

INFORMATION RETRIEVAL SYSTEMS

(Program Elective-IV)

CourseCode	19IT4701F	Year	IV	Semester	I
CourseCategory	PE	Branch	IT	CourseType	Theory
Credits	3	L-T-P	3-0-0	Prerequisites	DBMS,DS
Continuous Internal Evaluation:	30	Semester End Evaluation:	70	Total Marks:	100

Course Outcomes		Blooms Taxonomy Level
Upon successful completion of the course, the student will be able to		
CO1	Introduction to Information Retrieval Systems.	L2
CO2	Gain knowledge on capabilities of IRS.	L2
CO3	Applying various indexing techniques for information search.	L3
CO4	Gain knowledge on applying various data structures.	L3

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (H:High, M:Medium, L:Low)														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	3				3					3	3	3
CO2	3	3	3				3					3	3	3
CO3	3	3	3				2					3	3	3
CO4	3	3	3				2					3	3	3

Syllabus		
Unit No	Contents	Mapped CO
I	Introduction: Definition of Information Retrieval systems, Objectives of Information Retrieval systems, Functional Overview, Relationship to DBMS, Digital libraries and Data Warehouses.	CO1
II	Information Retrieval System Capabilities: Search Capabilities, Browse Capabilities, Miscellaneous Capabilities, Z39.50 and WAIS Standards	CO1
III	Cataloging and Indexing: History and Objectives of Indexing, Indexing Process, Automatic Indexing, Information Extraction.	CO1 CO2
IV	Data Structures: Introduction to Data Structures, Stemming Algorithms, and Inverted file structures, N-gram data structure, PAT data structure, Signature file structure, Hyper text data structure, Hidden Markov Model.	CO1 CO4
V	Automatic Indexing: Classes of Automatic Indexing, Statistical indexing: Probabilistic Weighting, Vector Weighting, Natural language, Concept indexing	CO1 CO3

Learning Resources
Text Books
[1] M.T.M. Gerald J Kowalski, Information Storage and Retrieval Systems: Springer International Edition, 2018
References
[1] W.B. Frakes, Ricardo Baeza-Yates, Information Retrieval Data Structures and Algorithms: Prentice Hall PTR, 2015.
[2] R. Baeza-Yates, Modern Information Retrieval: Pearson Education, 2012.
E-Resources and other Digital Material
[1] https://nlp.stanford.edu/IR-book/pdf/01bool.pdf [2] http://shodhganga.inflibnet.ac.in/jspui/bitstream/10603/141878/10/10_chapter02.pdf