



**C. U. SHAH UNIVERSITY, Wadhwan City**  
**Name of Program : Master of Library and Information Science (M.Lib.I.Sc.)**  
**Semester : I**  
**W.E.F. – June 2016**

**FACULTY OF:** - Arts and Humanities  
**DEPARTMENT OF:** - Library and Information Science  
**SEMESTER:** - I  
**CODE:** - 5AH01RMT2  
**NAME – Research Methodology**

**Teaching and Evaluation Scheme:-**

Subject Code	Name of the Subject	Teaching Scheme (Hours)				Credits	Evaluation Scheme							
		Th	Tu	Pr	Total		Theory				Practical (Marks)			Total
							Sessional Exam		University Exam		Internal		University	
							Marks	Hrs	Marks	Hrs	Pr/Viva	TW	Pr	
5AH01RMT2	Research Methodology	5	-	-	5	5	30	1.5	70	3	-	-	---	100

**Objectives: -**

1. To provide an understanding of the nature of research and the common research and statistical methods applied in library and information science.
2. To get familiar to design, carryout, interpret and present a research study.
3. To enable students to undertake research work systematically.

**Pre\_requisite:** Knowledge of English Language

**Course outline:-**

Unit	Course Contents	Number of Hours
1	<p><b>Introduction to Research</b></p> <ul style="list-style-type: none"> <li>* Foundations of research, Objectives , Motivations , Types of Research</li> <li>* Research Approaches &amp; Significance</li> <li>* Research Methods v/s Methodology</li> <li>* Research Process, Criteria of Good Research ,</li> <li>* Research Design, Research Problem, Sample Design</li> </ul>	[16]

	* Significance of research in LIS; Areas of research in LIS	
2	<p><b>Research Methods, Tools and Techniques</b></p> <p>* Scientific , Historical , Descriptive , Experimental and Delphi</p> <p>* Survey method and Case-Study method</p> <p>* Collection of Primary Data, Observation , Interview, Collection of Data through questionnaire and schedules, other Methods</p> <p>* Collection of Secondary Data, Selection of appropriate method for data collection, Case Study Method, Guidelines for developing questionnaire, successful interviewing</p>	[16]
3	<p>Data Analysis and Interpretation</p> <p>* Descriptive Statistics, Processing Operations Data Analysis (Elements),</p> <p>* Statistics in Research Measures of Central Tendency Mean Mode,</p> <p>* Statistical Packages – SPSS</p> <p>* Hypothesis</p> <p>* Interpretation and Report Writing</p> <p>* Layout of the research report, types of reports,</p> <p>* Oral presentation, Mechanics of writing a research report, Precautions for writing research reports</p> <p>* Style Manual (Introductory): MLA, APA, CHICAGO, ISI</p>	[14]
4	<p>Bibliometrics, Scientometrics, and Informetrics</p> <p>*Concept and Definition, Bibliometric Laws;</p> <p>* Bradford's; Zipf', Lotka,</p> <p>* Bibliographic Coupling, Obsolescence</p> <p>* Citation Studies Analysis,</p> <p>* Webometrics, Informetrics, Scientometrics</p>	[08]

#### Learning outcomes:

- 1) To provide an understanding of the nature of research and the techniques & tools of research and statistical methods applied in library and information science.
- 2) To enable students to undertake research activities & work systematically.

#### Teaching and learning methodology:

Board teaching, Class interaction, group discussion, Multimedia tools, through Power Point Presentation LCD projector, via seminar and assignments, quiz contest etc...

### **Recommended Books/Study resources**

- 1. Baker, Robert K. Doing Library Research: an introduction for community college students.** Colorado:Webview Press, 1981
- 2. Downs, Robert B. How to do Library Research.** Urbana: University of Illinois Press, 1966
- 3. Gosh, G.B. Trends of information service in India.** Cucutta: World Press, 1974
- 4. Kumar, P.S.G. Research in Library and Information Science in India.** New Delhi: Concept Publishing Co.1987
- 5. Mishra, J.K. Indian research in library and information science.** Ludhiana: Meballion Press, 2001
- 6. Busha, Achrls H. and Harter, Stephen P. Research methods in librarianship: techniques and interpretation.** New York: Academic Press, 1980
- 7. Kothari, C.R. Research Methodology: methods and techniques.** Ed.2.New Delhi: New Age International Publishers, 2004
- 8. Nirnjan, A.N. Research in LIS schools of Indian Universities.** Ludhiana: Meballion Press, 2002
- 9. Sahegal, R.L. Applied statistics for library science research.** New Delhi: Ess Ess Publications, 1998
- 10. Swanson, Don R. Operations research implication for library.** Chicago: University of Chicago Press, 1972
- 11. Sinha, Suresh C. Citation analysis of research field and information technology development.** New Delhi: Ess Ess Publication, 2001



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**FACULTY OF:** - Arts and Humanities  
**DEPARTMENT OF:** - Library and Information Science  
**SEMESTER:** - I  
**CODE:** - 5AH01EIM2  
**NAME – Electronic Information Management**

**Teaching and Evaluation Scheme:-**

Subject Code	Name of the Subject	Teaching Scheme (Hours)				Credits	Evaluation Scheme							
		Th	Tu	Pr	Total		Theory				Practical (Marks)			Total
							Sessional Exam		University Exam		Internal		University	
							Marks	Hrs	Marks	Hrs	Pr/Viva	TW	Pr	
5AH01EIM2	Electronic Information Management	5	-	-	5	5	30	1.5	70	3	-	-	---	100

**Objectives: -**

1. Management issues in the electronic publishing industry
2. The structure of the electronic information industry
3. Management issues in handling digital materials and importance of the development of policies for managing electronic information

**Pre requisite:** Knowledge of English Language and basic knowledge of computer applications

**Course outline:-**

Unit	Course Contents	Number of Hours
1	<b>Information Industry</b> * Information Age * Development of Information Industry * Genesis of Information Industry * Characteristics and Importance of Information Industry * Role of librarian in Information Industry	[12]

2	<p><b>Electronic Information Generation &amp; Management</b></p> <ul style="list-style-type: none"> <li>* Introduction to electronic information</li> <li>* Structure and features of electronic information</li> <li>* Advantages and disadvantages of electronic information</li> <li>* Content management:</li> <li>* Web 2.0 : wiki, podcasting, blogs</li> <li>* Ownership v/s access</li> </ul>	[16]
3	<p><b>E-publishing products and its issues</b></p> <ul style="list-style-type: none"> <li>* E-Books, E-Journals, E-zine, E-Reference Sources, Digital Documents (Born and legacy documents)</li> <li>* Electronic Theses and Dissertation: major ETD initiatives, NDLTD, Role of UGC and INFLIBNET</li> <li>* Peer reviewing, Editing and Proof reading, Designing and Typesetting, Printing</li> <li>* Sales and Marketing</li> <li>* Warehousing and Distribution</li> </ul>	[12]
4	<p><b>Network Publishing and Open Access</b></p> <ul style="list-style-type: none"> <li>* Network Publishing Technology</li> <li>* Network Publishing Technology Providers</li> <li>* Future of E-Publishing and Network Publishing</li> <li>* Aggregators of E-Publishing</li> <li>* Negotiations</li> <li>* Open Access initiatives (OAI)</li> </ul>	[14]

Learning outcomes:

- 1) Students are able to prepare a business plan for managing information available in electronic formats.
- 2) To get knowledge about electronic information management.

Teaching and learning methodology:

Board teaching, Class interaction, group discussion, Multimedia tools, through Power Point Presentation Presentation, LCD projector, via seminar and assignments, quiz contest etc...

## Recommended Books/Study resources

1. Brynjolfsson, Eric and Kahin, Brian (Ed.) Understanding the digital economy: data, tools and research. Massachusetts: MIT Press, 2002
2. Chandrashekar, S. Electronic Publishing with SGML. *In Digital Libraries: dynamic store house of digitalised information*, Edited by M.N.Malwad et al. New Delhi: New Age International Publishers, 1996.pp.5-14
3. Dru, M. Seven years of tracking electronic publishing: the ARL directory of electronic journals, newsletters and academic discussion in *Library Hi-Tech*, 17(1), 17-25. 1999
4. Kasdorf, William E.(Ed). The Columbia Guide to Digital Publishing. New York: Columbia University Press, 2003
5. Kumbar, T.S. and Karisiddappa, C.R. Electronic Journals. *In: Information Technology Application in Libraries: a text book for beginners*. Edited by M. Mahapatra and D.B.Ramesh. Bhubaneswar: Reprint. pp 293-97. 2004
6. Mahapatra, M. and Ramesh, D.B. Electronics Publishing and media. *In: Information Technology Application in Libraries: a text book for beginners*. Edited by M. Mahapatra and D.B.Ramesh. Bhubaneswar: Reprint. pp 496-509. 2004
7. Mahapatra, M. and Ramesh, D.B.(Ed.) Information Technology Application in Libraries: a text book for beginners. Bhubaneswar: Reprint. 2004
8. Merilin and Rose, Tom. Self publish and keep all the profits. 2003  
[http://www.about\\_books.com/self%20pub%20books.html](http://www.about_books.com/self%20pub%20books.html)
9. Martinez, Micheal L. The e-publishing channels. 2005 <http://www.micheal-martinez.com>
10. Panigrahi, Pijushkranti. Markup Languages in Web authoring. *In: Information Technology Application in Libraries: a text book for beginners*. Edited by M. Mahapatra and D.B.Ramesh. Bhubaneswar: Reprint. pp 496-509. 2004



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**FACULTY OF:** - Arts and Humanities  
**DEPARTMENT OF:** - Library and Information Science  
**SEMESTER:** - I  
**CODE:** - 5AH01IPR2  
**NAME – Information Processing: Theory & Practical**

**Teaching and Evaluation Scheme:-**

Subject Code	Name of the Subject	Teaching Scheme (Hours)				Credits	Evaluation Scheme							
		Th	Tu	Pr	Total		Theory				Practical (Marks)			Total
							Sessional Exam		University Exam		Internal		University	
							Marks	Hrs	Marks	Hrs	Pr/Viva	TW	Pr	
5AH01IPR2	Information Processing: Theory and Practical	4	-	2	6	5	30	1.5	70	3	-	-	50	150

**Objectives: -**

1. To discuss and specify various steps of information generation to information dissemination
2. To analyze information products and services

**Pre requisite:** Knowledge of English Language

**Course outline:-**

Unit	Course Contents	Number of Hours
1	<b>Information Architecture</b> * Basics of data and Information * Data, Information and knowledge * Information Management * Knowledge management	[06]
2	<b>Information Consolidation</b> * Information consolidation; Consolidation Products: Trend Reports, State-of-the Art Reports, Reviews, Conference proceedings etc. * Compilation of products: Annual Reports, Manuals, Handbooks, Directories,	[06]

	<p>Abstracts Bulletin, Bibliographies</p> <p>* Information Products/Services: Newsletter, Digests, Dossier, Technical Inquiries, Press Clipping Services, Indexing Bulletin, Subject Bibliographies</p> <p>* Analysis of Information products and services</p>	
3	<p><b>Indexing</b></p> <p>* Indexing: meaning and functions, process of indexing</p> <p>* Indexing languages-Need, Purpose, Characteristics, Types</p> <p>* Vocabulary control-Semantics, Syntactic</p> <p>* Subject heading list : LCHS and SLSH</p> <p>* Thesaurus: meaning, functions and construction of thesaurus</p> <p>* Pre coordinate indexing system: Chain indexing, PRECIS, POPSI</p> <p>* Post coordinate indexing system: UNITERM</p> <p>* Automatic indexing: KWIC, KWOC</p> <p>* Non conventional indexing – Citation indexing , Web indexing</p>	[10]
4	<p><b>Information Retrieval</b></p> <p>* Information Retrieval Systems – Needs, objectives, types and components</p> <p>* Quality control in indexing</p> <p>* Bibliographic description and standards for standards record format – ISBD, FRBR</p> <p>* Online Retrieval System</p> <p>* Metadata Schemas: MARC 21 , Dublin core, TEI, METS</p>	[08]
5	<p><b>Information Retrieval Process and Techniques</b></p> <p>* Electronic IRS – Purpose, function and features</p> <p>* OPAC – Electronic Databases (online and CD – ROMs)</p> <p>* E-Journals, Digital Libraries, Web Resources</p> <p>* Artificial Intelligence and Expert Systems</p> <p>* Evaluation of Information Retrieval System</p>	[10]
6	<p><b>Practical</b></p> <p>Metadata creation and tagging</p> <p>Preparing indexes</p> <p>Create a subject bibliography</p>	[14]



## Learning outcomes:

- 1) Students are able to prepare for indexing and effective information retrieval system
- 2) Students are able to know about Analysis of information and services

## Teaching and learning methodology:

Board teaching, Class interaction, group discussion, Multimedia tools, through Power Point Presentation, LCD projector, via seminar and assignments, quiz contest etc...

## **Recommended Books/ Study resources**

1. Chaudhary, G.G. Introduction to modern information retrieval. London: Library Association, 1999
2. Cleveland, Donald B. and Cleveland, Ana D. Introduction to indexing and abstracting. Colorado: Libraries Unlimited, 2001
3. Foskett, A.C. Subject approach to information. Ed.5. London: Library Association, 1996
4. Gosh, S.N. and Satpathi, J.N. Subject indexing system: concepts, methods and techniques. Calcutta: IASLIC, 1998
5. Korfhage, R.R. Information storage and retrieval. New York: John Wiley, 1997
6. Lancaster, F.W. Vocabulary control for information retrieval. Ed.2. Arlington: Information Resource Press, 1985
7. Lancaster, F.W. Indexing and abstracting: theory and practice. Ed.3. Urbana: University of Illinois, 2003
8. Rowley, J. The basics of information system. Ed.2. London, Library Association, 1996
9. Soergel, D. Indexing languages and thesauri: construction and maintenance. New York: John Wiley and Sons, 1974
10. Walker, G. and Janes, J. Online retrieval: a dialogue of theory and practice. London, Libraries Unlimited, 1993



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**FACULTY OF:** - Arts and Humanities  
**DEPARTMENT OF:** - Library and Information Science  
**SEMESTER:** - I Elective 1  
**CODE:** - 5AH01ALS2  
**NAME** – Academic Library System

**Teaching and Evaluation Scheme:-**

Subject Code	Name of the Subject	Teaching Scheme (Hours)				Credits	Evaluation Scheme							
		Th	Tu	Pr	Total		Theory				Practical (Marks)			Total
							Sessional Exam		University Exam		Internal		University	
							Marks	Hrs	Marks	Hrs	Pr/Viva	TW	Pr	
5AH01ALS2	Academic Library System	5	-	-	5	5	30	1.5	70	3	-	-	-	100

**Objectives: -**

1. To know about the changing information needs of academic community
2. To analyze and identify different types of academic library users
3. To promote the research in academic institution.

**Pre requisite:** Knowledge of English Language

**Course outline:-**

Unit	Course Contents	Number of Hours
1	*Higher Education industry *Higher education accreditation *Role of Library in Academic Institution *Library building space & Design. *Basic Skills for academic Librarian	[12]
2	*types of Academic Libraries: University, College, School Libraries *Collection Development: Traditional and electronic, Selection process and policy *E-Resources Management: Academic consortia-UGC Infonet, DELNET	[14]

	Consortia, Negotiation and vendor relationship -Remote access -Open Access Educational resources -Reference services: Traditional and Digital	
3	*Human Resource Management in AL -Academic Library Leadership -Publishing and E-Publishing - Liaison responsibility -Role of Library committee. -Training and development: User empowerment, Information Literacy -IPR, Copyright and Plagiarism - Ethics for academic Librarian	[14]
4	*Promotional Activity: -Social Media - Academic status of Librarian. -Public services - Future of academic Librarianship -Visit to an academic Library	[14]

### Learning outcomes:

1. Students are able to understand changing needs of information by academic community.
2. Students are able to manage various issue related to academic librarianship.

### Teaching and learning methodology:

Board teaching, Class interaction, group discussion, Multimedia tools, through Power Point Presentation, LCD projector, via seminar and assignments, quiz contest etc...

### **Recommended Books/ Study resources**

1. Academic Library Development by A. K. Dhiman and S. C. Sinha, Ess Ess Publications. 1991
2. Academic Library Systems by srinath sahai, Ess Ess Publications, 2009
3. Academic Library effectiveness by R. Raman Nair, Ess Ess Publications. 1992



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**FACULTY OF:** - Arts and Humanities  
**DEPARTMENT OF:** - Library and Information Science  
**SEMESTER:** - I Elective 1  
**CODE:** - 5AH01PLS2  
**NAME** – Public Library System

**Teaching and Evaluation Scheme:-**

Subject Code	Name of the Subject	Teaching Scheme (Hours)				Credits	Evaluation Scheme							
		Th	Tu	Pr	Total		Theory				Practical (Marks)			Total
							Sessional Exam		University Exam		Internal		University	
							Marks	Hrs	Marks	Hrs	Pr/Viva	TW	Pr	
5AH01PLS2	Public Library System	5	-	-	5	5	30	1.5	70	3	-	-	-	100

**Objectives: -**

1. To prepare manpower as per requirement of emerging information society.
2. To prepare the students for managing Public Library System.
3. To create awareness about importance of information in routine life.

**Pre requisite:** Knowledge of English Language

**Course outline:-**

Unit	Course Contents	Number of Hours
1	*Introduction to Public Library -Importance of Library in Society -Competency of Public Librarian	[12]
2	*Emergence of Public Libraries in India and abroad - UNESCO Public Library Manifesto - Government Initiatives: NKC, National Knowledge Network (NKN), NMEICT. National Knowledge Commission.	[14]

	- Non Government efforts: Role of NGOs	
3	* Library Legislation in India -Wish special reference to Gujarat Public Library Act 2001 - Public Library Act in Other states - Reviews of Public Library act - Right to Information Act, Press and registration act & Delivery of Books act - Suggestions	[14]
4	*Training and Development - Requirement of Trained Manpower in Public Libraries: - Public Relations and Extension Activity: - Community information centers: Rural and Agricultural	[14]

### Learning outcomes:

1. Students are able to analyze information needs of business community and corporate world.
2. Students are able to use knowledge management tools and techniques.

### Teaching and learning methodology:

Board teaching, Class interaction, group discussion, Multimedia tools, through Power Point Presentation, LCD projector, via seminar and assignments, quiz contest etc...

### **Recommended Books/ Study resources:**

1. Public Library Organisation by C. G. Vishwanathan, Ess Ess Publications 1990
2. Public Library System by Gopal Rao, Ekbote Brothers Hyderabad 1987
3. Indian Library Legislation 2 Volumes by Venkattapiah V., Daya New Delhi 1990
4. Library Organization by Krishna Kumar, Vikas 1986
5. Library movement and library development in India by Vashisht C. P. (Ed.) ILA 1994
6. Community librarianship: changing face of public libraries by Martin, W. J., Clive Bingley London 1989



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**FACULTY OF:** - Arts and Humanities  
**DEPARTMENT OF:** - Library and Information Science  
**SEMESTER:** - I Elective 2  
**CODE:** - 5AH01DLB2  
**NAME** – Digital Libraries: Theory and Practical

**Teaching and Evaluation Scheme:-**

Subject Code	Name of the Subject	Teaching Scheme (Hours)				Credits	Evaluation Scheme							
		Th	Tu	Pr	Total		Theory				Practical (Marks)			Total
							Sessional Exam		University Exam		Internal		University	
							Marks	Hrs	Marks	Hrs	Pr/Viva	TW	Pr	
5AH01DLB2	Digital Libraries: Theory and Practical	4	-	2	6	5	30	1.5	70	3	-	-	50	150

**Objectives: -**

1. Understand the foundation of digital library system.
2. Demonstrate understanding of theoretical concepts and practical skills related to digital library development and management.
3. Create awareness of fragile digital file formats and reduce the risk of information lost.
4. To prepare manpower who can manage digital content effectively .

**Pre requisite:** Knowledge of English Language

**Course outline:-**

Unit	Course Contents	Number of Hours
1	<b>Introduction:</b> *Digital Libraries: - Genesis, definition, objectives & scope, Digitization processes: input capture devices	[14]

	<ul style="list-style-type: none"> <li>*Image editing software &amp; OCR</li> <li>* File formats: image formats, audio formats, storage media formats,</li> <li>* Storage media life cycles</li> <li>* Content management: Word press, Drupal, Joomla</li> <li>* Artificial Intelligence</li> </ul>	
2	<p><b>Collection Development:</b></p> <ul style="list-style-type: none"> <li>*Digital content creation and management</li> <li>*Digitization standards, procedures.</li> <li>*Online and offline DL</li> <li>*Web 2.0 and web based services</li> </ul>	[14]
3	<p><b>DL Architecture and design</b></p> <ul style="list-style-type: none"> <li>*DL Models,</li> <li>*Metadata: Types and schemas</li> <li>*DL softwares: Dspace,E-prints and GSDL</li> <li>*Issues related to Digital libraries: Security of data and information</li> </ul>	[14]
4	<p><b>Practical:</b></p> <ul style="list-style-type: none"> <li>*Dspace and GSDL</li> <li>*Word press</li> </ul>	[12]

### Learning outcomes:

1. Students are able to design and develop digital library
2. Students are able to manage digital content more effectively and secured

### Teaching and learning methodology:

Board teaching, Class interaction, group discussion, Multimedia tools, through Power Point Presentation, LCD projector, via seminar and assignments, quiz contest etc...

### **Recommended Books/ Study resources:**

1. Digital Libraries in higher education by Amjad ali, Ess Ess Pub 2005
2. Digital Libraries and information networks by Amjad ali, Ess Ess pub. 2007

3. Digital Libraries and Digitization by Gurudev Singh, Ess Ess Pub. 2011
4. Digital Libraries: Dynamic Storehouse of Digitized Information by N. M. Malwad, New age publishers 2008
5. E-Publishing and Network Publishing by Dr. J. P. Gondalia, Cyber Tech Publication, New Delhi 2015.
6. Digital Library Programs for Libraries and Archives: Developing, Managing, and Sustaining Unique Digital Collections by Aaron D Purcell, Neal Schuman pub 2016
7. Digital Library management by Chandrakanta swain, SSDN Pub 2012





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**FACULTY OF:** - Arts and Humanities  
**DEPARTMENT OF:** - Library and Information Science  
**SEMESTER:** - I Elective 2  
**CODE:** - 5AH01LAN2  
**NAME –** Library Automation and Networking: Theory and Practical

**Teaching and Evaluation Scheme:-**

Subject Code	Name of the Subject	Teaching Scheme (Hours)				Credits	Evaluation Scheme							
		Th	Tu	Pr	Total		Theory				Practical (Marks)			Total
							Sessional Exam		University Exam		Internal		University	
							Marks	Hrs	Marks	Hrs	Pr/Viva	TW	Pr	
5AH01LAN2	Library Automation and Networking: Theory and Practical	4	-	2	6	5	30	1.5	70	3	-	-	50	150

**Objectives: -**

1. To understand the requirement of library automation and networking
2. Take benefit from library networking technology
3. To betterment of library services with I.T. Applications

**Pre requisite:** Knowledge of English Language and computer.

**Course outline:-**

Unit	Course Contents	Number of Hours
1	<b>Library Automation:</b> Definition, need, purpose and advantages. Areas of Automation – Acquisition, Cataloguing, Access to Catalogue (OPAC), Circulation and Serial Control.	[10]
2	<b>Automation: Planning</b>	[12]

	<p>Planning for Automation Procedure:</p> <p>Steps in Automation: Developing a basic Technology Plan.</p> <p>Identifying goals and objectives, Describing existing library services and technology, Feasibility Study, Assessing needs and priorities, Preparing strategic Plan, Hardware and Software selection and Implementation.</p> <p>Barcode &amp; QR Code Technology: Meaning, need, purpose and advantages.</p> <p>RFID System</p>	
3	<p><b>Integrated LMS</b></p> <p>Open source:</p> <p>KOHA, Newgenlib, E-granthalaya</p> <p>Proprietary:</p> <p>SOUL 2.0,</p> <p>Issues in Library automations.</p> <p>Cloud hosted v/s local hosted: Advantages and drawback</p>	[10]
4	<p><b>Library Networking and Networks:</b></p> <p>Networking: Concept need and advantages. Basic components of network.</p> <p>Types of Networks – LAN, MAN, WAN.</p> <p>Networks: General and Subject specific.</p> <p>General – ERNET, NICNET, INFONET.</p> <p>Library Networks: OCLC, BLAISE, JANET, INFLIBNET, DELNET, ALIBNET : Their objectives, Functions, Services and Activities.</p>	[12]
5	<p><b>Practical:</b></p> <p>OS: KOHA, NewGenlib</p> <p>Proprietary: SOUL 2.0</p>	[10]

Learning outcomes:

1. Students are able to manage integrated library system.

2. They are also able to design Library automation plan.
3. Students are able to understand advantages of library networks.

### Teaching and learning methodology:

Board teaching, Class interaction, group discussion, Multimedia tools, through Power Point Presentation, LCD projector, via seminar and assignments, quiz contest etc...

### **Recommended Books/ Study resources:**

1. Fundamentals of Library automations by Pandey S.K. Ess Ess Pub. 1995
2. Information technology and library automation by G. Devrajan Ess Ess Pub. 2014
3. A Manual for Library automation and networking by N. R. Satyanarayana Ess Ess Pub 2014
4. Library automation: Design, Principles and practice by J. Haravu, Allied publishers 2004
5. Library automation in india by Hilal ahmad, Ane books 2016
6. Library automation and networking by Balasubramaniam P. Deep and Deep Pub 2012
7. Library networking by S. Chaudhary APH Publishing 2011
8. Automation and networking of Libraries: A manual of Library management software and applications of computer technology in Library by Lakshmikant Mishra, New age International 2008