A4	T: Present Examples L: Reading lecture notes and Chap 5 A: Quiz	Lecture Notes
Final Exam					

22. Teaching Methods and Assignments:

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

Lectures, Lab work and Presentations

23. Evaluation Methods and Course Requirements:

Teaching (T) Strategies

Class Contact is 3 Hours per 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 select a programming language to implement the assignments. Students will access the e-learning platform for more instruction and supported learning materials

Assessment (A) Methods

There will be several assessment methods of evaluation the performance of the students such as attending and class participation, grading the homework, quizzes and assignments; conducting the Midterm and the Final Exams. Every student is expected to completely adhere to the assignments and project strict deadlines, absolutely no exceptions will be given.

24. Course Policies:

A- Attendance policies: Maximum allowable absence 15% of number of Lectures/Semester

B- Missing Deadlines: In case of missing a submission deadline of homeworks 10% will be deducted from the grade on the first day, 20% for the second day, 50% afterwards. **NO Exceptions!**

C-Academic Dishonesty: Cheating & plagiarism are forbidden under any circumstances, and violates the intellectual property of others. Such cases will be reported to the department chairman immediately. Cheating includes team work on individual homeworks and projects, while plagiarism includes the behaviour of copy/paste.

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%	Mid-Term Exam	TBA
20%	Programming Assignments	TBA
50%	Final Exam	TBA

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:**Textbook:**

[*Introduction to Information Retrieval*](#), Christopher D. Manning, Prabhakar Raghavan, and Hinrich Schutze, Cambridge University Press. 2008.

- M. Konchady (2006). Text Mining Application Programming, Charles River Media.
- Witten & E. Frank (2005). Data Mining: Practical Machine Learning Tools and Techniques, 2nd Edition, Morgan Kaufmann Publishers.
- R. Feldman & J. Sanger (2007). The Text Mining Handbook: Advanced Approaches in Analyzing Unstructured Data, Cambridge University Press.
- S. Chakrabarti (2003). Mining the Web: Discovering Knowledge from Hypertext Data, Morgan Kaufmann Publishers.
- C. Manning & H. Schutze (1999). Foundations of Statistical Natural Language Processing, MIT Press.
- **Lucene:** <http://lucene.apache.org/core/>
- **Hadoop:** <http://hadoop.apache.org/>

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

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

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

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

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

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Head of Department
Assistant Dean for Quality Assurance
Course File