



**Information Retrieval System (BIT -453)**

Unit	Details	Hours
I	<b>Introduction:</b> Basic concepts, Past present and Future of IRS, Retrieval Process. <b>Modeling:</b> Introduction, A Taxonomy of IR Models, Retrieval: Adhoc and Filterig, A formal characterization of IR Models, Classic IR, Set Theoretic Models, Algebraic Models, Probabilistic Models, Structured Text Retrieval Models, Models for Browsing.	13
II	<b>Retrieval Evaluation:</b> Introduction, Reference Collections. <b>Query languages:</b> Introduction, Keyword-based querying, pattern Matching, Structural Queries, Query Protocols.	11
III	<b>Query operations:</b> Introduction, User Relevance Feedback, Automatic Local Analysis, Automatic Global Analysis. <b>Text and Multimedia Languages and Properties:</b> Introduction, Meta Data, Text, Markup Languages, Multimedia.	11
IV	<b>Text operations:</b> Introduction, Document Preprocessing, Document Clustering, Text Compression, Comparing Text Compression Techniques. <b>Indexing:</b> Introduction, Inverted Files, Other Indices for Text Searching, Boolean Queries,	11
V	<b>Searching:</b> Sequential Searching, Pattern Matching, Structural Queries, Compression. <b>Parallel and Distributed IR:</b> Introduction, Parallel IR, Distributed IR	14
<b>TOTAL HOURS</b>		<b>60</b>

**Text/Reference Books:**

<b>T/R</b>	<b>Book Title/Authors/Publication</b>
T1	1) Ricardo, Baeza-yates, Berthier Ribeiro-Neto, “Modern Information Retrieval” Pearson Education, 2008
T2	1) W.B. Frakes, Ricardo Baeza Yates, “Information Retrieval: Data Structures & Algorithms”, Pearson Education, 2008.
R1	2) Gerald Kowalski, “Information Retrieval Systems: Theory and Implementation”, Kluwaer Academic Publishers, 1997.

**Course Objectives:**

1	Making students understand concepts related to information retrieval models, retrieval performance evaluation.
2	Explain various query and text operations for information retrieval.
3	Explain various Search operations for information retrieval.