

SEMESTER-III

LIS-301: INFORMATION RETRIEVAL **(4 Credits)**

Objectives:

- To know various types of information retrieval Systems; their characteristics, evaluation, performance, and models..
- To acquaint with various tools, techniques and systems of IR.

Method of Instruction: A combination of lectures, discussions, guest lecturers (where possible) and special presentations will form the methods of instruction. The module will follow with an examination at the end of the semester carrying 80 marks covering all units having three types of questions (long, short and very short) to be solved within 2 1/2hrs. Besides, internal assessment of 20 marks will be assessed on attendance, performance in presentations, assignments and symposiums.

Unit I: Retrieval and Vocabulary Control.

- 1.1 Information Retrieval: Concept, Features, Genesis & Development.
- 1.2 Derived Indexing: Printed indexes & Database access systems
- 1.3 Subject Indexing and Vocabulary Control: Concept and Need.
 - 1.3.1 Subject Heading Lists,
 - 1.3.2 Thesaurus: Structure and Functions and design
- 1.4 Trends in Indexing: Automatic Indexing etc.

Unit II: Subject Indexing Techniques

- 2.1 Pre-coordinate Indexing Systems: Concepts and Types Uses.
 - 2.1.1 Chain Indexing.
 - 2.1.2 Postulate Based Permuted Indexing System (POPSI)
 - 2.1.3 Preserved Context Indexing System (PRECIS)
- 2.2 Keyword Indexing: KWIC/ KWOC/ KWAC
- 2.3 Post-Coordinate Indexing Systems: Concept , Uses,& Types.
 - 2.3.1 UNITERM Indexing System.
 - 2.3.2 Optical Coincidence System
 - 2.3.3 Batten System
- 2.4 Citation Indexing: Concept and development.
 - 2.4.1 Online Citation Indexing Tools: SCOPUS, Web of Science, Google Scholar etc.

—

Unit III: Web : Retrieval Systems

- 3.1 Web Information Retrieval System: Features
- 3.2 Information Retrieval Models and their Applications.
- 3.3 Models based on Input/Output
 - 3.3.1 Data retrieval model
 - 3.3.2 Information retrieval model
 - 3.3.3 Knowledge retrieval model
- 3.4 Models based on Theories and Tools
 - 3.4.1 Boolean model
 - 3.4.2 Vector space model
 - 3.4.3 Mathematical model
- 3.5 Evaluation of Information Retrieval Systems: Methods and Parameters

Unit IV: Web: Search Strategy

- 4.1 Characteristics of web Information Retrieval
- 4.2 Web and Information Retrieval Tools: Need, Types and Features.
- 4.3 Information Retrieval Process: Techniques & Refinement.

Suggested Readings:

Chodhury, C.G. (2004). *Introduction to Modern Information Retrieval*. (2nd ed.). London: Facet Pub.

Cleveland, Donald B and Cleveland, Anna D.(1990) *Introduction to Indexing and Abstracting*. (2nd ed.). USA: University of Michigan.

Dhawan, K.S. (1997). *Principles of information retrieval*. New Delhi: Commonwealth

Foskett, A.C. (1996). *The subject approach to information* (5th ed.) .London: Library Association.

Jones, Karen.Sparck. (1981). *Information retrieval experiment*. London: Butterworth.

Kiewitt, Eva.L. (1979). *Evaluating information retrieval systems: the probe program*. London: Greenwood.

Lancaster, F.W. (2003). *Indexing and Abstracting in Theory and practice* (3rd ed.). London: Facet Pub.

- Meadow, Charles.T. (1967). *The analysis of information systems*. New York: John Wiley.
- Muhammad Riaz. (1991). *Advanced indexing and Abstracting*. New Delhi: Atlantic
- Rajan, T N. (1981). *Indexing systems: Concepts, Models & techniques*. Calcutta: IASLIC.
- Ranganathan, S. R. (1973).*Documentation: Genesis and Development*. Delhi: Vikas Pub.
- Rijsbergen, J. van. (1979). *Information retrieval* (2nd ed.). London: Butterworths.
- Smiraglia, Richard.P. (2002). *Works as entities for information retrieval*. New York: Haworth.
- Vickery, B.C. (1970).*Techniques of Information Retrieval*.(2nd ed.). London: Butterworth.
- Wessel Andrew, E. (1974). *Computer aided Information Retrieval*. Los Angeles: Melville Pub.