



Course Plan
For
Information Retrieval System


IV B. Tech(CSE)

I SEMESTER

ACADEMIC YEAR

2015-16

V.Subhashini
Assistant Professor

	<p>COURSE PLAN</p>	2015-16
		Regulation: R12

FACULTY DETAILS:

Name of the Faculty: v.subhashini

Designation: Asst. Professor

Department: CSE

1. TARGET

a) Percentage Pass:100

b) Percentage I class:80

2. COURSE PLAN

(Please write how you intend to cover the contents: i.e., coverage of Units by lectures, guest lectures, design exercises, solving numerical problems, demonstration of models, model preparation, or by assignments, etc.)

3. METHOD OF EVALUATION

3.1. Continuous Assessment Examinations (CAE 1, CAE 2)

3.2. Assignments / Seminars

3.3. Mini Projects

3.4. Quiz

3.5. Term End Examination

3.6. Others

4. List out any new topic(s) or any innovation you would like to introduce in teaching the subject in this Semester.

Signature of HOD
Date:

Signature of Faculty
Date:



GUIDELINES TO STUDY THE SUBJECT

2015-16

Regulation: R12

FACULTY DETAILS:

Name of the Faculty: v.subhashini

Designation: Asst. Professor

Department: CSE

Guidelines for Preparing the Course: B. Tech

Course Description:

This course studies the theory, design, and implementation of text-based information systems. The Information Retrieval core components of the course include statistical characteristics of text, representation of information needs and documents, several important retrieval models (Boolean, vector space, probabilistic, inference net, language modeling, link analysis), clustering algorithms, collaborative filtering, automatic text categorization, and experimental evaluation. The software architecture components include design and implementation of high-capacity text retrieval and text filtering systems.

Principles of organizing and providing access to information using automated information storage and retrieval systems. Retrieval system models, index language selection, data structures, user interfaces and evaluation for text and multimedia applications.

Course Objectives:

Learning Outcomes:

Upon completion of the subject, students will be able to:

Professional/academic knowledge and skills

- (a) understand and apply the basic concepts of information retrieval;
- (b) appreciate the limitations of different information retrieval techniques;
- (c) write programs to implement search engines;
- (d) evaluate search engines;
- (e) develop skills in problem solving using systematic approaches;
- (f) solve complex problems in groups and develop group work.

1. Develops a thesis statement and formulates questions based on the information need
2. Explores general information sources to increase familiarity with the topic
3. Identifies key concepts and terms that describe the information need
4. Knows how information is formally and informally produced, organized, and disseminated
5. Identifies the purpose and audience of potential resources (e.g., popular vs. scholarly, current vs. historical)
6. Differentiates between primary and secondary sources, recognizing how their use and importance vary with each discipline
7. Defines a realistic overall plan and timeline to acquire the needed information
8. Identifies keywords, synonyms and related terms for the information needed
9. Selects controlled vocabulary specific to the discipline or information retrieval source
10. Constructs a search strategy using appropriate commands for the information retrieval system selected (e.g., Boolean operators, truncation, and proximity for search engines; internal organizers such as indexes for books)
11. Implements the search strategy in various information retrieval systems using different user interfaces and search engines, with different command languages, protocols, and search parameters
12. Selects appropriate search system(s) to retrieve information in a variety of formats
13. Uses various classification schemes and other systems (e.g., call number systems or indexes) to locate information resources within the library or to identify specific sites for physical exploration
14. Uses specialized online or in person services available at the institution to retrieve information
15. Selects among various technologies the most appropriate one for the task of extracting the needed information (e.g., copy/paste software functions, photocopier, scanner, audio/visual equipment, or exploratory instruments)
16. Creates a system for organizing the information
17. Differentiates between the types of sources cited and understands the elements and correct syntax of a citation for a wide range of resources
18. Records citation information for future reference



COURSE OBJECTIVES

2015-16

Regulation: R12

FACULTY DETAILS:

Name of the Faculty: v.subhashini

Designation: Asst. Professor

Department: CSE

On completion of this Subject / Course the student shall be able to:

S.No.	Objectives	Outcomes
1.	To outline basic terminology and components in information storage and retrieval systems	
2.	To compare and contrast information retrieval models and internal mechanisms such as Boolean, Probability, and Vector Space Models	
3.	To articulate fundamental functions used in information retrieval such as automatic indexing, abstracting, and clustering	
4.	To critically evaluate information retrieval system effectiveness and improvement techniques	
5.	To understand the unique features of Internet-based information retrieval	
6.	To describe current trends in information retrieval such as information visualization	

Signature of Faculty
Date:

Note: For each of the OBJECTIVE indicate the appropriate OUTCOMES to be achieved.
Kindly refer Page 16, to know the illustrative verbs that can be used to state the objectives.



COURSE OUTCOMES

2015-16

Regulation: R12

FACULTY DETAILS:

Name of the Faculty:: v.subhashini
 Designation: Asst. Professor
 Department:: CSE

The expected outcomes of the Course / Subject are:IRS

S.No.	General Categories of Outcomes	Specific Outcomes of the Course
A.	An ability to apply knowledge of mathematics, science, and engineering	
B.	An ability to design and conduct experiments, as well as to analyze and interpret data	
C.	An ability to design a system, component, or process to meet desired needs within realistic Constraints such as economic, environmental, social, political, ethical, health and safety, Manufacturability and sustainability	
D.	An ability to function on multi-disciplinary teams	
E.	An ability to identify, formulate, and solve engineering problems	
F.	An understanding of professional and ethical responsibility	
G.	An ability to communicate effectively	
H.	The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context	
I.	A recognition of the need for, and an ability to engage in life-long learning	
J.	A knowledge of contemporary issues	
K.	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.	

Objectives – Outcome Relationship Matrix (Indicate the relationships by ☒ mark).

Objectives \ Outcomes	A	B	C	D	E	F	G	H	I	J	K
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



COURSE SCHEDULE

2015-16

Regulation: R12

FACULTY DETAILS:


Name of the Faculty:: v.subhashini
 Designation: Asst. Professor
 Department:: CSE

The Schedule for the whole Course / Subject is:: IRS

S. No.	Description	Duration (Date)		Total No. of Periods
		From	To	
1.	UNCSE I Introduction: Definition, Objectives, Functional Overview, Relationship to DBMS, Digital libraries and Data Warehouses, information Retrieval System Capabilities: Search, Browse, Miscellaneous	29/6/15	13/7/15	11
2.	UNCSE II Cataloging and Indexing: Objectives, Indexing Process, Automatic Indexing, Information Extraction. Data Structures: Introduction, Stemming Algorithms, Inverted file structures, N-gram data structure, PAT data structure, Signature file structure, Hypertext data structure	14/7/15	25/7/15	10
3.	UNCSE III Automatic Indexing: Classes of automatic indexing, Statistical indexing, Natural language, Concept indexing, Hypertext linkages	27/7/15	7/8/15	7
4.	UNCSE IV Document and Term Clustering: Introduction, Thesaurus generation, item clustering, Hierarchy of clusters	10/8/15	20/8/15	7
5.	UNCSE V User Search Techniques: Search statements and binding, Similarity measures and ranking, Relevance feedback, Selective dissemination of information search, Weighted searches of Boolean systems,	31/8/15	14/9/15	10

	Searching the Internet and hypertext. Information Visualization: Introduction, Cognition and perception, Information visualization technologies			
6.	UNCSE VI Text Search Algorithms: Introduction, Software text search algorithms, Hardware text search systems. Information System Evaluation: Introduction, Measures used in system evaluation, Measurement example – TREC results.	16/9/15	27/9/15	10
7	UNCSE VII Multimedia Information Retrieval – Models and Languages – Data Modeling, Query Languages, Indexing and Searching	28/9/15	4/10/15	7
8	UNCSE VIII Libraries and Bibliographical Systems – Online IR Systems, OPACs, Digital Libraries.	7/10/15	11/10/15	4

Total No. of Instructional periods available for the course: Hours / Periods

	SCHEDULE OF INSTRUCTIONS UNCSE - I	2015-16
		Regulation: R12

FACULTY DETAILS:


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 Department:: CSE

The Schedule for the whole Course / Subject is:: IRS

Sl. No.	Date	No. of Periods	Topics / Sub - Topics	Objectives & Outcome Nos.	References (Text Book, Journal...) Page No ___ to ___
1	29,30/6/15	2	Introduction: Definition, Objectives,	2	(T1) 1-8
2	1,2/7/15	2	Functional Overview,	4	T1 9-17
3	4/7/15	1	Relationship to DBMS,	1	T1 18
4	6, 7/7/15	2	Digital libraries and Data Warehouses	2	T1 19-20
5	8,9/7/15	2	Information Retrieval System Capabilities:	4	T1 25
6	11,13/7/15	2	Search, Browse, Miscellaneous	3	T1 26-40

Signature of Faculty
Date

- Note: 1. ENSURE THAT ALL TOPICS SPECIFIED IN THE COURSE ARE MENTIONED.
 2. ADDITIONAL TOPICS COVERED, IF ANY, MAY ALSO BE SPECIFIED **BOLDLY**.
 3. MENTION THE CORRESPONDING COURSE OBJECTIVE AND OUT COME NUMBERS AGAINST EACH TOPIC.

	SCHEDULE OF INSTRUCTIONS UNCSE - II	2015-16
		Regulation: R12

FACULTY DETAILS:

Name of the Faculty:: v.subhashini
 Designation: Asst. Professor
 Department:: CSE

The Schedule for the whole Course / Subject is:: IRS


Sl. No.	Date	No. of Periods	Topics / Sub - Topics	Objectives & Outcome Nos.	References (Text Book, Journal...) Page No ___ to ___
1	14/7/15	1	Cataloging and Indexing: Objectives,	4	T1 47-49
2	15/7/15	1	Indexing Process,	7	T1 52-54
3	16/7/15	1	Automatic Indexing, Information Extraction.	6	T1 54-64
4	17/7/15	1	Data Structures: Introduction,	2	T1 65-66
5	18,20/7/15	2	Stemming Algorithms,	9	T1 67-74
6	20/7/15	1	Inverted file structures,	5	T1 76-79
7	21/8/15	1	N-gram data structure,	7	T1 79-82
8	23/7/15	1	PAT data structure,	5	T1 83-86
9	25/7/15	1	Signature file structure, Hypertext data structure	4	T187

Signature of Faculty
Date

Note: 1. ENSURE THAT ALL TOPICS SPECIFIED IN THE COURSE ARE MENTIONED.

2. ADDITIONAL TOPICS COVERED, IF ANY, MAY ALSO BE SPECIFIED **BOLDLY**.

MENTION THE CORRESPONDING COURSE OBJECTIVE AND OUT COME NUMBERS AGAINST EACH TOPIC.

	SCHEDULE OF INSTRUCTIONS UNCSE - III	2015-16
		Regulation: R12

FACULTY DETAILS:


Name of the Faculty:: v.subhashini
 Designation: Asst. Professor
 Department: CSE

The Schedule for the whole Course / Subject is:: IRS

Sl. No.	Date	No. of Periods	Topics / Sub - Topics	Objectives & Outcome Nos.	References (Text Book, Journal...) Page No ___ to ___
1	27/7/15	2	Automatic Indexing: Classes of automatic indexing, Statistical indexing,	5	T1 95-109
2	29/7/15	1	Natural language,	7	T1 111-116
3	3/8/15	2	Concept indexing,	3	T1 118-119
4	5/8/15	2	Hypertext linkages	2	T1 120

Signature of Faculty
Date

Note: 1. ENSURE THAT ALL TOPICS SPECIFIED IN THE COURSE ARE MENTIONED.
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 MENTION THE CORRESPONDING COURSE OBJECTIVE AND OUT COME NUMBERS AGAINST EACH TOPIC.

	SCHEDULE OF INSTRUCTIONS UNCSE - IV	2015-16
		Regulation: R12

FACULTY DETAILS:


Name of the Faculty:: v.subhashini
 Designation: Asst. Professor
 Department: CSE

The Schedule for the whole Course / Subject is:: IRS

Sl. No.	Date	No. of Periods	Topics / Sub - Topics	Objectives & Outcome Nos.	References (Text Book, Journal...) Page No__ to __
1	10/8/15	2	Document and Term Clustering: Introduction,	6	T1 125-127
2	13/8/15	2	Thesaurus generation,	8	T1 128-139
3	17/8/15	1	Item clustering,	4	T1 140-141
4	20/8/15	2	Hierarchy of clusters	3	T1 142-144

Signature of Faculty
Date

Note: 1. ENSURE THAT ALL TOPICS SPECIFIED IN THE COURSE ARE MENTIONED.
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 MENTION THE CORRESPONDING COURSE OBJECTIVE AND OUT COME NUMBERS AGAINST EACH TOPIC.

	SCHEDULE OF INSTRUCTIONS UNCSE - V	2015-16
		Regulation: R12

FACULTY DETAILS:


Name of the Faculty:: v.subhashini
 Designation: Asst. Professor
 Department: CSE

The Schedule for the whole Course / Subject is:: IRS

Sl. No.	Date	No. of Periods	Topics / Sub - Topics	Objectives & Outcome Nos.	References (Text Book, Journal...) Page No__ to __
1	31/8/15 1/9/15	2	User Search Techniques: Search statements and binding, ,	6	T1 149-150
2	3,4/9/15	2	Similarity measures and ranking Relevance feedback,	5	T1 151-161
3	5/9/15	1	Selective dissemination of information search,	8	T1 162-168
4	7/9/15	1	Weighted searches of Boolean systems,	9	T1 169-173
5	10/9/15	1	Searching the Internet and hypertext.	4	T1 174-177
6	12,13/9/15	2	Information Visualization: Introduction, Cognition and perception,	6	T1 181-189
7	14/9/15	1	Information visualization technologies	7	T1 190-198

Signature of Faculty
Date

Note: 1. ENSURE THAT ALL TOPICS SPECIFIED IN THE COURSE ARE MENTIONED.
 2. ADDITIONAL TOPICS COVERED, IF ANY, MAY ALSO BE SPECIFIED **BOLDLY**.
 MENTION THE CORRESPONDING COURSE OBJECTIVE AND OUT COME NUMBERS AGAINST EACH TOPIC.

	SCHEDULE OF INSTRUCTIONS UNCSE - VI	2015-16
		Regulation: R12

FACULTY DETAILS:


Name of the Faculty:: v.subhashini
 Designation: Asst. Professor
 Department: CSE

The Schedule for the whole Course / Subject is:: IRS

Sl. No.	Date	No. of Periods	Topics / Sub - Topics	Objectives & Outcome Nos.	References (Text Book, Journal...) Page No ___ to ___
12	16/9/15	1	Text Search Algorithms: Introduction,	6	T1 203-206
3	17,19/9/15	2	Software text search algorithms,.	4	T1 207-215
4	20,21/9/15	2	Hardware text search systems.	4	T1 216-219
5	23/9/15	1	Information System Evaluation: Introduction,	5	T1 224-225
6	24,26/9/15	2	Measures used in system evaluation,	7	T1 226-232
7	27/9/15	2	Measurement example – TREC results	3	T1 233-243

Signature of Faculty
Date

Note: 1. ENSURE THAT ALL TOPICS SPECIFIED IN THE COURSE ARE MENTIONED.
 2. ADDITIONAL TOPICS COVERED, IF ANY, MAY ALSO BE SPECIFIED **BOLDLY**.
 MENTION THE CORRESPONDING COURSE OBJECTIVE AND OUT COME NUMBERS AGAINST EACH TOPIC.

	SCHEDULE OF INSTRUCTIONS	2015-16
	UNCSE - VII	Regulation: R12

FACULTY DETAILS:


Name of the Faculty:: v.subhashini
 Designation: Asst. Professor
 Department: CSE

The Schedule for the whole Course / Subject is:: IRS

Sl. No.	Date	No. of Periods	Topics / Sub - Topics	Objectives & Outcome Nos.	References (Text Book, Journal...) Page No ___ to ___
1	28/9/15	3	Multimedia Information Retrieval – Models and Languages – Data Modeling,	5	RB2
2	30/9/15, 1/10/15	2	Query Languages,	6	RB2
3	3/10/15	1	Indexing and	4	RB2
4	4/10/15	1	Searching	5	RB2

Signature of Faculty
Date

Note: 1. ENSURE THAT ALL TOPICS SPECIFIED IN THE COURSE ARE MENTIONED.
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 MENTION THE CORRESPONDING COURSE OBJECTIVE AND OUT COME NUMBERS AGAINST EACH TOPIC.

	SCHEDULE OF INSTRUCTIONS UNCSE - VIII	2015-16
		Regulation: R12

FACULTY DETAILS:

Name of the Faculty:: v.subhashini
 Designation: Asst. Professor
 Department: CSE

The Schedule for the whole Course / Subject is:: IRS

Sl. No.	Date	No. of Periods	Topics / Sub - Topics	Objectives & Outcome Nos.	References (Text Book, Journal...) Page No__ to __
1	7/10/15	1	Libraries and Bibliographical Systems	5	RB2
2	8/10/15	1	Online IR Systems,	4	RB2
3	10/10/15	1	OPACs,	3	RB2
4	11/10/15	1	Digital Libraries.	2	RB2

Signature of Faculty
 Date

Note: 1. ENSURE THAT ALL TOPICS SPECIFIED IN THE COURSE ARE MENTIONED.
 2. ADDITIONAL TOPICS COVERED, IF ANY, MAY ALSO BE SPECIFIED **BOLDLY**.
 MENTION THE CORRESPONDING COURSE OBJECTIVE AND OUT COME NUMBERS AGAINST EACH TOPIC.

	COURSE COMPLETION STATUS	2015-16
		Regulation: R12

FACULTY DETAILS:

Name of the Faculty:
Subject IRS

v.subhashini

Subject Code 57057


Actual Date of Completion & Remarks, if any

UnCSE s	Remarks	Nos. of Objectives Achieved
Unit 1	NO	7
Unit 2	NO	8
Unit 3	NO	5
Unit 4	NO	3
Unit 5	NO	6
Unit 6	NO	5
Unit 7	NO	5
Unit 8	NO	3

Signature of Dean of School
Date:

Signature of Faculty
Date:

NOTE: AFTER THE COMPLETION OF EACH UNCSE MENTION THE NUMBER OF OBJECTIVES ACHIEVED.

	TUTORIAL SHEETS - I	2015-16
		Regulation: R12

FACULTY DETAILS:

Name of the Faculty:: v.subhashini
 Designation: Asst. Professor
 Department:: CSE

The Schedule for the whole Course / Subject is:: IRS

Date:24/8/1
5

This Tutorial corresponds to Unit Nos.1,2,3,4

Time:2:40

Q1. Explain the functional overview of information storage and retrieval system?

Q2. Discuss the objectives of information retrieval systems

Q3. Explain indexing process.

Q4. Describe the similarities and differences between term stemming algorithms and n-grams


Q5. Discuss hypertext linkages

Q6.Explain term clustering using single link algorithm

Please write the Questions / Problems / Exercises which you would like to give to the students and also mention the objectives to which these questions / Problems are related.

Signature of Dean of School
Date:

Signature of Faculty
Date:

	TUTORIAL SHEETS - II	2015-16
		Regulation: R12

FACULTY DETAILS:

Name of the Faculty:: v.subhashini
Designation: Asst. Professor
Department:: CSE

The Schedule for the whole Course / Subject is:: IRS

Date:8/10/15

This Tutorial corresponds to Unit Nos.5, 6, 7

Time:2:40

Q1. What are the problems with weighting schemes?

Q2. Explain Hardware text search algorithms

Q3. compare between indexing and searching

Q4. Explain the query languages

Please write the Questions / Problems / Exercises which you would like to give to the students and also mention the objectives to which these questions / Problems are related.

Signature of Dean of School
Date:

Signature of Faculty
Date:



**ILLUSTRATIVE VERBS
FOR STATING
INSTRUCTIONAL OBJECTIVES**

2015-16

Regulation: R12

These verbs can also be used while framing questions for Continuous Assessment Examinations as well as for End – Semester (final) Examinations.

ILLUSTRATIVE VERBS FOR STATING GENERAL OBJECTIVES

Know Comprehend	Understand Apply	Analyze Design	Generate Evaluate
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ILLUSTRATIVE VERBS FOR STATING SPECIFIC OBJECTIVES:

**A. CognCSEive
Domain**


1	2	3	4	5	6
Knowledge	Comprehension Understanding	Application of knowledge & comprehension	Analysis of whole w.r.t. CSEs constituents	Synthesis combination of ideas/constituents	Evaluation judgement

Define	Convert	Change	Breakdown	Categorize	Appraise
Identify	Defend	Compute	Differentiate	Combine	Compare
Label	Describe (a procedure)	Demonstrate	Discriminate	Compile	Conclude
List	Distinguish	Deduce	Distinguish	Compose	Contrast
Match	Distinguish	Manipulate	Separate	Create	CrCSEicize
Reproduce	Estimate	Modify	Subdivide	Devise	Justify
Select	Explain why/how	Predict		Design	Interpret
State	Extend	Prepare		Generate	Support
	Generalize	Relate		Organize	
	Give examples	Show		Plan	
	Illustrate	Solve		Rearrange	
	Infer			Reconstruct	
	Summarize			Reorganize	
				Revise	

B. Affective Domain

C. Psychomotor Domain (skill development)

Adhere	Resolve	Bend	Dissect	Insert	Perform	Straighten
Assist	Select	Calibrate	Draw	Keep	Prepare	Strengthen
Attend	Serve	Compress	Extend	Elongate	Remove	Time
Change	Share	Conduct	Feed	Limit	Replace	Transfer
Develop		Connect	File	Manipulate	Report	Type
Help		Convert	Grow	Move precisely	Reset	Weigh
Influence		Decrease	Handle	Operate	Run	

	LESSON PLAN Unit-1	2015-16
		Regulation: R12

Name of the Faculty: V.subhashini

Subject IRS

Subject Code 57057


Unit I

INSTRUCTIONAL OBJECTIVES:

Session No	Topics to be covered	Time	Ref	Teaching Method
1	Introduction: Definition, Objectives,	50min	T1	Black Board
2,3	Functional Overview,	100min	T1	Black Board
4	Relationship to DBMS,	50min	T1	Black Board
5,6	Digital libraries and Data Warehouses	100min	T1	Black Board
7,8	Information Retrieval System Capabilities:	100min	T1	Black Board
9,10	Search, Browse, Miscellaneous	100min	T1	Black Board

On completion of this lesson the student shall be able to(Outcomes)

1. understand and apply the basic concepts of information retrieval;
2. Identifies key concepts and terms that describe the information need
3. Knows how information is formally and informally produced, organized, and disseminated
4. Identifies the purpose and audience of potential resources (e.g., popular vs. scholarly, current vs. historical)


	ASSIGNMENT Unit-I	2015-16
		Regulation: R12

Assignment / Questions

1. Explain the functional overview of information storage and retrieval system?
2. Does a private index file differ from a standard database management system (DBMS). What problems need to be addressed when using a DBMS as part of an information retrieval system?
3. Explain browse capabilities

Signature of Faculty

Note: Mention for each question the relevant objectives and outcomes.

	LESSON PLAN Unit-II	2015-16
		Regulation: R12

Name of the Faculty: v.subhashini

Subject IRS

Subject Code 57057

Unit II

INSTRUCTIONAL OBJECTIVES:


Session No	Topics to be covered	Time	Ref	Teaching Method
11	Cataloging and Indexing: Objectives,	50min	T1	Black Board
12	Indexing Process,	50min	T1	Black Board
13	Automatic Indexing, Information Extraction.	50min	T1	Black Board
14	Data Structures: Introduction,	50min	T1	Black Board
15,16	Stemming Algorithms,	100min	T1	Black Board
17	Inverted file structures,	50min	T1	Black Board
18	N-gram data structure,	50min	T1	Black Board
19	PAT data structure,	50min	T1	Black Board
20	Signature file structure, Hypertext data structure	50min	T1	Black Board

On completion of this lesson the student shall be able to

1.To learn how to cataloguing the text

2.They learned how to indexing the keyword

3.They learned how to stem the word


	ASSIGNMENT Unit-II	2015-16
		Regulation: R12

Assignment / Questions

1. Explain indexing process.
2. Discuss hypertext data structure.
3. Explain porter stemming algorithm.
4. What is an indexing? Explain CSEs objectives.
5. Describe the similarities and differences between term stemming algorithms and n-grams
6. Discuss in detail n-gram data structure

Signature of Faculty

Note: Mention for each question the relevant objectives and outcomes.

	LESSON PLAN Unit-III	2015-16
		Regulation: R12

Name of the Faculty: v.subhashini

Subject IRS

Subject Code 57057

Unit III

INSTRUCTIONAL OBJECTIVES:

Session No	Topics to be covered	Time	Ref	Teaching Method
21,22	Automatic Indexing: Classes of automatic indexing, Statistical indexing,	100min	T1	Black Board
23	Natural language,	50min	T1	Black Board
24,25	Concept indexing,	100min	T1	Black Board
26,27	Hypertext linkages	100min	T1	Black Board


On completion of this lesson the student shall be able to(Outcomes)

1.They learned how the automatic indexing work

2.They learned the use of statistical indexing

3.They learned the use of natural languages

4.They learned the use of concept indeing


	ASSIGNMENT Unit-III	2015-16
		Regulation: R12

Assignment / Questions

1. Discuss hypertext linkages
2. Explain term clustering using single link algorithm.
3. Are thesauri a subclass of concept classes? Justify.

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Note: Mention for each question the relevant objectives and outcomes.

	LESSON PLAN Unit-IV	2015-16
		Regulation: R12

Name of the Faculty: v.subhashini

Subject IRS

Subject Code 57057

Unit IV

INSTRUCTIONAL OBJECTIVES:

Session No	Topics to be covered	Time	Ref	Teaching Method
28,29	Document and Term Clustering: Introduction,	100min	T1	Black Board
30,31	Thesaurus generation,	100min	T1	Black Board
32	item clustering,	50min	T1	Black Board
33,34	Hierarchy of clusters	100min	T1	Black Board


On completion of this lesson the student shall be able to (Outcomes)

1.They learned how to compute the similar documents(terms)

2.They learned the use of thesaurus generation

3.They learn the item clustering matrix computation

4.They learn how the clusters are hierarchialforms


	ASSIGNMENT Unit-IV	2015-16
		Regulation: R12

Assignment / Questions

1. Explain term clustering using single link algorithm.
2. Discuss about hierarchy of clusters.
3. Compare and contrast manual clustering and automatic term clustering

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Note: Mention for each question the relevant objectives and outcomes.

	LESSON PLAN Unit-V	2015-16
		Regulation: R12

Name of the Faculty: v.subhashini

Subject IRS

Subject Code 57057


Unit V

INSTRUCTIONAL OBJECTIVES:

Session No	Topics to be covered	Time	Ref	Teaching Method
35	User Search Techniques: Search statements and binding,	50min	T1	Black Board
36,37	Similarity measures and ranking Relevance feedback,	100min	T1	Black Board
38,39	Selective dissemination of information search,	100m	T1	Black Board
40	Weighted searches of Boolean systems,	50min	T1	Black Board
41,42	Searching the Internet and hypertext.	100min	T1	Black Board
43,44	Information Visualization: Introduction, CognCSEion and perception,	100min	T1	Black Board
45	Information visualization technologies	50min	T1	Black Board

On completion of this lesson the student shall be able to (Outcomes)

- 1.They learned the most appropriate search techniques for extracting relevant information
- 2.They learned the similarity measures for finding relevant data
- 3.They learned which visualization technology is suitable for visualizing the data or images
- 4.They learned how many visualization technologies in information Retrieval Systems

	ASSIGNMENT Unit-V	2015-16
		Regulation: R12

Assignment / Questions

1. Explain similarity measures.
2. Discuss information visualization technologies.
3. What are the problems with weighting schemes?

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Note: Mention for each question the relevant objectives and outcomes.



LESSON PLAN
Unit-VI

2015-16

Regulation: R12

Name of the Faculty: v.subhashini

Subject IRS

Subject Code 57057


Unit VI

INSTRUCTIONAL OBJECTIVES:

Session No	Topics to be covered	Time	Ref	Teaching Method
46	Text Search Algorithms: Introduction,	50min	T1	Black Board
47,48	Software text search algorithms,.	100min	T1	Black Board
49,50	Hardware text search systems.	100min	T1	Black Board
51	Information System Evaluation: Introduction,	50min	T1	Black Board
52,53	Measures used in system evaluation,	100min	T1	Black Board
54,55	Measurement example – TREC results	100min	T1	Black Board

On completion of this lesson the student shall be able to (Outcomes)

- 1.They understood the use of text search algorithms
- 2.They learned the process of software text search algorithms to find the similar text
- 3.They learned the process of hardware text search algorithms to find similar text
- 4.They learned the comparison between software text search algorithms and hardware text search algorithms


	ASSIGNMENT Unit-VI	2015-16
		Regulation: R12

Assignment / Questions

1. Explain Hardware text search algorithms
2. Text streaming architecture
3. Discuss about the techniques involved in software text search algorithms

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Note: Mention for each question the relevant objectives and outcomes.

	LESSON PLAN Unit-VII	2015-16
		Regulation: R12

Name of the Faculty: v.subhashini

Subject IRS

Subject Code 57057


Unit VII

INSTRUCTIONAL OBJECTIVES:

Session No	Topics to be covered	Time	Ref	Teaching Method
56,57,58	Multimedia Information Retrieval – Models and Languages – Data Modeling,	150min	T1	Black Board
59,60	Query Languages,	100min	T1	Black Board
61	Indexing and	50min	T1	Black Board
62	Searching	50min	T1	Black Board

On completion of this lesson the student shall be able to

- 1.They learned how to retrieve images,audios,videos and text data streams from the relevant documents
- 2.They learned which query languages are suitable for retrieving user relevant information
- 3.They learned how to indexing the word(term)


	ASSIGNMENT Unit-VII	2015-16
		Regulation: R12

Assignment / Questions

1. Explain the models and languages with respect to multimedia system?
2. Explain the query languages?
3. compare between indexing and searching

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Note: Mention for each question the relevant objectives and outcomes.

	LESSON PLAN Unit-VIII	2015-16
		Regulation: R12

Name of the Faculty: v.subhashini

Subject IRS

Subject Code 57057

Unit VIII


INSTRUCTIONAL OBJECTIVES:

Session No	Topics to be covered	Time	Ref	Teaching Method
63	Libraries and Bibliographical Systems –	50min	T1	Black Board
64	Online IR Systems,	50min	T1	Black Board
65	OPACs,	50min	T1	Black Board
66	Digital Libraries.	50min	T1	Black Board

On completion of this lesson the student shall be able to

1.They learned the difference between normal libraries and Digital libraries

2.They learned the use of online IRSystems

	ASSIGNMENT Unit-VIII	2015-16
		Regulation: R12

Assignment / Questions

- 1.Explain about the OPACS?
2. Compare between online IRSystem and offline IRSystem
- 3.Distinguish between Digital libraries,Data warehouse and DBMS

Signature of Faculty

Note: Mention for each question the relevant objectives and outcomes.