Faculty of Humanities & Social Sciences

Library and Information Science

M.A. Library and Information Science

Curriculum

2004

Curriculum Development Centre

Tribhuvan University

Kirtipur. *Kathmandu*

Nepal

Publisher:
Curriculum Development Centre
Tribhuban University
Kirtipur, Kathmandu,
Nepal
Tel. No. 4-330856
4-334041

First Edition:
500 Copies
Chaitra, 2060
March, 2004

Price:

Printers:
T.U., Press
Kirtipur, Kathmandu
Nepal.

Master of Library and Information Science

M.A., Library and Information Science

Effective from 2004

Office of the Dean
Faculty of Humanities & Social Sciences
Tribhuvan University
Kathmandu, Nepal

Introduction

Information is a major resource for meaningful decision and knowledge expansion. It plays key role for overall development of a country. Without correct information right decision can not be taken place. Therefore. there is a need of library and information systems and services in all areas and subjects. There are many libraries and information centers in the government offices. non-governmental organizations. academic institutions. universities and so on. Such libraries and information centers have felt necessity of professional high skill human resources for scientific organization and services since long back. This necessity was recognized by Tribhuvan University (TU). which has the responsibility to produce high skill professional human resources in different sectors. In 1995 TU had established a Department of Library Science under the faculty of Humanities and social Sciences. From the same year a post graduate bachelor degree course in library science of one year duration was started. But only middle level professional human resources will not be sufficient in this inf]ormation explosion age. Specialization is also required to store and retrieve appropriate information form global. regional and national information systems and services. In this regard in 2002 TU has decided to start the Master of Library and Information Science (MLISc). This is a landmark for professional development in Nepal.

The Objectives of The Department

The objectives of the Central Department of Library and Information Science will be to:

1. train different categories of information personnel required for the country.
2. provide information services to the users who attend the libraries of different types and sizes through professional support.
3. conduct research in the library and information sectors.
4. provide continuing of library and information science education to all categories of library and information workers.
5. conduct seminars. workshops. research and consultancies in the field of library and information science.

6. provide counseling services. guidance. suggestions in the policy and other related matters in the field of library and information science.
7. suggest the concerned authorities for legalized library and information services in the country.
8. produce high skill professional human resources in the field of library and information science.
9. conduct faculty development programme for quality education.
10. present proposals. programmes and advises to the concerned organizations and government offices according to their needs and requests for the development informations sectors.

Outlines of the Curriculum

The curriculum of MLISc degree of TU will incorporate the philosophy by which the information specialists or librarians on completion of two years programme will be competent to carry out the library or information services to grass root level and top management to all categories of users. In these services the graduates will be able to trace out any information whether current or retrospective from a library or information systems of the country or from outside the country by using different databases. e-mail. CD-ROM. Internet etc.

Course Content

The Curriculum is divided into two parts. The first part will be of one academic year consisting of five compulsory papers. Four compulsory papers and one specialization paper will be the contents of second part. The specialization paper of part second may be chosen from the given list with the approval of the head of central department. Paper IX of part second for dissertation students should require to work 4 hours per week under the supervision of guide. Each paper will require approximately seven classes per week for lecture. problem solving and practical.

Objectives of MLISc Course

The Objectives of MLISc course are as follows:

1. to give the knowledge of basic principles and laws of library and information science.

2. to provide basic skills of libraianship and information manager for the scientific management of libraries and information centers.
3. to acquaint with social. cultural. educational and communication environment of libraries and information centers for competitive. effective and efficient information services.
4. to provide the knowledge and skill of management and administration of all types. sizes and subjects of libraries and information centers.

Admission Requirements

The candidate seeking admission to the course should satisfy the following conditions:

1. Bachelor's degree or its equivalent from a recognized university.
2. Proficiency in English
3. Basic knowledge in computer
4. Preference will be given to the students with 45 or above percentage of marks.
5. special consideration shall be given to the eligible candidates from
   a. the field of Library and Information Science. Science and Technology.
   b. employees in libraries and information centers or holding some basic qualifications in library and information science education.
6. Candidates has to pass an entrance test for admission. securing not less than 35% of marks. The entrance examination will be of 50 marks.

Duration of the Course and Examination

The duration of the course is of two academic years and there is an university examination at the end of each year Seventy percent attendance is the class is compulsory The candidates will be awarded the Degree of Master of Library and information Science [MLISc] . A student who has passed his/her two years of study will be graded on the basis of the two year's average marks.

Classification of Division

75 percent and above Distinction
60 percent and above First Division
50 Percent and above Second Division
40 percent and above Third Division

Teaching Methods

The traditional lecture method will occupy more time for teaching Except that following will be suggested methods to teaching for quality education and skills:

- Last 10 minutes of the lecture period discussion
- Monthly seminar to be organized.
- Group discussion and cooperative projects to be followed.
- Computer technology to be used
- Hand-on experience to be provided whenever possible

Teaching Aids

There are different kinds of teaching aids for scientific teaching of information science New methods of communication are being development and new information technologies are being used. Information Science being rapidly development the following facilities will be provided for teaching:

a. Overhead Projector
b. Slide Projector
c. Audio and Video Video Equipments
d. Personal Computer
e. Necessary Computer Software

Other Activities

a. Field Observation: Provision is made for visiting various libraries and documentation center in the country

b. Training. seminar and conferences: Special provision will be made to have exposure among to students on training. seminars. conferences projects. presentations and lectures by visiting experts and professors.

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Course Structure

1st Year

Paper	Code No.	Subjects	Full Marks
I	501	Library/Information Society and Data Communication and computer Network in Library Services Group A : Library/Information Society - 50 Group B : Data Communication and computer Network in Library Services - 50	100
II	502	Library and Information Management	100
III	503	Information Control Technology Group A : Theory - 50 Group B : Practice - 50	
IV	504	Cataloguing and Indexing Group A : Theory - 50 Group B : Practice - 50	100
V	505	Information and Communication Technology Group A : Theory - 50 Group B : Practice - 50	100

2nd Year

Paper	Code No.	Subjects	Full Marks
VI	506	Information Procession Processing and Retrieval Group A : Theory - 50 Group B : Practice - 50	100
VII	507	Information Sources and Services	100
VIII	508	Research Methodology & Quantitative Techniques	
IX	509	Dissertation	100
X	510	Specialization Papers (Any One)	100
	510-1	Comparative and International Librarianship	
	510-2	Non-Book Materials and Library Services.	
	510-3	Bibliographic Control	
	510-4	Education for Library and Information Science.	
	510-5	Preservation and Conservation of Documents.	
	510-6	Computer Programming in Library Automation Group A : Theory Group B : Practice	

LISc. 501

Paper I : Library/Information Society and Data Communication Computer Network in Library Service

Group A: Library/Information Society [Theory]

Full Marks: 50
Pass Marks: 20
Teach Hrs.: 75

Course Objectives

This paper intends to enable the students to explain the development of library, information and documentation centres passed thorough various human civilizations. It also focuses on the library's educational and informational role to meet with the ever-growing needs and demands of users. It also familiarizes with the latest technological aids being used on library services. This paper aims to boost up the professional confidence, performance competence and work responsibilities amongst students, and ultimately produces qualified and creative manpower in Nepal's information market competent enough to work at the global level also.

The objectives of this course are:

- to enable the students to explain the development of library, information and documentation centres passed through human civilizations
- to focus on library's educational and informational role to meet with ever growing demands of users
- to familiarize with the latest technological aids being used in library services
- to boost up the professional confidence and capabilities amongst students
- to produce qualified and creative manpower in Nepal's information market competent enough to work at the global level

Unit/Course Content	Teaching Hrs.

1. History of Libraries: 10
   - Development of libraries as knowledge communication and information centre or role of library in human society
   - Evolution and present stage of information society

2. Libraries in Nepal: 5
   - Library movements before 1951
   - Library development after 1951 to date

3. Laws of Library Science: 5
   - Five Laws in Library Science by Dr. SR Ranganathan
   - each laws with their impacts on library development
   - comments and expansion of these laws. analytical study
   - ethics of librarianship

4. Types and functions of Libraries: 10

Aims. objectives. functions and services of libraries e.g.
   - Academic
   - Public Library
   - National Library
   - Special Library
   - Private Library
   - Depository Library

5. Information Society. Evolution of the Concept: 5
   - Economic criteria
   - Technological criteria
   - Social criteria
   - Political criteria

6. Meaning of Informations: 10
   - Everyday uses of information
   - Focused perception of information
   - Data. information and knowledge
   - Meaning of communication
   - Links between information and communication
   - Information quality

7. Library legislation: 5
   - India
   - UK
   - USA
   - Nepal

8. Library Associations: 5
   - History. professional contribution. training offered by these associations

9. Impact of Information and Communication Technologies: 10
   - Meaning
   - Security of information
   - Computer crime
   - Legal. address against criminal behavior
   - Primary and library
   - Intellectual property
   - Censorship and free speech
   - The networking of society
   - The Internet
   - Information superhighways
   - Social impact of information and communication technologies

10. Global Information Flows: 10
   - Networks and organizational structure
   - Information flows in the developing world
   - The contribution of information in development
   - The role of information policy
   - Strategies for development
   - Transborder data flows
   - Sovereignty
   - Cultural imperialism
   - Global transformation

Suggested Readings:

1. Gates. Jean Key: Introduction to Librarianship: New York. MCGraw - Hill. 1996.
2. Ranganathan. S.R.: Five Laws of Library Science: Bombay Asia Publishing House. 1957.
3. Jefferson. G.: Library cooperation: 2nd ed. London clive Bengey. 1990.
4. Beenham. Rosemary: The Basic of Librarianship: 3rd Ed. and Colin. Herrison London: Clive Bengey. 1990.
5. Hutcings. F.G.B.: Librarianship. a short manual. with special reference to development country: kaulka lumpur: up 1969 or latest edition.
6. Marshal. D.N.: History of Libraries. Ancient and Medieval. New Delhi: Oxford and IBC Publishing. 1983.
7. Charan. Jagadish: Fundamentals of Library Science. a modern approach. Delhi: Macmillan. 1972.
8. UNESCO: Library Education Programmes in development countries with special reference to Asia: London: LA. 1982.
9. मिश्र, नारायणप्रसाद र शान्ति: पुस्तकालय विज्ञानको रुपरेखा, काठमाण्डौं, २०३८
10. Encyclopedia Britannia: America. Colliers. Columbia and MCGraw Hill Encyclopedia of science and Technology.
11. Encyclopedia of American Library Association.
12. Encyclopedia of Library and Information Science Set.
13. International encyclopedia of Information and Library science. Edited by John Feather and Paul sturges. New York. Routledge. 1997.
14. Other New titles to be recommended by Teacher as arrived in the Library.
15. Kumar Krishan: Library Organization: New Delhi. Vikash Publishing House. 1995.
16. Khanna. J.K.: Library and Society. 2nd revised and enlarged edition: New Delhi. Ess Ess Publications. 1994.
17. Pandey S.K. and Sharma: Library and Society. 2nd edition New Delhi. Ess Ess Publications. 1992.

Paper I : Library/Information Society and Data Communication Computer Network in Library Service

Group B: Data Communication Computer Network in Library Service [Theory]

Full Marks: 50
Pass Marks: 20
Teach Hrs.: 75

Course Objectives

The objectives of the course is to develop skills in library science students in designing analyzing troubleshooting and general knowledge and maintained knowledge of use in library network.

Unit/Course Content	Teaching Hrs.
1. Introduction: – A communication model – Data Communication Network – Protocols and Standards	5
2. Basic Concepts and of: – LAN Configuration – Topologies – Transmission mode – Categories of networks	5
3. Internet-works: Computer communication Architecture: – OSI (Open Systems Interconnections) – TCP/IP (Transmission Control Protocol/Internet Protocol) – Numbering systems – Decimal numbers – Binary numbers – Octal numbers – Hexa decimal numbers	5

4. Transformations: 15
   - From other systems to decimal
   - From decimal to other systems
   - From binary to octal or hexadecimal

5. TCP/IP Protocol: 10
   - IP Protocol
   - IP Addresses
   - Subnretting overview of Internet Control Protocols
   - ARP and RARP
   - ICMP

6. Topologies overview of IEEE Standard 802 for LANS 10
   - IEEE 802.3 and Ethernet
   - IEEE 802.4 and Token Bus
   - IEEE 802.5 and TokenRing

7. Meaning of transport layer: 5
8. Internet Transport Protocols TCP and UDP: 20
   - Client server model
   - Boot Strap Protocol (Boot P) and Dynamic thus Protocol (DHCP)
   - Domain Name System (DNS)
   - World Wide Web (WWW)
   - E-mail
   - FTP

Suggested Readings:

1. Foruzan . B.A.: Data Communication and Networking. New Delhi: Tata McGraw-Hill. 2000.

2. Tanebaum. A.S.· Computer Networks. 3rd ed.. PHI. 1996.

3. Stalling W.: Data and Computer Communications. 5th ed. PHI. 1997.

4. Boss. Kausik: Information Networks in India: Problems and Prospects. New Delhi: ESS ESS Publications. 1994.

5. Rao. I. K. Ravichandra: Library Automation. New Delhi: New Age International (P) Ltd. Pub. 1996.

6. Sehgal. R. L.: An Introduction to Library Network. New Delhi: ESS ESS Publication. 1996.

7. Sharma. Pandey S. K.: Library computerization: Theory and Practice. New Delhi: ESS ESS Publications. 1993.

8. Keshav. S.: An Engineering Approach to Computer Networking. Longman: Addisen Wesely. 1997.

9. Lemer. D. E.: Internetworking with TCP/IP. Vol. 1. 3rd ed. PHI. 1995.

10. Stevens. W.R.: TCP/IP Illustrated. Vol. 1. Vol. 2. Vol. 3. Addisen Wesely.

11. Krishna Kumar: Library Organization. New Delhi. Vikas Publishing. 1993.

12. Ramaiah. L. S. et al.: Information and Society. New Delhi. ESS ESS Publications. 1997.

13. Rauganathan. S. R.: The Five Laws of Library Science. Banglore: Sarada Rauganathan Endowment for Library Science. 1988.

LISc. 502

Paper II. Library and Information Management [Theory]

Full Marks: 100
Pass Marks: 40
Teach Hrs.: 150

Course Objectives

This course is intended to teach the students about the application of scientific management theories. principles and policy for effective. efficient and prompt functioning of a library. At the end of the course. the student will be able to gain knowledge to manage and to operate the library. information/documentation centres for better services.

The objectives of this course are:

- To introduce the theories procedure. techniques and principles of management.
- To consider their application in the management of information system and services.
- To develop competence's and leadership qualities which can be applied in the overall (including global context) information environment.

Unit/Course Content	Teaching Hrs.
1 Management Theory and Principles:	10

- Management - meaning and scope. scientific management. levels of management. function of management in library/information system-POSDCORB. principles of scientific management. and its application in library management
- Motivation. Concept and Types
- Motivation and Behaviour
- Theories of Motivation (Maslow's Theory of Motivation. the Herzberg Studies and McGregor: Theory X and Theory Y)

2. Organizational Theory: 5
   - Library organizational structure (characteristics of division)
   - Process of structuring (principle of organising)
   - Organizational charts (different libraries charts)

3. Planning Library Building: 10
   - Preliminary considerations
   - Location
   - Space planning for various areas
   - Furnishing (Library furniture)
   - Environmental controls
   - Standards and work flows
   - Ergonomic
   - Illumination (Lighting)
   - Ventilation
   - Sanitation. Humidity

4. Stock Management: 25
   - Documents and their types:(including non-print materials)
   - Selection principles
   - Users' studies
   - Selection tools for books
   - Selection tools for periodicals and serials government
   - Selection tools for non print materials

Acquisition Unit:
   - Problems in Acquisition
   - Document selection
   - Document procurement
   - Ordering methods
   - Document accessioning
   - Records and registers

Technical Unit:
   - Classification scheme and its application
   - Catalogue code and its application
   - Internal and Physical form of catalogue
   - Materials and equipment

Periodicals Units:

- Means and methods of acquisition
- Periodical receiving and methods of recording

5. Circulation Unit: 20
   - Circulation work and its goals and scope
   - Circulation systems
   - Registration of members
   - Charge and discharge of documents
   - Changing systems
   - Inter library loan

6. Stock Maintenance: 20
   - Maintenance work and management
   - Stocking principles
   - Stocking systems
   - Shelf arrangement
   - Stock maintenance
   - Stock verification
   - Binding
   - Preservation

7. Personnel Management: 10
   - Library staff
   - Staffing requirements
   - Manpowering planning
   - Job analysis
   - Job description
   - Staff recruitment
   - Staff training
   - Staff manuals
   - Staff performance appraisal

8. Financial Management: 20
   - Financial management
   - Library finance
   - Library expenditure

- Library budget and its budgetary methods
- Preparation of library budget
- Accounting
- Auditing
- Cost effectiveness and Cost Benefit Analysis
- Library statistics and its types and their compilation
- Annual report and its importance

9. Library Committees: 10
   - Needs. purpose and functions of library committees
   - Librarian and library committees
   - Library rules and regulations
   - Library brochures

10. Management -Information System (MIS): 20
   - Introduction. importance. evolution of MIS
   - Computer and MIS
   - Organizational structure
   - Logical fouincations of MIS
   - Typical management of information system
   - Future of MIS
   - PERT. CPM and Operation research techniques:

Suggested Readings:

1. Corbetl. Edmund (V) : Fundamental of library organisation and Administration. 1978
2. Dougherty (R. M.) and Heiarity (E. J.): Scientific Management of Library Operation. 1966.
3. Evans (G. E.): Management Techniques for Libraries: New York. Academic Press. 1983.
4. Mittal. R. L.: Library Administration: Theory and Practice: New Delhi. Metropolitan Book. Cp. (Pvt.) Lt. 1987.

5. Stueart R. D. and Eastlick J. T.: Library Management (Library science text serials) USA. Libraries Unlimited. 1981.

6. Ranganathan S. R.: Library Administration: Bangalore. Sarada Ranganathan Endowment for Library Science. 1988.

7. Krishna Kumar: Library Manual. New Delhi. Vikas Publishing House. 1991.

8. Devar. Rustons: The Management Process. Latest ed.

9. Jones. Norogh and Jordon Peter: Staff Management in Library and Information Works. 1982.

10. Murdick: Information Systems for Modern Management. 1979.

11. UNESCO: Handbook for Information Systems and Services. 1977.

12. Stoner. James. A. P.: Management. 1987.

13. Lancastu. F. W.: The Management for Library and Information Services. London. Bilterworths. 1985.

14. Wasserman. Paul and Bundy M. L.: Reader in Library Administration. 1968.

15. Jones (Ken): Conflict and Change in Library Organization. People. Power and Service. 1984.

16. Mokerjee (S.K.) and Sengupta (B): Library Organization and Library Administration. 1977.

17. Panwar. B. S. and Vyas. S. D.: Library Management: Delhi. B. R. Publishing Corporation. 1986.

18. Feather. John: Preservation and the Management of Library Collections: London. Library Association Publishing. 1996.

19. Lahiri. Ramansu: Management of Libraries: Concepts and Practice: New Delhi. Ess Ess Publications. 1996.

20. Khalid K. Farugi: Planning Library Building. New Delhi. Anmol Publishings Pvt. Ltd. 1988.

21. Sharma. H. D.: Library Building and Furniture: A Handbook for Librarians. Varanasi. 1996.

22. Chakrabarti. Ajil K.: A Treatise on Book Selection. Delhi. 1983.

LISc. 503

Paper III. Information Control Techniques

Group A: Information Control Techniques [Theory]

Full Marks: 50
Pass Marks: 20
Teach Hrs.: 75

Course Objectives

This course is designed to provide theoretical knowledge on controlling methods through library classification Information is available in different sizes. formats and types in plenty of numbers. Without proper organisation of information. it can not be retrieved and utilized. Therefore. each and every professional should have the knowledge of controlling techniques and its different facets and tools such as history. theories types. practices. advantages. disadvantages. structure system and so on. At the end of the course student will be able to gain the knowledge on information controlling techniques through classification and subject analysis of the documents.

The objectives of this course are:

- to study and understand the theory of classification.
- to familiarize the students with the practice of the classification.
- to give the knowledge on different schemes of classification to the students for appropriate selections.
- to familiarize the students with the procedure involved in document classification and subject analysis

Unit/Course Content	Teaching Hrs.
1. Information and its Organization: - Definition - Needs - Purpose - Types and Kinds - Functions	10

- Controlling techniques
- Library Classification
- Need and purpose of Library Classification
- Basic Concepts and Terminology on library classification

2. Universe of Subject: 10
   - Structure and development of Universe of Subject.
   - Mode of formation of Subjects and its types

3. Classification Schemes and Theory: 15

Broad outline of major schemes of classification:
   - CC
   - UDC
   - DDC
   - LC
   - Canons and Principles of Idea Plane: Verbal Plane; Notional Plane

4. Notation: 10
   - Needs. Types: Functions and Qualities: Canons: Devices: Hospitality in Notional System: Capacity of Notation

5. Controlling Tools and their usage: 10
   - Book Number and Call number
   - Class Number
   - Collection Number
   - New Trends in Classification.
   - Tools for Subject Headings
   - Thesaurus and Indexing Techniques

6. Classification of Complex Subject by DDC:
   - Complex Subject
   - Phase Relations
   - Intra-Facet Relation
   - Intra Array Relation
   - Use of Devices

Group B: Information Control Techniques [Practical]

Full Marks: 50
Pass Marks: 20
Teach Hrs.: 75

Course Objectives

This course is designed to provide practical knowledge on library classification. There are different schemes for library classification . Detailed study on all schemes are not possible. Therefore only one scheme(DDC) is selected for this course.

The objectives of this course are:

- to know the skills of assigning class numbers to the documents.
- to familiarize the students with the structure of schemes of classification.
- to give the knowledge of different steps involved in document classification

Unit/Course Content	Teaching Hrs.
1. Classification: – Steps in Practical classification – Introduction of classification schemes – Postulation Approach	20
2. Classification Scheme of Melvil Dewey: – Structure or Mapping – Main Classes. Divisions. Sections. Subsection – Use of Notes like "Scope" "In Clusion" "Class Here" Class elsewhere. Optional etc. – Synthesis. Add Instruction – Signs for certain Techniques – Case of Schedules	40
3. Auxiliary Tables in DDC: – Use of Standard Subdivision Table	

- Use of Area Table
- Use of Subdivision of Individual Literature Table
- Use of Subdivision of Individual Language Table
- Use of Racial Ethnic and Traditional Groups
- Use of Languages Table
- Use of Persons Table
- Use of Relative Index

Suggested Reading:

1. Ranganathan. S.R.: Prolegomena to Library Classification. 3rd ed. Bangalore. Sarada Ranganathan Endowment. 1967
2. Krishna Kumar: Theory of Classification. New Delhi. Vikas. 1991
3. Foskett. A.C.: The Subject Approach to Information 4th ed. London. Clive Bringley. 1982
4. British Standards Institute: Universal Decimal Classifications. London. B.S. 1000A. 1965
5. Cutter. C.A.: Cutter Sanborn Three-Figure Author Table
6. Dewey. Melvil: Dewey Decimal Classification. 19th to 21 ed. New York Forest Press. 1979 to 1996
7. Ranganathan. S.R.: Colon Classification. 6th ed. with Amendments. Bombay. Asia. 1963
8. Buchnan. Brain: Theory of Library Classification. London. Clive Bingley. 1979.
9. Chan. Lois Mai: Cataloguing and Classification. An Introduction. New York. MCGraw Hill. 1985.
10. Husain. Sharbahat: Library Classification Facts and Analysis. New Delhi. Tata Mc Graw Hill Publication. 1993.

11. Kaula. P.N.: Treatise on Colon Classification. Delhi. Sterling. 1985.

12. Palmar. B.I. and Wells. A.J.: Fundamentals of Library Classification. London. George Allen and Unwin. 1951.

13. Ranganathan. S.R.: Elements of Library Classification. 3rd ed. Banglore. Sarada Ranganathan Endowment. 1989.

14. Wynar. Bohdan S.: Introduction to Cataloguing and Classification. 7th ed. by Taylor. A.G. Colorado. Libraries Unlimited. 1985.

LISc. 504

Paper IV. Library Cataloguing and Indexing

Group A: Library Cataloguing and Indexing [Theory]

Full Marks: 50
Pass Marks: 20
Teach Hrs.: 75

Course Objectives

This course is aimed to provide theoretical knowledge of Library cataloguing and subject indexing procedures to analyse the monographs and non books materials. As there are different rules. regulations and codes for this purpose. In this course only well known and relevant codes and rules are introduced. The student will be able to analyse the materials from different facets and synthesize them in international standards after the completion of this course.

The objectives of this course are:

- to acquaint and understand the theories of cataloguing and subject indexing.
- to acquaint with the cataloguing codes. rules and regulations to the students.
- to familiarize the students with procedures involved in cataloguing and subject indexing

Unit/Course Content	Teaching Hrs.
1. Catalogue:	15

- Concept and evolution
- Needs. Purpose
- Objective
- Types of catalogue
- Library catalogue their types.
- Historical development. need. purpose and function of library catalogue.

2. Physical form of Catalogue: 3
   - Card form: book form: sheaf form.

3. Types of Catalogue: 3
   - Alphabetic. classified and alphabetico-classed catalogue

4. Types. Codes and Description of Cataloguing: 20
   - Subject catalogue functions. CC. alphabetical subject catalogue. subject headings. Using LC and Sears list. Mesh. AGROVOC. UNESCO. Popline. UNIVIS chain procedure. PRECIS & POPSI (techniques only) its development origion and varieties of codes

5. Description of Cataloguing: 5
   - Descriptive cataloguing:
   - Standards cataloguing.

6. Principles of Cataloguing: 8
   - Normative principles. cannons and laws of Lib. Sc. and their implication

7. Important of Cataloguing on Classification: 10
   - Relation of cataloguing with classification.
   - Help provided by classifier to cataloguer and vise-versa.

8. Filing of Entries: 6

Alphabetical order:
   - Letter by letter.
   - word by word and according to class number

9. Reference Materials: 5
   - Materials required in catalogue department

Suggested Readings:

1. American Library Association et. al: Anglo American Cataloguing Rules 2nd edition London. LA. 1978

2. Krishna Kumar & Girija Kumar: Theory of Cataloguing 5th revised ed. New Delhi Vikas Publishing House Pvt. Ltd.

3. Ranganathan. S. R.: Classified Cataloguing Code 5th ed. Bombay. Asian Publishing House

4. Westby. B. M. Ed.: Sears Lists of Subject Heading. 16th ed. New York

5. Wynal. Bodhans: Introduction to cataloguing and Classification. 7th edition. Lttleton. libraries unlimited. 1985.

6. Riaz. Mohamnd: Modern techniques of documentation and information work. Delhi. Royal publications. 1992.

7. America Library Association: A. L. A rules for filing catalogue cards. Chicago ALA. 1968

8. A. L A.: Guidelines for Book catalogue. Chicago 1977.

9. Boll. John J.: Introduction to cataloguing. New York: McGraw-Hill. 197 V in 2 Vols.

10. Krishna Kumar: An Introduction to Anglo American cataloguing rules 2nd ed. New Delhi. Vikas. 1987.

11 Weihs. Jean: Non-book Materials. the organization of integrated collection: 3rd ed. Ottawa. CLA. 1989.

Group B: Library Cataloguing and Indexing [Practical]

Full Marks: 50
Pass Marks: 20
Teach Hrs.: 75

Course Objectives

Library cataloguing and Indexing practice paper intends to have a good skill of the students in cataloguing the universe of knowledge existed in the form of recorded knowledge and to acquaint them with monographs and non book materials and enable to catalogue them according to set standards.

The objectives of this course are:

- To acquaint and understand the practice of cataloguing and subject indexing.
- To acquaint with cataloguing codes and use them practically in Libraries.
- To familiarize the students with procedures in subject indexing practically.

Unit/Course Content	Teaching Hrs.
1. Choice of Access Pointed and Rendering of Names: - Single personal author, joint authors, shared author, shared responsibility, editorial works, with collective title, without collective title - choice among names and references - Nepalese names and references	15
2. Multi-volumes and Series: - Multiple volumes and series	
3. Corporate Author: - Single corporate body, joint corporate and more than three	5
4. Uniform titles: - Regarding manifestation under various title, additions, part of a work, selection sacred scriptures, continuos	10

serials and complete serials. changed in name and frequency etc. with scope

5. Subject Heading: 10
   - Terminology. structure of subject headings. types of subdivisions. format etc. SIL and LCSH types of subjects headings single noun adjectival headings. phrase headings prepositional phrase. qualifiers an inverted headings

6. Keywords: 5
   - Single noun. phrase headings. qualifier. descriptors. narrow. term. broad term. related term. etc.

7. Conference and Corporate bodies: 10
   - Additions to names. as corporate bodies. omissions from names etc.
   - Administrative organ of first and second remove and constitutional organs

8. Types of entries in CC: 10
   - Terminology of classification i.e. class. class number etc.
   - Alternative name entry. pseudonym. real name etc.
   - Leading. heading. title. note. accession number and tracing section

9. Complexities. simple periodicals publication. interrupted publication and amalgamation etc. 5

Suggested Readings:

1. Library of congress subject heading prepare by the cataloguing policy support office/Washington DC Library of congress 1996.
2. Macro Thesaurus for information processing in the field of economics and social development updated by Amme Di Lauro and Alice Watsom. OECD. UN. 1998.
3. UNESCO Thesaurus. Paris. UNESCO. 1995. and
4. As prescribed in theory paper.

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Paper V. Information and Communication Technology

Group A: Information and Communication Technology
[Theory]

Full Marks: 50
Pass Marks: 20
Teach Hrs.: 75

Course Objectives

The course is designed to provide theories. principles and practicalities of Information Technology. including data models. retrieval mechanism. networking. evaluation methods. information storage. efficiency and security considerations of database systems.

The goal of the course is to introduce and prepare the students in technological initiatives in libraries. information centres and other settings.

Objectives:

- to introduce and review computers and computerized technology and their application in libraries and information centres
- to foster an awareness of issues occurring through the automation process
- to foster an awareness of possible new directions in the use of technology in information-based settings
- to make able to implement a database application using a PC-based relational DBMS software package
- to make able to implement a networking application for the PC-based relational DBMS software package.

Unit/Course Content	Teaching Hrs.

1. Introduction: 5
   - Genesis. Information Technology: a brief history. history of computing. need of automation. various application of computer and situation in Nepal

2. Computer fundamentals: 20
   - Computer basics: algorithms a simple model of a computer. characteristics of a computer. problem solving using computer

Data representation:

   - Input/Output units: decryption of commonly used input units. computer output units
   - Data storage devices: main memory devices. virtual memory. cache memory. back up storage devices. magnetic disks. optical disks. virtual disks. early devices

3. Operating systems: 10
   - Function of the operating systems: Introduction. Types of operating system
   - MS DOS: Definition of DOS. brief history of DOS. important features of DOS
   - Windows interface: Windows operating modes. types of windows and Icons. parts of window. dialog boxes. organizing files and folders. working within documents. printing. installing software
   - LINUX: Introduction to LINUX and hardware requirements for LINUX

4. Word processing (with reference to Winword and Page Maker: 5
   - Introduction to word processor and desktop publication. application and windows to formatting bibliographic database

5. Database Management Systems: 5
   - Basic database concepts (records and fields) Boolean queries. design of database. input and output formats

Internet:

- a brief history of INTERNET. the growth of the INTERNET. using the INTERNET without a WWW browser (i.e. TELENET and FTP). virus checking using down loaded files. computer mediated communication using e-mail and discussion groups. advance use of a WWW browser. search techniques required for the INTERNET. current awareness service using INTERNET. running a WWW server as an information provider. choosing a commercial INTERNET access-service provider

6. Creating a web page: 20
   - tools for page creation anatomy of a WWW page. basic formatting. fonts and type style. inserting graphics and other media types. using tables. full out forms. using color. special characters and entities. design tips

7. Library automation. history. importance. need. present trends and areas: 10
   - introduction
   - cataloguing
   - circulation
   - acquisitions
   - serials control
   - other
   - CCF (common communication format)

Group B: Information and Communication Technology
[Practical]

Full Marks: 50
Pass Marks: 20
Teach Hrs.: 75

Unit/Course Content	Teaching Hrs.
1. Operating Systems:	15

- DOS commands internal and external
- doskey utility and Ansi.sys. customizing DOS with config.sys
- Batch files: techniques of batch files
- Windows interface: windows operating modes. types of windows and Icons. parts of window. dialog boxes. organizing files and folders. working within documents. printing. installing software and hardware

LINUX:

- Introduction to LINUX: difference between LINUX and other operating systems. hardware requirements. installing LINUX. basic UNIX concept. file permissions. using vi editor

2. Formatting text: 15

- Applying font styles. working with tabs. setting indents and line breaks. setting paragraph alignment. setting line spacing. creating headers and footers. setting margins. paginating a document. hyphenating a text

Working with tables and printing documents:

Presentation-quality output of CDS/ISIS databases with reference to RTF format:

- producing the report. margins. tabs and indentation. fonts and font sizes. carriage returns and new lines. character sets. repeatable fields. command summary

3. CDS/ISIS: 30

- Introduction to CDS/ISIS. data entry guideline and rendering. record modification. browsing. searching (using the term dictionary). system print and sort techniques.

search strategy, and inverted file, search techniques covering different types of operators, concept of set theory, free text search, formatting language and field select table, user print and sort, database creation, record generation, export and import of records, system utility services and installation (standalone and LAN system)

4. Communication applications: 10
   - INTERNET: using INTERNET without a WWW browser (i.e. TELENET and FTP), advanced use of WWW browser, search techniques required for INTERNET

Creating a web page:

   - tools for page creation anatomy of a WWW page, basic formatting, fonts and type style, inserting graphics and other media types, using tables, full out forms, using color, special characters and entities, design tips

5. Windows: 5
   - using the network, setting up computer to use a network, sharing folders or printer, using resources located on other computers

Suggested Readings:

1. Alex Leon and Mathew Leon: Fundamentals of Computer Science and Communication Engineering, Chennai, Leontech World, 2000.
2. Peter Norton: Peter Norton's Introduction to Computers, New Delhi, Tata McGraw Hill, 2001.
3. Pandey S. K. Sharma: Fundamentals of Library Automation, New Delhi, ESS ESS Publications, 1998.
4. D. S. Yadav: Foundations of Information Technology, New Delhi, New Age International (P) Ltd., Publishers, 2002.

5. N. R. Satyanarayanan: A Manual of Computerization in Libraries. New Delhi. Wishula Prakashan. 1995.

6. David Pett and Others: Red Hat Linux Unleashed. New Delhi. Tech Media. 2000.

7. I. R. Ravichandra Rao: Library Automation. New Delhi. New Age International. 1996.

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Paper VI. Information Processing and Retrieval

Group A: Information Processing and Retrieval [Theory]

Full Marks: 50
Pass Marks: 20
Teach Hrs.: 75

Course Objectives

Information processing and retrieval (IPR) system refers to a series of activities carried out in any library and information centre ranging from selection and collection of relevant information i.e. documents to processing. organization. storage. dissemination. retrieval and delivery of information required by users and evaluation of these activities for further improvement of the IPR system. It is IPR system which determines the success or failure of any library and information system. On this background. this course in designed to provide detail and in-depth theoretical knowledge in every aspect of IPR covering from the basic concepts of IPR to organization of knowledge content analysis. knowledge representation. advanced cataloguing and classification. knowledge base system. planning and designing of information retrieval system. indexing concepts. indexing languages. thesaurus construction. information consolidation and repackaging. retrieval process such as searching and search strategies. evaluation of information retrieval system etc.

The course aims at imparting detail theoretical knowledge about information processing and retrieval (IPR) system among students in order to make them capable of designing and developing an efficient IPR system suitable for storing. searching. retrieving and presenting information tailored to clientele's needs. The major objectives of the course are to :

- Introduce basic concept of IPR and its various activities:
- Provide basic knowledge in designing and developing IPR system:
- Impart in-depth knowledge in advanced cataloguing specially for non- book materials for both manual and computerized systems:

- Familiarize with advanced classification schemes like UDC. CC. LC classification schemes etc.:
- Enhance in-depth knowledge in indexing concepts system and indexing languages:
- Develop skill for designing and constructing thesaurus:
- Acquaint with theoretical knowledge and skill in information consolidation and repackaging techniques:
- Provide detail knowledge in literature search and search strategy using different search operations in order to search required information form local databases CD-ROM databases and on line database through INTERNET and INTRANET: and
- Give basic knowledge about evaluation of IPR system.

Unit/Course Content — Teaching Hrs

1. Introduction of Basic Concepts: — 15
   - Information and its sources.
   - Information generators. users and managers.
   - Information processing and retrieval
   - Information delivery and feed back
   - Information technology

   Intellectual Organisation of Information:

   Principles and Techniques of Standard Methods:
   - Bibliographic control
   - Rules of descriptive cataloguing specially for non-book materials(AACR-2)
   - Content analysis
   - Advanced classification scheme such as UDC. CC and LC Classification.

   Knowledge Representation:
   - Introduction to variety of models for representing knowledge
   - Information and communication process
   - Different approach as psychology. anthropology and linguistics

   Knowledge Base Systems:
   - Artificial intelligence system
   - Expert system
   - Natural language system

- Computer vision and image reproduction system
- Robotics

Planning and Designing of Information Retrieval System:

- Objectives
- Functions
- Performance requirements

Environmental variables etc.

2. Indexing Concepts: Theory and Methods: 15

Theory of General Indexing Languages:

- Purpose and objective of indexing.
- Evolution of indexing systems from Melvil Deway C. A Cutter. to the present

Indexing languages:

- Vocabulary control
- Semantics and Syntax
- Classification systems
- Thesauri
- Classrous
- Subject Headings

Design and Construction of Thesaurus

3. Types of Indexing Systems: 20

Coordinate Indexing System:

- Uniform indexing system
- Optical coincidence indexing system.
- Peck-o-book Card system
- Edge- Notch system
- Zato coding system

Development made by Uniterm Indexing System

- Pre-coordinate indexing system
- Vocabulary Control (Thesaurus)
- Syndatic Devices
- Index Mechanization

Pre-coordinate indexing system:

- Chain indexing
- PRECIS
- POPSI

Post-coordinate indexing system:

- KWIC
- UNITERM
- Citalion indexing

Automated Indexing system or

Computer base indexing Systems and Methods for:

- Free text
- Full text

Controlled vocabulary procedures

4. Information processing for consolidation and Repackaging: 10
   - Importance and needs
   - Techniques. style and methods
   - Content analysis
   - Subject Representation
   - Principles and techniques of writing
     -Abstract
     -Briefs
     -Digests etc.
5. Retrieval Process: 15

   Searching:
   - Concept of professional literature search
   - Objectives of searching
   - Function of searching
   - Search operation and its steps

   Search Strategy:
   - Development of search strategy
   - purpose and function of search strategy
   - Query formulation
   - Search operators like Boolean operators and others

   Basic Concepts in Search on CD-ROM Database and On-line Search from International Database through INTERNET

   Evaluation of Information Retrieval System:
   - Purpose and objectives of evaluation
   - Methods of evaluation

   Evaluation Studies/Projects
   - Cranefild. ASLIB
   - MEDLARS

   Catalogue uses studies

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Paper VI. Information Processing and Retrieval

Group B: Information Processing and Retrieval [Practical]

Full Marks: 50
Pass Marks: 20
Teach Hrs.: 75

Objectives

The course is designed to acquaint students with practical knowledge and skill in cataloguing specially cataloguing non-book materials using AACR-2 both for manual and computerized systems in advance classification using UDC and CC schemes. in in-depth subject indexing using PRECIS and other thesaurus. in abstract writing and literature search using different research operators from local. CD-ROM and on line data bases.

The major objectives of this practical course are to:

- Provide practical knowledge and skill in cataloguing of non-book materials.
- Develop skill in classification using UDC & CC.
- Train in in-depth subject indexing using PRECIS and other thesaurus
- Impart practical knowledge and skill in writing different types of abstracts and
- Provide practical knowledge and skill in literature search from different databases local. CD-ROM & on-line.

Unit/Course Content — Teaching Hrs.

1. Cataloguing: 15

   Descriptive Cataloguing of Non-book materials like:
   - Cartographic materials
   - Audio visual materials
   - Visual materials
   - Sound recording
   - Kits

- Transparencies
- Film strips etc.

By using AACR-2 for both manual and computerized systems

2. Classification: 15
   - Introduction of various features of UDC and CC schemes
   - Steps in practical classification
   - Content analysis

   Determination of appropriate class no

3 Indexing: 15
   - Introduction to various features of:
   - PRECIS and Thesaurus
   - Their use for subject indexing

   Practical exercises

4. Information Consolidation and Repackaging: 15
   - Introduction to various types of abstracts. briefs and digests.
   - Practical steps in writing
   - Various types of abstracts

   Briefs and Digest writing

5. Literature search in both manual and computerized data bases. 15
   - Development of search strategy
   - Use of different operators
   - Practical Searching and retrieving
   - Matching
   - Reviewing
   - Delivery of required information.

   Evaluation

Suggested Readings:

1 Fosket. A. C. : The Subject Approach to Information 5th ed. London. Library Association Publishing 1996

2 Lancaster. F. W. : Information Retrieval Systems Characteristics. Testing and Evaluation 2nd ed. New York. Wileny 1979

3 Prasher. R. G. : Indexing and Indexing System. New Delhi. Medallion Press. 1989.

4 Seetharama. S : Information Consolidation and Repackaging. Framework. Methodology. Planning. New Delhi. Ess-Ess Publications. 1997

5 Krishna Kumar : Theory of Classification. New Delhi. Vikas. 1991

6 British Standard Institute : Universal Decimal Classification: London. B S 1000a.1995.

7 Ranganathan S. R. : Colon Classification 6th ed. with Amendments Bombay. Asia 1963.

8 Macro-thesaurus for Information Processing in the Field of Economy and Social Development/ updated by Amme Di Lauro and Alis Watson. 4th ed. Paris. OECD /UN. 1998

9 UNESCO Thesaurus. Paris. UNESCO. 1995.

10 American Library Association & Other : Anglo-American Cataloguing Rules. 2nd ed. London. LA. 1978.

11 Westby. B. M. ed. Sears Lists of Subject Headings. 16th ed.. New York.

12 Riaz. Mohamand : Modern Techniques of Documentation and Information work Delhi Royal Publication 1992.

13 Weihs. Jean : Non-book Materials. The Organization of Integrated

Collection. 3rd ed. Ottawa Canadian library Association 1989..

14 Aitchison J and Gilchrist : Thesaurus Construction : A Practical Manual London. Aslib 1972

15 IASLIC : Indexing Systems: Course Materials for IASLIC Special Courses Calcutta IASLIC 1976.

ISO Handbook on Documentation and Information 1985.

16 RAO. I. K. Ravichandra: Library Automation. 2nd ed. New Delhi. New Age International. 1992.

17 Clevelan. D. B. and Cleveland A. : Abstracting. 2nd ed. Libraries Unlimited. 1990

18 Lancaster. F. W Indexing and Abstracting in Theory and Practice. Library Association. 1991.

19 Richard. Fothergil and Ian. Bulchart: Non-book Materials in Libraries a Practical Guide 3rd ed. London. Library Association. 1990.

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Paper VII. Information Sources and Services [Theory]

Full Marks: 100
Pass Marks: 40
Teach Hrs.: 150

Course Objectives

This course is intend to develop advance skill required to manage a library/Documentation/Information system/ centre Students require in depth study of varieties of information sources. information content on them. Students need to develop an analytical skill required to locate. pertinent information. abstract to provide summary of the document. extract relevant information from a large mass of information media. Impart skills to prepare a digest. explore and exploit electronic information sources.

The objectives of this course are:

- To enable the students to identity documentary sources. non-book materials and electronic information sources. which they need to acquire. organise and generate services.
- To impart the skills to make use of the relevant sources to meet the information need of users.
- To acquire knowledge on development of services in libraries.
- To enable the students to retrieve the required information from electronic sources.
- To develop skills to provide general awareness services and personalised services with emphasis on developing analytical skills require to prepare information product and services.

Unit/Course Content — Teaching Hrs.

1. Documentary Sources: — 25
   Primary sources
   - Journals. thesis. Govt. publications. patents. gray literature

- Secondary Sources
- Dictionaries. Encyclopedias books. Biographical dictionaries. year books etc.
- Reference and Information Sources Practical:

A. Encyclopedias
- Encyclopedia Americana
- Encyclopedia of Library and Information Science
- International Encyclopedia of the Social Sciences.
- Mc. Graw Hill Encyclopedia of Science & Technology
- New Encyclopedias Britannica
- Some other newly published Encyclopedias.

B. Dictionaries
- Oxford English Dictionary.
- Raghu Vira's English Hindi dictionary.
- Webster's Third New International English Dictionary.
- Random House Dictionary of English Language.
- Angreji Nepali Sajha Samchhipta Sabdakosha. Sajha Prakashan.
- Some other standard and newly published dictionaries.

C. Year Books
- Europe Year Book.
- India: A Reference Book
- Statesman's year Books.

D. Biographical Dictionaries
- International who's who.
- Who's who Nepal
- Mc Graw Hill Encyclopedia of world Bibliography.
- Webster's Biographical Dictionary.
- Some other standard and newly published biographical dictionaries.

E. Bibliographies
- Nepalese National Bibliography.

- Books in Print
- British Books in Print
- Indian Books in Print.
- Indian National Bibliography
- British National Bibliography.

F. Directories
- Ulrich's International Periodicals Directory
- World of Learning.
- IFLA's Directory.

G. Geographical Sources
- Webster's New Geographical Dictionary
- World Almanac and Book of Facts
- Columbia Lippincott Gazetter

H. News Summaries
- Asian Recorder
- Nepal Press Digest
- Keesing's Contemporary Archives

I. Hand Book
- Universities Handbook India.
- Handbook of Library and Information Science.
- Tertiary Sources
- Advances. Annual. reviews.

2. Non-Book Materials: 10
   - Maps. Photos. posters. Audio-visual materials
   - Cassettes. disk. micro film. micro fiches . slides etc.

3. scope on information literacy 15
   - information literacy standard for different batch
   - application information literacy
   - world science on information literacy

4. Human Sources and Institutional sources: 5
   - Preparation of directories human sources in a specialized area.
   - local. regional. international
   - Mission or discipline oriented institution's directories
   - Local. regional. international.

5. Reference Service: 15
   - Origin and development of reference service
   - Need of reference service
   - Types of reference service
   - Preparation/organisation of reference service/department
   - Reference service in academic. Special and Public Libraries.
   - Role of reference service in national development

6. Preparation of Awareness Services: 20
   - Need of general awareness services
   - Characteristics of awareness services
   - Types of awareness services
   - Arrangement/preparation of awareness services
   - Exhaustive/Current approach
   - Preparation of Personalised Services
   - Historical background
   - Characteristics of personalised services
   - Purpose of personalised services
   - Planning of personalised services
   - Steps involved in personalised services
   - Flow charts of personalised services
   - Advantages/disadvantages of personalised services

7. Analytical Services: 15
   - Need of analytical services
   - Types of analytical services

   Abstracting Services:
   - Introduction of abstract
   - Types of abstract

- Indicative abstract
- Informative abstract
- Slanted abstract
- Parts of abstract
- Stages of abstracting
- Auto abstracting
- Abstracting services

Index Services:

- Introduction index and indexing services
- Need of index and indexing services
- Types of index and indexing services
- POPSI. PRECIS. Key-word. Indexing

Indexing services:

- General. science and technology
- Social sciences

Information Analysis and Consolidation Products(IA+C):

- Introduction of IA+C products
- Need of IA+C products
- Types of IA+C products
- State of the Art-Report(STOAR)
- Digest. Trend Report
- Pre-requisites for IA+C products
- Stages in the preparation of IA+C products
- Initiation step
- Scope determination
- Collection of information
- Appraisal of information collected
- Scope re definition
- Testing of the draft
- Finalisation

8. Search Strategy: 10
   - The reference interview
   - Search in depth
   - Un answered questions
   - Search failures

9. Database and Internet Search 15
   - National. regional. international

10. Marketing of Information Services: 20
   - Introduction of marketing
   - Need of information marketing
   - Guidelines for marketing
   - Scope and audience
   - Methodology
   - Planning of marketing programme
   - Implementation
   - Evaluation

Suggested Readings:

1) Bose. H. Information Science: Principle and Practice. New Delhi. Sterling. 1986.

2) Bunch. Allan. The Basics of Information Work. London. Clive Bingley. 1985.

3) Foskett. DJ. Information Service in Libraries. London. Crosby Lackwood. 1958.

4) Girija. Kumar and Krishna Kumar. Philosophy of User Education. New Delhi. Vikas. 1983.

5) Guha. B. Documentation and Information Service. Techniques and Systems. Rev. ed. 2. Calcutta. World Press. 1983.

6) Katz. William A. Introduction to Reference Work. vols. 1-2. New York. Mc Graw Hill. 1969.

7) Mukharjee. AK. Reference Work and its Tools. ed. 3. Calcutta. World Press. 1975.

8) Olle. James G. A Guide to Sources of Information in Libraries. Aldershot Hants. UK. Gower. 1984.

9) Shera. Jesse H. Documentation and the Organization of Knowledge. ed. by D.J. Foskett. London: Crosby Lack Wood. 1966.

10) Vickery. BC. Information Systems. London. Butter Worths. 1973.

11) Vishwanathan. CG. Elements of Information Science. New Delhi. Today and Tomorrow. 1976.

12) Parasher. RG: Information and its Communication. New Delhi. Medallion Press. 1991

13) Seetharama. S: Guide lines for planning of libraries and information centres. Calcutta. IASLIC. 1990

14) Shera. Jesse H: The foundation of education for Librarianship. New York. Wiley Becker. 1972

15) Kent. AK: Information as power. ASLIB proceedings. 31(1). 1979

16) Roeley. JE and Truner. CMD: The dissemination of information. London. Ardere Deutsch. 1978

17) Butterworths series of information sources for research and development. Butterworths. London

18) Rajan. TN: ed: Indexing systems concepts models and techniques. Calcutta. IASLIC

19) Krishna Kumar: Reference service. New Delhi: Vikas 1994

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Paper VIII. Research Methodology & Quantitative Techniques [Theory]

Full Marks: 100
Pass Marks: 40
Teach Hrs.: 150

Course Objectives

The course of Research Methods will be provided a foundation for the dissertation which might be included after the completion of all the course. It presents a variety of research methodologies as well as dealing with the design, formulation and presentation of a research project. The course is divided into two groups. Group A deals with Research Methodology and Group B deals with Quantitative Technique. Student should have to attempt five questions selecting at least two questions from each group.

The objectives of this course are:

- To teach the students how to carry out, interpret and present a research study.
- To enable the students to undertake research project and to prepare the presentation of a dissertation.
- To demonstrate the importance of research in the library and information fields.
- This course objectives is to develop skills in systematic analysis of library and information science decisions. It is designed to aid students in the identification of problems currently in need of investigation and to create appreciation of research

Group A : Research Methodology

Unit/Course Content	Teaching Hrs.
1. Definition of Research: - Basic concepts of research. - Research in Librarianship - Relevance of research methods to information studies.	10

2. Steps in Research: 15
   - Formulation of the research plan
   - Implementation of the research plan

   Implementation of the results

3. Planning of the research: 25
   - Sampling. randomness. survey guidelines
   - Selection of Samples
   - Size. reliability and validity.
   - Collecting the information. documentary sources. questionnaires (Question construction. Length Layout. Pilot surveys. distribution and retrieval schedules) interviews. direct observation. self-investigation
   - Processing and analysis of data coding percentage. variable. averages. measures of distribution (frequency. quintile). correlation. weighting. sampling error
   - Interpretation and presentation of results. bias. non response. interpretation of relationships tabular & graph presentation. column. bar & pie-charts

4. Types Research Methods: 15
   - Documentary research
   - Bibliographical research.
   - Historical research. obtaining historical evidence. evaluation of sources
   - Empirical research
   - Experimental research
   - Evaluation research
   - Case studies.
   - Comparative studies
   - Content analysis
   - Survey research

5. Formulation of a Research Proposal: 15
   - A brief introduction to the study
   - Statement of the problem
   - Objective of the study
   - Scope/limitation of the study

- Review of literature
- Signification of the study
- Hypothesis
- Definition of terms
- Research methods to be applied
- Cost and budgetary
- Time span
- Report writing
- Citation and use of footnotes

Group B : Qualitative Techniques

6. Introduction to Statistics: 20
   - Meaning. Scope and limitation of statistics. Types and sources of data. methods of collection of primary and secondary data collection.

   Sampling:
   - theoretical bases of sampling
   - methods of sampling
   - random sampling methods: simple. stratified. systematic
   - size of sample
   - merits and limitation of sampling
   - probability
   - introduction definition and concept
   - calculation of probability
   - Bayes' theorem

7. Interpretation of data 15
   - Data classification (Need. meaning. objectives and types of classification) construction of frequency distribution and its principles.
   - Presentation of data.
   - Tabular Presentation

   Diagrammatic presentation (Bar diagram. Pie diagram.

8. Statistical Measures:
   - Measures of central Tendency : Mean. Median. Mode. Weighted average geometric mean. Harmonic mean. choice and general limitation of an average.

- Measure of dispersion : absolute and relative measures. range. quartile deviation. standard deviation. coefficient of variation.
- Skewness and Kurtosis: Meaning. objectives and measures of skewness. Karl Persons. Bowley's and Kelly's Kurtosis and its measurement

9. Correlation and regression analysis . Karl person's coefficient. Regression equations. properties of regression co-efficient.10

10. Hypothesis Testing : 10
    - Test of significance. T- test. Z- test for testing significance. F test. chi square test. area of application of chi square test

11. Origin of Bibliometrics. Bibliogmetric distribution . Law of scattering .citation analysis. library use studies 15
    - Zipf Law
    - Bradford Law

Suggested Readings:

1. Charles H. Burha and Sephen P. Harter: Research Methods in Librarianship: Techniques and Interpretation. New York. Academic Press. 1980
2. Maurico B. Line: Library Surveys: An Introduction to the use. Planning Procedure and Presentation of Surveys. 2nd ed. London Bingly. 1982
3. Krishna Kumar: Research Methods in Library and Information Science. Vikas Publishing House. New Delhi. 1992
4. Sardana JL and RL Sehgal: Statistical Methods for Librarians. EEP. New Delhi. 1982

5. Nick Moore and Marton Hops: The Basics of Writing Reports Etceteras. London Bingly. 1985

6. I. K. Ravichandra Rao: Quantitative Methods for Library and Information Science. New Delhi. Wiley Eastern Limited. 1985.

7. B. D. Panda: Research Methodology for Library Science: with Statistical Methods and Bibliometrics. New Delhi. Anmol Publications Pvt. Ltd.. 1997.

8. Howard K. Wolff and Prem R. Pant: Hand for Social Science Research and Thesis Writing: Kathmandu. Nepal. 1975.

9. Lokesh Koul: Methodology of Educational Research. New Delhi. Vikas Publishing House. 1972.

10. Peter Stephen and Susan Hornby: Simple Statistics for Library and Information Professionals. 2nd edi. London Library Association Publishing. 1997.

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Paper IX. Dissertation

Full Marks: 100
Pass Marks: 40

Course Objectives

This course is designed to provide an opportunity for each student to undertake an in-depth study of one particular topic within library and information science and in particular apply the knowledge and technology gained from the course on "Research Methodology and Quantitative Techniques" and conduct under the guidance of a faculty members who will act as a super visor. The results of the investigation should be formerly presented in the dissertation in precise length and other conditions would normally be described by the TU or subject committee.

A research proposal should be submitted for approval. before undertaking it by all students. The submitted dissertation will be evaluated by the concerned expert and the student should defend the viva.

The objectives of this course are:

- to enable students to prepare research proposal in a related topic.
- to carryout research activity applying suitable research methodology
- to develop analytical thinking capability of students

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Paper X. Comparative and International Librarianship [Theory]

Full Marks: 100
Pass Marks: 40
Teach Hrs.: 150

Course Objectives

This paper will familiarise the students to

- provide the knowledge of activities and services of national. regional and international Librarianship:
- introduce the knowledge of Library Movement. Library Systems. its types and characteristics. component of information systems:
- provide the concept of Networking and Resource Sharing between libraries and information centres of the national. regional and international:
- provide the knowledge of Standards in the field of library and information sciences:
- introduce the concept of Modern technology. its function and other technologies in the field of libraries and information centres:
- provide the basic concept of Communication its media:
- provide the knowledge of computerized bibliographic database and the software package.

Unit/Course Content	Teaching Hrs.
1. Comparative Librarianship and International Librarianship History of: – Comparative Librarianship. – International from ancient to to-date – Scope of Comparative Librarianship. International from ancient to to-date	10
2. Comparative Librarianship of: – America.	10

- Great Britain.
- India and
- Nepal

3. Comparative study of Library and Information systems: 15
   - Academic.
   - Public.
   - Special.
   - Research.
   - School libraries
   - Library Education in policy in USA UK. India and Nepal
   - Library legislation and its role in the development of library and information science in USA UK. India and Nepal

4. International Librarianship: 20
   The scope. purpose. structure. functions and role of
   - UNISIST.
   - UNESCO.
   - IFLA.
   - FID.
   - ICSU. etc.

5. Comparative Study of Professional's organisation: 15
   - Emergence. objectives. structure. functions and role played in the development of profession
   - China Library Association.
   - Bangladesh Library Association.
   - Pakistan Library Association and
   - Nepal Library Association

6. Communication:. 10
   Development of communication systems in Nepal
   - Telecommunication
   - Radio
   - Television
   - its role in the library and information field.

7. Comparative Networking Systems: 20
   - National
   - Regional
   - International
   - AGRIS
   - CARIS
   - CAS.
   - SPINES
   - MEDLARS
   - MEDLINE
   - CAN/SDI etc.

8. Comparative Study of Standards : 10
   - Academic
   - Public
   - Special

9. Comparative Study of Modern Technology: 20
   - Development of modern technology and application. its role and impact in the field of library and information science. library profession. education
   - CD-ROM
   - INTERNET & INTERNET
   - E-mail
   - Remote Login
   - Telnet
   - World Wide Web
   - FTP (File Transfer Protocol)

10. Comparative Study of Computerised Bibliographic Software Package
    and Databases : 15
    - Dbase
    - Cardbox
    - CDS/ISIS.

Suggested Readings:

1. Advances in Librarianship. New York: Academic Press
2. Broomeley. David W. British Librarianship and information work 1981-1985. London: Library Association. 1988
3. Corbett. Edmund V. An introduction to Librarianship. London: James and Clarke. 1963
4. Danton. J. Perian. The dimensions of comparative Librarianship. Chicago: American Library Association. 1973 Encyclopedia of information and library science
6. Encyclopedia of American Library Association
7. Gardner . Frank M. Public library legislation: a comparative study. Paris: UNESCO. 1971
8. Gates. Jean Key. Introduction to Librarianship. 2nd ed. New York: McGraw-Hill . 1976
9. Gidwani. N. N. Comparative Librarianship: essays in honor of Prof. D. N. Marshall. New Delhi: Vikas Publishing House. 1973
10. Goyal. Sat Paul. Indian Librarianship (essays in honor of S. R. Bhatia). Delhi: Scientific Book House. 1972
11. Hutchings. F. G. D. Librarianship: a short manual with reference to developing countries. Kuala Lumpur: Oxford University Press. 1969
12. Marshall. D. K. History of libraries: ancient and medieval. New Delhi: Oxford & IBH Pub.. 1983
13. Mekharji. Ajit Kumar. Librarianship: its philosophy and history. Bombay: Asia Publishing House. 1966
14. Naidu. N. Guruswamy. Librarianship in developing countries. New Delhi: Ess Ess Publications. 1992
15. Sharma. Ravindra N. Indian Librarianship: perspectives and prospects. New Delhi: Kalyani Publishers. 1981
16. Umapathy setty. K. Librarianship: change and status quo. New Delhi: Vikas Publishing

17. UNESCO Library education programmes in developing countries with special reference to Asia. London: Library Association. 1982

18. मिश्र, नारायणप्रसाद र शान्ति:पुस्तकालय विज्ञानको रुपरेखा, काठमाडौं, 2038

LISc. 510-2

Paper X.Non Book Materials and Library Services [Theory]

Full Marks: 100
Pass Marks: 40
Teach Hrs.: 150

Course Objectives

This paper intends to provide knowledge of special materials and their values in library and information centre. It also provides specialized knowledge in acquiring and organizing special material and there by provide familiarity with various types of special materials.

- To provide knowledge about non book materials. their values and importance and to familiarize with different types of non book materials.
- To give specialized knowledge about acquiring and organising non book materials and enable to preserve them.
- To enable the students to serve the users with specials materials.

Unit/Course Content		Teaching Hrs.
1	Non Book Materials: Origin. nature. types. and characteristics of non book materials	10
2	Kinds of Non Book Materials: Printed non book materials. theses. conference. proceedings paper	8
3	Audio Materials: Sound records. tapes. and cassettes	8
4	Visual Materials: Slides. film strips	8
5	Audio Visual Materials: Sound film strips. sound motion picture and video cassettes	8
6	Special Materials: Archive. manuscripts. local history. standards and specification	20

7 Planning and Organization: 20
Building and space. furniture. equipment and their storage and conservation techniques

8 Techniques of Organising Non Book Materials: 48
Acquisition. evaluation. processing. storage. retrieval and dissemination

9 Equipment: 10
Overhead projector. microfilms. micro fiche readers. records and cassette player

10 Computer and Non Book Materials: 10
Electronic journals. creation and storage of information source.

Suggested Readings:

1) Weihs. Jean/Non book materials. the organization of integrated collection. 3rd ed. Ottawa. Canadian Library Association 1989.

2) Richard Fothergill and Ian Butchart/ Non book materials in libraries. a practical guide 3rd ed. London. Library Association. 1990.

3) Ireland. Norman Olin/ The pamphlet file. rev. ed. Boston. F. W. Wascon C. 1954.

4) Encyclopedias of information and library science ed. by Ishwari Corea. Cad David. Ugando and Khalid Kamal Faruqui. New Delhi. Akashdeep Publishing House. 1993 in 10 vols.

5) Encyclopedic Dictionary of information technology edited by M. L Narang. New Delhi. Anmol publications. 1995 in 2 vols.

6) Encyclopedic dictionary of library and information Science ed. by P. P. Pramer and B Bhata. New Delhi. Anomol Publications. 1989 in 4. vols.

LISc. 510-3

Paper X. Bibliographic Control [Theory]

Full Marks: 100
Pass Marks: 40
Teach Hrs.: 150

Course Objectives

This contains items of course which cover the comprehensive measure of the Bibliographic Control System: book culture. bibliographic control. copyright and legal deposit. bibliographies. role of information publishing industry and book trade. bibliographic rules. universal bibliographic control (UBC).universal availability of publication (UAP) and computerized & information technology applications to bibliographic control.

The objectives of this course is to:

- make the idea of developing the concept of bibliographic control system with special application and developing the information exchange in the national and international level.

Unit/Course Content	Teaching Hrs.
1. Book Culture: – History and origin of book – Book: The mirror of Civilization. media and learning in society – Information explosion and books for all – Reading habits	15
2. Bibliographic Control: – Concept. definition and scope – Development of bibliography and controlling methodologies – National imprint and authority control – National collection	20

3. Copyright Issues: 20
   - Definition. objectives. copyright security and laws
   - Intellectual property right laws and principles (WIPO. ISO...)
   - International treaties. global copyright laws
   - Nepalese. international or global situation

4. Book Publishing: 35
   - Publishing industry
   - ISBN. ISSN
   - Nepalese book publishing and information dissemination and control
   - Press. media. publication and bibliographic control. the role of censorship

5. Standard: 20
   - National and international standard
   - Terminologies. classification. AACR-2. ISO. CCF. MARC...
   - Compatibility. Bibliographic control

6. Universal Bibliographic Control (UBC): 20
   - Development stages. concept and procedures
   - Universal availability of publication (UAP) national and international
   - UNESCO. IFLA. UNISIST/ ASTINFO. ASLIB. FID. OCLC... roles and functions

7. Modern Techniques of Bibliographic Control: 20
   - On-line database on bibliographic control
   - Networking concept and development
   - CCF(UNESCO). MARC. UNIMARC application
   - Modern bibliographic and futuriestic approach: telematics. cybermetics and bibliometrics etc.

Suggested Readings:

1) Pauline Atherton. Hand Book for Information Systems and Services. UNESCO

2) Simmons. P & Hopkinson A CCF. Paris. UNESCO. 1992.

3) UNIMARC 2nd ed. ISBN 3-598-11308.0

4) Darinson Bibliographic Control. Clive Bingley. London: linnet Books. Flamden. Conn. .19.. Latest ed.

5) Teaching Package on Standardization in Information handling. PGI -91/WS/2. Paris : UnESCO 1991.

6) Diercks. Harold and Hopkinson. Alan. Reference manual for machine readable bibliographic descriptions. 3rd revised edition UNESCO. 1986. (PGI-86/WS/6)

7) Atherton. Pauline. Handbook for Information System and Services. Paris: UNESCO. 1977.

8) Anderson. Dorothy. UBC: a survey of Universal Bibliographic control. London: IFLA International Office for UBC.1982.

9) Holt. Brian P. ed. UNIMARC Manual London IFLA UBCIM Program. 1987.

10) Manual on bibliographic Control Paris UNESCO. 1983. (PGI-83/WS/8)

11) Manual. CDS/ISIS Made Essay GTZ/GATE. ABT (htpp://www.saur.de)

12) Lose leaf. UNIMARC manual 2nd ed. 1994 ISBN 3-598-11211-4

13) International Cataloguing and Bibliographic Control (ICBC) Quarterly Journal of the IFLA and M/ ISSN : 1011-8829

14) Darison. Bibliographic Control. Clive Bingly. London: Linnet Books. Flamden. conn.

LISc. 510-4

Paper X. Education for Library and Information Science [Theory]

Full Marks: 100
Pass Marks: 40
Teach Hrs.: 150

Course Objectives

This course is patterned

- to offer informations on the core and elective subjects commonly accepted and taught by larger group of global universities
- to trace the latest disciplines working with library and information science which should be included in any modern curriculums in order to meet with the fast changing information needs of the society. and the applicability or inclusion of varieties of information retrieval systems and services in the ELIS course
- to trace the modern and popular subjects being included and should be included type of subjects as electives courses on ELIS course.

Focus in this chapter is concentrated systems and services of various discipline. their utilities. virtues and impacts on the information society. The objectives of the course are:

- to develop the curriculum of ELIS in the context of the users' information needs. nation's information needs and objectives for educational and research development purposes. the impacts of various types of information systems and services in the information society as a whole
- to make the library and information science education most useful productive and marketable on the constantly. changing information needs of the intellectual society of the country working at various fields as well as at the national international level
- to standardize and update the curriculum of ELIS at par with globally accepted popular and upcoming new subjects with

their applicabilities and impacts on information society as whole.

Unit/Course Content	Teaching Hrs.

1. Development of LISE: 10
   - LISE at levels of certificate. degree. diploma. master. M. Phil.. specialization. Ph.D. in UK. USA. India. Australia. Malaysia. Thailand and Nepal

2. Course Emphasis and Lectures Hours: 30
   - Certificates. Degree. Masters. M.Phil.. Specialization. Ph. D.
   - Prerequisites courses
   - Core course numbers and hours
   - Subject weightage in curricula in theory and practice in UK. USA. Australia. Thailand. India. Malaysia. Nepal

3. Production of Professional Manpower and Employment: 30
   - Professional
   - Semi-professional
   - Information scientist in UK. USA. Australia. Thailand. India. Malaysia. Nepal

4. LISE Research Supports: 20
   - Latest trends on topic emphasis
   - Role of IFLA. UNESCO. various universities. ALA. The Library Association and others

5. Information Exchange Programmes/Services: 20
   - History and latest developments
     Internet and its impacts on information retrieval and repackages

6. Preparation of Research Work: 20
   - Cataloguing. classification. documentation
   - LISE on society. inter personal communication between library staff and users

- Collection development
- Library computerization
- Literature review production on any topic/subject in consultation with guide

Suggested Reading:

1. Altherton. Pauline — Hand book for information systems and services. Paris: UNESCO. 1977.

2. Garvey. William D. — Communication: The essence of science facilitating information exchange among libraries. scientists. engineers and students. Oxford: Pergaman Press. 1979.

3. Machlup. F and Mansfield. Uma — The study of information: Interdisciplinary message. New York: Wiley. 1983.

4. Jefferson. G. — Library Cooperation. London: Andre Deutsch 1966.

5. Anthony. L. S. — Handbook of special Librarianship and information work. Latest edition.

6. Ashworth. Wilferd — Special Librarianship. London: Clive Bingley. 1979 or Latest ed.

7. Mount. Ellis. — Special Libraries and information centres:

An introductory text. New York: Special libraries Association. 1983 or latest edition

8. Prasher, R. G. — Information and its communication, New Delhi: R. G. Prasher, 1992.

9. Venkatappaiah, Velaga. — Dimension of Library and Information Science:

Kaula Festschrift. New Delhi: Concept Publishing, 1990.

10. Shera, Jese H. — The Foundation of education for Librarianship. New York: Becker & Hayes.

11. Shera, Jese H. — Sociological foundations of Librarianship

12. Rosa, G. — Scientific Information and Society.

13 Machlup, F. — Knowledge: Its creation, distribution and economic significance, 3 vols. V. 1. 1980, 2, 1982, V. 3.1984.

14. Walford, A.J. — Guide to Reference Materials, 7th edition. vol. 2 and 3 only, pub. LA

LISc. 510-5

Paper X. Preservation and Conservation of Documents [Theory]

Full Marks: 100
Pass Marks: 40
Teach Hrs.: 150

Course Objectives

- The primary goals of this course is the preservation and conservation of library documents on different forms which may be artistic. historical. scientific. religious or social. It is an invaluable and irreplaceable for future generation.
- This course intend to notify about the deteriorating factors and techniques of preventive methods and treatment of documents.

Theoretical and practical investigation of the preventive care of document in different libraries.

- To identify and understand on the need of preservation and conservation of document.
- To introduce basic philosophies. approaches to preventive conservation and collection management.
- To acquaint knowledge on different chemicals for prevention and conservation of documents.
- To impart the different security devices for prevention and conservation of documents.
- To provide opportunities for students to apply theoretical knowledge about preventive conservation and collection management.

Unit/Course Content — Teaching Hrs.

1. Philosophy on preservation & conservation of document: 6
   - Meaning: Ethics: Objectives: Origins
   - Needs and Importance

2. Different form of documents: 25
   - History of Printing: Archives: Manuscripts: Books: Periodicals: Non-book material: audio-visual: compact disc and electronic storage media etc.

3. Deterioration factors of documents: 20
   - Introduction of deterioration factors: Paper quality: Environmental factors: Biological factors
     a) Mechanical damage
     b) Biological damage
     c) Chemical damage
     e) Chemistry of Paper

4. Causes of decay of document: 14
   - Human behavior on pests
   - Storage methods and environment of store house.
   - Micro-organisms. Insects. Rodents. Human agents. Vandalism . Fire. Water and others.

5. Treatment methods: 20
   - Binding techniques: Name of chemicals & their uses: lamination: photocopy of archives material: encapsulation of document Collection arrangement: monitoring of surrounding environment Haritalika (Yellow Paper)

6. Conservation treatment for preservation: 20
   - Building conditions: Materials' conditions and characteristics of collections
   - BC : a) Light pollution b) Humidity

7. Materials of new technologies: 20
   - Discussion on new information storage media like: - photographs: motion picture: video recording: sound recording: CD disc: Information storage magnetic tape.

8. Security Devices : 10
   - Introduction of different traditional security devices:
   - New security devices: Regular cleaning and observation of document

9. Care of other library equipment : 10
   - Introduction of other library equipment rather than document like: photocopy machine: computer: fax machine: binding machine: microfiche reader: microfilm reader: CD player and other equipment.

10. Users Motivation : 5
   - Understanding the ethics of motivation: techniques & methods of motivation

Suggested Reading:

1. Preserving Library Material/ Swartzburg. Susan G. 2nd. ed. Scarecrow Press. 1995
2. . Library Conservation/ H.S. Chopra
3. Caring for your collections/ National Committee to Save American Cultural Collection. Abrams 1992
4. Conserving and Preserving materials in Non-book Formats edited Kathryn Luther Henderson and William T. Henderson. Graduate School of Library and Information Science. 1991.
5. Paper and its preservation: Environmental Controls. Library of Congress. Preservation Leaflet no. 2 (Rev) Preservation Office. 1983
6. Encapsulation in Polyester Film Using Double-sided tape. Technical Leaflet: storage and handling. Northeast Document Conservation Centre 1992.
7. Preservation and Storage of Sound Recordings/ Pickett. A.G. and M.M. Lemcoe. Library of Congress 1959.
8. New Preservation Concern: Video Recordings. Calmes. Alan. Commission on Preservation and access newsletter. 1990.
9. Care and Handling of computer magnetic storage media. NBS Special Publication 500-101 Washington. D.C. National Bureau of Standards 1983
10. Promoting Preservation Awareness in Libraries: a source book for Academic. Public and Special Collections/ Jeanne M. Drewes Ed. 1997
11. Book. Their Care and Repair/ Jane Greenfield. 1983
12. Library Policy for Preservation and Conservation in European Community: Principles. Practices and the Contribution of New Information Technologies/ Alexander Wilson. 1989.

13. Preservation and the management of Library Collections/John Feather. 1991
14. Reading guide to the Preservation of Library Collection /Gerldine Kenny ed. 1992.
15. Bookbinding & Conservation by Hand: a working guide. /Laura S. Young. 1995

LISc. 510-6

Paper X. Computer Programming in Library Automation

Group A: Computer Programming in Library Automation [Theory]

Full Marks: 50
Pass Marks: 20
Teach Hrs.: 75

Course Objectives

The courses designed to provide foundation. in computer programming to beginner using the programming language. Pascal with reference to CDS/Pascal. This course consists of algorithms and computers. concept of high level languages and their translation. basic data types and statements of PASCAL. procedures and functions. Pascal structuring facilities-arrays. strings. CDS/PASCAL.

- The objectives of this course is to develop skills in library personnel for writing programs with reference to CDS/PASCAL for the library use.

Unit/Course Content	Teaching Hrs.
1. Introduction:	15
– Algorithms. characteristics of computers. developing algorithms. analysis of systems study	
– determination and survey of requirements. analysis phase of the system study	
– determination and survey of inputs/outputs	
2. Flow charting and system design:	15
– purpose and use. symbols of flow chart. constructing chart	
Principles of systems design:	
– review of goals. economic feasibility. unit costs. elements of design phase. objectives of new design. manuals of procedures of operations. manual procedures. aspects of	

design the computer base system. system installation. system follow up

3. higher level languages for computer 10
   - the Pascal language on the description of programming language
   - description of syntax rules
   - constants and scalar variables

4. definition variables 10
   - input/output statements
   - expressions
   - Arithmetic
   - Hierarchy

5. a simple computer program 10
   - notes on style
   - examples

6. conditional statements
   - implementing loops in program

7. Defining and manipulating arrays: 10
   - array initializing
   - initializing character array
   - initializing numeric array
   - operating with array
   - reading and writing arrays
   - examples of for loops with arrays

8. Introduction: 5
   - declaring and using function
   - syntax rules for function
   - decelerating procedures block structure

Group B: Computer Programming in Library Automation [Practical]

Full Marks: 50
Pass Marks: 20
Teach Hrs.: 75

Unit/Course Content	Teaching Hrs.

1. Data types and declarations: 10
   - data types
   - integer. real. char. Boolean. enumerated. subrange
   - data declaration
   - constants and constant definition. type definition. variable declaration
   - statement expressions and assignments
   - statements. expressions. the assignment statement
   - simple input and output of data
   - transferring information to from the program. input in PASCAL. output in PASCAL

2. Statements: 10
   - compound statements
   - repetitive statements
   - the while statements.
   - the repeat statement. The for statements
   - the case statement

3. Procedures and functions:
   - the procedures concept. block structure and scope
   - parameters
   - variable parameters. value parameters
   - functions
   - side effects of functions
   - procedures
   - functions as parameters
   - recursion

4. Arrays: 20
   - the arrays concept
   - two dimensional concept
   - whole array operations
   - packed array
   - strings
   - string assignments
   - the length function
   - the concat function
   - the copy function
   - the pos function
   - the delete and insert procedure
   - representing string as arrays
   - string comparisons
   - string comparisons
   - numeric conversions
   - formatting numeric output
   - string to number
   - the val procedure
   - passing string to procedures
   - functions

5. Introduction: 35
   - CDS/ISIS Pascal, compiling and executing program, files produced by CDS/ISIS Pascal, compiler error messages
   - language specifications
   - constants, types and variables, expression, statements, procedures and function
   - designing and integrating user exits
   - menu exits and format exits

Suggested Reading:

1. Champan, Edward a. Pierre, Paul St. Lubans, John. Library system analysis guidelines. New York: Wiley Inter-science. 1970.

2. Welsh John and Elder John. Introduction to Pascal. 2nd ed. N. J.: Prentice Hall, 1982.

3. Turbo Pascal Tutor. USA: Borland International, 1987.

4. UNESCO. CDS/ISIS version 2.3. 1989.

5. Sharma. Pandey S. K.: Fundamental of Library Automation. ESS ESS Publication. New Delhi. 1985.

6. Sharma. Pandey S. K.: Library Computerization: Theory and Practice. ESS ESS Publication. New Delhi.

7. Rao. I. K. Ravichandra: Library Automation. New Age International (P) Limited. Publishers. New Delhi. 1990.

8. Shukla. R. K.: Automation of Libraries and Information Centres: Using dBASE III Plus. New Delhi: Concept Publishing Company.