



छत्रपति शाहू जी महाराज विश्वविद्यालय, कानपुर

CHHATRAPATI SHAHU JI MAHRAJ UNIVERSITY, KANPUR

(पूर्ववर्ती कानपुर विश्वविद्यालय कानपुर)

Formerly Kanpur University, Kanpur – 208024

A Documentary Support

For

Metric No. – 1.1.1

Programme Outcomes & Course Outcomes

Under the

Criteria - I

(Curriculum Design and Development)

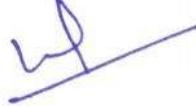
Key Indicator - 1.1

In

Metric No. – 1.1.1

Master of Library and Information Science

Co-ordinator
Internal Quality Assurance Cell
CSJM University, Kanpur


(Registrar)
C.S.J.M.University
Kanpur REGISTRAR
C.S.J.M. UNIVERSITY
KANPUR

**CHHATRAPATI SHAHU JI MAHARAJ UNIVERSITY
KANPUR**



**DEPARTMENT OF LIBRARY AND INFORMATION
SCIENCE**

Masters of Library and Information Science (M.Lib.& Inf. Science)

Program Outcomes (POs)

On successful completion of the Masters of Library and Information Science program, the pass-out students expected to get equipped with:

PO1 - To gain advance knowledge of Library and Information Science get advance knowledge on cataloguing and classification, identify various types of information sources and services and learn publishing, digital library and library automation.

PO2 - To support users by cataloguing digitizing, preserving, and conserving sources and applying ICT techniques in libraries.

PO3 - To analyze user needs concerning secondary data & data analysis for research, thesis writing, and simplify information search and retrieval.

PO4 - To retain knowledge on research methodology, conduct lifelong research.

PO5 - To comprehend various knowledge on research productivity and metrics.

PO6 - To gain knowledge on managing library and information centre and electronic resources management.

PO07 - To retain theoretical and practical knowledge on various techniques of ICT, digitalization knowledge and database management, library management, library automation and storage and retrieval.

Program Specific Outcomes (PSO)

PSO1 - Disciplinary knowledge

PSO2 - Professional and Managerial skills

PSO3 - Skilled communicator

PSO4 - Problem solver

PSO5 - Team player/worker

PSO6 - Digitally literate

PSO7 - Ethical awareness/reasoning

PSO8 - Lifelong learners

Course Outcomes (COs)

Paper Name: Knowledge, Information & Communication (Theory) **(Paper Code: MLIS – 101)**

CO1 - Understand the concept of data information and knowledge, its attributes and information generation.

CO2 - They will know about the **Communication process** and its different models and channels.

CO3 - Shall be able to know the concept of **Knowledge Management** and its different models.

CO4 - Will be able to extend their knowledge about the role of the **nation** in information policies.

Paper Name: Advanced Information Retrieval System (IRS) (Theory)

(Paper Code: MLIS -102)

CO1 - Know about the different Information Retrieval systems, design of IRS and its evaluations.

CO2 - Understand the Standards in **Bibliographic Record format** that are used in libraries;

CO3 - Able to identify the **Indexing service search techniques** and strategy.

CO4 - Understand the **searching techniques** helpful in retrieving the information effectively and efficiently.

Paper Name: Marketing of Library and Information Products and Services (Theory)

(Paper Code:MLIS -103)

CO1 - Make the required information reach larger audience in accessible and usable form.

CO2 - Develop vibrant professional for the information marketing and optimum utilization of information resources.

CO3 - Make intensive use of information in wide range of development activities.

CO4 - Enable students to **assess information user needs**.

CO5 - Inculcate the skills of information analysis, evaluation, synthesis, packaging and repackaging of information product.

CO6 - Define the process of information consolidation and describe its role and potential benefits in satisfying information need of users.

Paper Name: Information Systems and Programs (Theory)

(Paper Code: MLIS – 104)

CO1 - Understand the functioning and usefulness of Information systems.

CO2 - Provide the services to the users by using **national** and **international** information centers and systems.

CO3 - They will be able to use **national** and **International** information systems and services rendered by prestigious institutes.

Paper Name: Advance Knowledge Organization and Information processing: Cataloguing Practice AACR-II (R) (Practice)

(Paper Code: MLIS – 105)

CO1 - Able to catalog the reading material as books and periodical according to **AACR-2R**.

CO2 - Besides they will be abreast to catalog non book material.

CO3 - They will also exposed and learn the modern technology of Machine-readable catalog (**MARC -21 R**).

Paper Name: Application of Information and Communication Technology (Theory)

(Paper Code: MLIS – 106(A))

CO1 - Deal with the knowledge of hardware, software, networking, interactive media, telecommunication, **library automation and digitization**, and new emerging devices and technologies related to ICT.

CO2 - Develop and implement support strategies of effective news of Information Technology

CO3 - Implement policies and procedures necessary to ensure effective, secure and appropriate use of information resources and services

CO4 - Efficiently manage procurement and **acquire new hardware and software**

CO5 - Develop social skills data essentials for cooperative and collaborative learning based around ICT

Paper Name: Research Methods and Statistical Techniques (Theory)
(Paper Code: MLIS – 201)

CO1 - Familiarize with the process of research and different research methods.

CO2 - Develop the skills for quantitative data analysis and consolidation.

CO3 - Write cohesive and succinct reports

CO4 - Understand research Techniques& tools, style manuals and Reference management software.

Paper Name: Application of Information and Communication Technology (Practical)

(Paper Code: MLIS – 202)

CO1 - Install and used library software and besides he/she will be able to design websites./blog content management software and LMS (SOUL).

CO2 - Understand the practical aspect and knowledge of remote access tools and advance search/federated search.

Paper Name : Useful Skills and resources in open learning environment

(Open Elective Paper)

(Paper Code : MLIS – 203)

CO1 - Capability to critically analyze open access resources and to make effective use

CO2 - Capable of demonstrating the ability to understand professional ethics along with moral values based on the Indian values and ethos.

CO3 - Capable of self-paced and self-directed learning aimed at personal development; for improving knowledge and skills through continuing educational opportunities.

CO4 - Apply problem solving skills while providing support services for teaching, learning and research and for formulating appropriate strategies to use technologies, databases, platforms, resources.

Paper Name: Introduction to Bibliometrics and Scientometrics(Theory)
(Paper Code: MLIS -204)

CO1 - Be familiar with the concept of bibliometrics, informetrics, scientometrics, Journal Impact factor, cybermetrics, webometrics and altmetrics.

CO2 - Carry out quantitative studies on various subject fields.

CO3 - Get acquainted with the concept of citation analysis, different forms of citation, impact factor, theory and laws etc.

CO4 - Apply qualitative as well as quantitative techniques in library and information science.

CO5 - The courses focus on new trends in research perspective as Journal Impact factor, utility of bibliometric, informatics laws, cyber metrics laws. Information science and its features and relation with other subjects.

Paper Name : Knowledge Organization and Information Processing: Classification Practice (UDC) (Practice)

(Paper Code : MLIS – 205)

CO1 - Able to classify depth subject in special libraries and institutes by using Universal Decimal Classification This scheme. Course will also make them efficient, to use and classify complex subjects.

Paper Name: Internship

(Paper Code: MLIS -206)

CO1 - Each student shall have to undergo an **internship** of 30 days.

	Regional
	Global
	National

	Local

Masters of Library and Information Science (M.Lib.I.Sc)-One Year (First Semester)

Course Code	TYPE	Course Title	Theory/ Practice	Credits	Internal Marks	Exam Marks	Total
MLIS– 101	CORE/SKE	Knowledge, Information & Communication	Theory	4	25	75	100
MLIS – 102	EEC/SKE	Advanced Information Retrieval System (IRS)	Theory	4	25	75	100
MLIS – 103	EEC/SKE	Marketing of Library and Information Products and Services	Theory	4	25	75	100
MLIS – 104	CORE/SKE	Information Systems and Programmes	Theory	4	25	75	100
MLIS - 105	SKE	Advance Knowledge Organization and Information processing: Cataloguing Practice AACR-II (R)	Practice	4	25	75	100
MLIS – 106	SKE/EC	Application of Information and Communication Technology	Theory	4	25	75	100
		Maximum marks of I semester		24	150	450	600

(Second Semesters)

Course Code	Type	Course Title	Theory/ Practical	Credits	Internal Marks	Exam Marks	Total
MLIS - 201	SKE	Research Methods and Statistical Techniques	Theory	4	25	75	100
MLIS - 202	SKE/EC	Application of Information and Communication Technology	Practical	4	25	75	100
MLIS - 203	SEC	Useful Skills and resources in open learning environment (Open Elective Paper)	Theory	4	25	75	100
MLIS - 204	CORE/SKE	Introduction to Bibliometrics and Scientometrics	Theory	4	25	75	100
MLIS - 205	CORE/SKE	Knowledge Organization and Information Processing: Classification Practice(UDC)	Practice	4	25	75	100
MLIS - 206	SEC	Internship	Project	6=6	25	75 Report	100
		Maximum Marks of II Semester		26	150	450	600
		Total marks of I & II Semester		50	300	900	1200

SKE- Skill Enhancement Course,**EEC**-Employability Enhancement Course; **EC**- Entrepreneurship Course

Note: As per the ordinance of Library and Information Science of the University of CSJM, Kanpur, each student shall have to undergo an internship of 30 days immediately after the second semester examination. The original certificate of such training has to be submitted to the concerned college/university (where students enrolled) for final result. A vivace and report based on training will be evaluated by the internal examiner.

Paper Name:Knowledge, Information & Communication (Theory)

Paper Code:MLIS – 101 CORE/SKE

Credit : 4		Core: Compulsory
Max. Marks :25+75		Min. Passing Marks:10+30
Number of Lecture (per Week) :4 Hours		
Unit	Topic	
I	Information Nature and attributes. Information: Nature, Properties, Types and Scope.	
		15

	Conceptual difference between Data, Information and Knowledge. Information Generation: Modes and forms, Information Theory, Information Diffusion Process.	
II	Knowledge Management Knowledge Management: Definition, concept, need, and models. Components and process of Knowledge Management, Types of Knowledge, Information Management Vs Knowledge Management	15
III	Communication Process Communication: Genesis and Characteristics Communication Process, Types and Media Communication Channels and Models Communication of Information and Barriers to I.C.	15
IV	Information Policies: National Program and Policies National Information Policy (NIP) National Mission on Libraries(NML) National Knowledge Commission (NKC) Changing role of Library and Information Centre in modern Information Society.	15

Learning Outcome:

Upon successful completion of the course, students will be able to:

- Understand the concept of data information and knowledge, its attributes and information generation.
- They will know about the Communication process and its different models and channels.
- Shall be able to know the concept of Knowledge Management and its different models.
- Will be able to extend their knowledge about the role of the nation in information policies.

Suggested Reading:

- Khan, M.T.M. (1998). Information organization and communication. New Delhi: EssEss Publications.
- Parashar, R.G. (2003). Information and its communication. New Delhi: Medallion Press.
- Rakowski, R. (2007). Knowledge Management: Social, cultural and theoretical perspective. U.K.: Chandos Publishing
- Sharma, S. & Gopal S. (2011). Applications of Knowledge Management in the digital era. New Delhi: GNOSIS.

Suggestive Digital Platforms Web links:<https://inflibnet.ac.in>

Paper Name: Advanced Information Retrieval System (IRS) (Theory)

Paper Code: MLIS -102 EEC/SKE

Credit : 4	Core: Compulsory	
Max. Marks : 25+75	Min. Passing Marks:10+30	
Number of Lecture (per Week):4 Hours		
Unit	Topic	No of Lectures
I	Information retrieval IRS: concept and definition objectives operation and design of information retrieval system. IRS evaluation: precision, recall, vector scale, response time. IR Model: General Introduction,	15
II	Standard in Bibliographic Record format &description ISBD, MARC 21, CCF, FRBR, Bib frame, Dublin core Standards for bibliographic information exchange and Communication: ISO - 2709, Z39.50, Z39.71	15
III	Indexing: Specific Aspects Indexing: Concept, definitions, functions. Citation Indexing: concept definitions: SCI and SSCI. Thesaurus Construction	15
IV	Search Techniques Search Strategy: Concept, Meaning, Preparation of search strategy Search Techniques: Boolean operator, Fuzzy searching, Case sensitive searching, Truncation, proximity.	15

Learning Outcome:

- Know about the different Information Retrieval systems, design of IRS and its evaluations.
- Understand the Standards in Bibliographic Record format that are used in libraries;
- Able to identify the Indexing service search techniques and strategy.
- Understand the searching techniques helpful in retrieving the information effectively and efficiently.

Suggested Readings:

1. Chowdhury, G.G. (2010). Introduction to model information retrieval system (3rded.). London: Facet Publishing.
2. Lancaster, F.W. (2003). Indexing and abstracting in theory and practice. Urabana: University of Illions.
3. Rajan, T.M. (1981). Indexing Systems: concepts, models and techniques. Calcutta: IASLIC.
4. Salton G. & McGill, M.J. (1983).Introductionto modern informationretrieval. NewYork: McGraw-Hill.
5. Chu,Heting (2003)Information Representation and Retrieval in Digital age.-2nd edition [s.l.]:Information Today.

Suggestive Digital Platforms Web links:

<https://egyankosh.ac.in/>

<https://inflibnet.ac.in>

<https://nios.ac.in/media/documents/SrSecLibrary/LCh-015B.pdf>

<https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=9JW4FTxyrU+Wsr8xl8vgiw>

Paper Name: Marketing of Library and Information Products and Services (Theory)

Paper Code:MLIS -103 EEC/SKE

Credit : 4		Core: Compulsory
Max. Marks :25+75		Min. Passing Marks:10+30
Number of Lecture (Per Week):4 Hours		
Unit	Topic	No. of Lectures
I	<ul style="list-style-type: none">• Marketing: Concept, Definitions, Need, Functions.• Information as a Marketable Commodity• Information Products: Concept, Nature, Definition, Types with Examples• Information Analysis• Packaging and Repackaging of Information	15
II	<ul style="list-style-type: none">• Distribution and Marketing of Information, Channels.• Marketing Mix.• Marketing Strategy• Techniques and Tools of Market Analysis	15
III	<ul style="list-style-type: none">• Information Analysis Centre's (IAC) and Consolidation• Indexing and Abstracting Periodicals• Reviews and State of Art Report• Progress Report and Trend Report• Conference Report and Statistical Report	15
IV	<ul style="list-style-type: none">• E-Marketing: Concept, strategies, Use, Advantages,	15

	<ul style="list-style-type: none"> • Information Audit: Role, Scope, Methodology, • Market Segmentation. • Electronic Content Creation 	
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Learning Outcomes:

Upon successful completion of the course, students will be able to:

- Make the required information reach larger audience in accessible and usable form.
- Develop vibrant professional for the information marketing and optimum utilization of information resources.
- Make intensive use of information in wide range of development activities.
- Enable students to assess information user needs.
- Inculcate the skills of information analysis, evaluation, synthesis, packaging and repackaging of information product.
- Define the process of information consolidation and describe its role and potential benefits in satisfying information need of users.

Suggested Readings:

1. Gupta, D. K., et al.(2006). Marketing Library and Information service: International perspectives. Munich: K. G. Saur.
2. Kotter, Philip.(2002). Marketing Management. Delhi: Prentice Hall.
3. Chopra, H.S.(1996). Information marketing. Jaipur:Rawat Pub.
4. Jain, AbhinandanK.,ET.al.(1999). Marketing information products and services: A primer for libraries and information professionals. New Delhi: Tata Mcgraw Hill.
5. Asghar. M & Bhatti, R (2012). Marketing of Library and Information Services and Products. LAP Lambert Academic Publishing.
6. Chaddham K (2014). Marketing of Library and Information Products and Services: Using Services Marketing Mix. IGI Global.

7. Chopra, H.S. (1996). Information marketing. Jaipur: Rawat
8. Gordon, V. S (2016). Marketing for special and Academic Libraries. Rowman& Littlefield
9. Jain, A. K.; Jajoo, B. H.; Jambhekar, A.; Rao, T. P. R. & Rao, S. S (1999).
10. Product Design and Test Marketing of information product and services. Delhi: Oxford & IBH Pub. Co.
11. Lackie, R. J & Wood, M. S (2015). Creative Library Marketing and Publicity: Best Practices. Rowman& Littlefield Publishers.

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Paper Name: Information Systems and Programs (Theory)

Paper Code:MLIS – 104CORE/SKE

Credit :4	Core: Compulsory	
Max. Marks :25+75	Min. Passing Marks:10+30	
Number of Lecture (per Week) :4 Hours		
Unit	Topic	No. of lectures
I	Information System <ul style="list-style-type: none"> • Information Systems: Concept, Definition, Characteristics, Objectives, Types and constraints. • Information Centre: Data Banks, Clearing Houses 	15
II	National organization and Programme <ul style="list-style-type: none"> • Planning and Designing of National Information System. • National InformationSystem in India: NASSDOC, NISCAIR, NISSAT, ENVIS, DESIDOC, SENDOC 	15
III	Information System & Organizations <ul style="list-style-type: none"> • INFLIBNET • DELNET • ICAR • ICMR • CSIR • E-Shodhsindhu • NKRC (National knowledge Resource consortia) 	15
IV	International organizations and Programmes <ul style="list-style-type: none"> • AGRIS • INIS • INSPEC 	15

Learning Outcomes:

Upon successful completion of the course, students will be able to:

- Understand the functioning and usefulness of Information systems.
- Provide the services to the users by using national and international information centers and systems.
- They will be able to use national and International information systems and services rendered by prestigious institutes.

Suggested Reading:

1. Grassian, E.S. (2005). Learning to lead and manage information literacy instruction. New York: Schuman Publishers.
2. Vickery, B.C. (1987). Information Systems. Washington:Butterworths.
3. Baman, P. (1993). Studies on Information Systems, Services and Programmes in India and abroad.
4. Delhi:Ajnata.
5. Atherton, Pauline. (1997). Handbook of Information System and Services. Paris: UNESCO

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Paper Name: Advance Knowledge Organization and Informationprocessing:Cataloguing Practice AACR-II (R) (Practice)

Paper Code:MLIS – 105SKE

Credit :4		Core: Compulsory
Max. Marks :25+75		Min. Passing Marks:10+30
Number of Lecture (per Week):4 Hours		
Unit	Topic	No. of Lectures
I	Cataloguing of Multi-volume and Composite books. <ul style="list-style-type: none">• Cataloguing of Multi Volume Books.• Cataloguing of Composite Books.	15
II	Cataloguing of Corporate authorship <ul style="list-style-type: none">• Government Publications• Institution publications• Conference Proceedings	15
III	Cataloguing of Periodicals and Non-Book Materials <ul style="list-style-type: none">• Serial/ Journal Publications. Non-Book Materials	15

	<ul style="list-style-type: none"> • Cartographic Materials • Manuscripts • Sound Recordings • Motion Pictures and Video recordings • Microforms/Computer File. 	
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IV	Cataloguing inMARC -21	15
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Note: Library of Congress List of Subject Headings will be followed.
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Learning Outcomes:

Upon successful completion of the course, students will be able to:

- Able to catalog the reading material as books and periodical according to AACR-2R.
- Besides they will be abreast to catalog non book material.
- They will also exposed and learn the modern technology of Machine-readable catalog (MARC -21 R).

Suggested Reading:

1. AACR-2 Ed 1978
2. Krishan Kumar. An Introduction to Cataloguing Practice. New Delhi: Vikas Publishing.
3. J.N. Gautam. Advance Cataloguing: CCC and AACR-2. Agar: Y.K. Publishers.
4. Cataloguing Practice retrieved from: <https://egyankosh.ac.in/handle/123456789/33025>
5. Anglo-American Cataloguing Rules (AACR, AACR2, AACR2R)<https://www.librarianshipstudies.com/2018/12/anglo-american-cataloguing-rules-aacr.html>

Paper Name: Application of Information and Communication Technology (Theory)

Paper Code:MLIS – 106(A)SKE/EC

Credit :4	Core: Elective	
Max. Marks :25+75	Min. Passing Marks:10+30	
Unit	Topic	No. of Lecturer
I	Library Automation:Definition, Need, Purpose, Advantages, And Limitations LibraryAutomation: Area & Planning. Selection of Hardware and Software Planning and Implementation of Library Automation Library management software: KOHA, Libsys, SOUL	15
II	Barcode, RFID, QR Code, Biometric, Smartcard: Features and Application of Internet Security Digital object identifier. Content Management Systems—Architecture, Data Integration CMS Software—Selection, Implementation and Evaluation.	15
III	Internet: Concept, features, services, and tools. Network Based Information Services Connectivity: Dialup, Leased lines, ISDN, Digital subscriber lines Internet protocol and Standards – HTTP, SHTTP, FTP, SMTP, TCP/IP, URI, URL	15
IV	Digitization – Planning, Selection of materials, Hardware, Software, process, Issues Digital Preservation – Need, Purpose, Standards, Methods, Techniques Digital Libraries: Genesis, Characteristics, Types and Architecture Digital Library initiatives - National (NDL, UP HE Digital library etc.) Metadata: types, need and purpose Hardware and Software for digital libraries, OCR, Image Editing software Input capture devices, scanners, digital, movie cameras	15

Learning Outcomes - Upon successful completion of the course, students will be able to:

- Deal with the knowledge of hardware, software, networking, interactive media, telecommunication, library automation and digitization, and new emerging devices and technologies related to ICT.
- Develop and implement support strategies of effective news of Information Technology
- Implement policies and procedures necessary to ensure effective, secure and appropriate use of information resources and services
- Efficiently manage procurement and acquire new hardware and software
- Develop social skills data essentials for cooperative and collaborative learning based

around ICT

Suggested Readings:

1. Anderson, C. G., & Maxwell, D. C. (2004). Starting a Digitization Center. USA: Chandos Publishing
2. Chopra, H. S. (1999). Library Information Technology in Modern Era: Libraries and Librarian in New Millennium. New Delhi: Commonwealth.
3. Dahl, M. V; Banerjee, K & Spalti, M (2006). Digital Libraries: Integration Content and System. 2006. Chandos publishing.
4. Gopal, K (2002). Intellectual Freedom in Digital Libraries. Authors Press.
5. Jeevan, V. K. J (2003). Digital Libraries. New Delhi: EssEss.
6. Lesk, M (2005). Understanding Digital Libraries. USA.MKP
7. Limb, P (2004). Digital Dilemmas and Solution. Oxford: Chandos
8. Muller, J. F (2003). A librarian's Guide to the Internet: Searching and Evaluating Information. Chandos Publishing.
9. Muller, J. F. (2003). A Librarians Guide to the Internet. Oxford: Chandos.
10. Papy, F (2007). Digital libraries. London: John Wiley.
11. Witten, I. H & Bainbridge, D (2003). How to Build Digital Library. Elsevier Science

Paper Name: Research Methods and Statistical Techniques (Theory)**Paper Code:MLIS – 201SKE**

Credit :4	Core: Compulsory	
Max. Marks :25+75	Min. Passing Marks:10+30	
Number of Lecture (per Week) :4 Hours		
Unit	Topic	No. of Lecture
I	Research: Concept & Types of Research Steps of Research Research Design: Essentials of good research design & its importance. Types of Research Designs. Hypothesis Ethical Aspects of Research	15
II	Research Methods Scientific Method Historical Method Descriptive Method: Survey Method & Case Study Method, Delphi Method Experimental Method	15
III	Research Techniques and Tools Data Sources: Primary and Secondary data. Questionnaire and Schedule Interview Observation Rating Scales Sampling Techniques: Probabilistic and Non-probabilistic Sampling techniques	15
IV	Data Analysis & Interpretation Tabulation and Graphical Presentation of Data Descriptive Statistics:Measures of Central Tendency; Mean, Mode, Median, Measures of Dispersion. Style Manuals - Chicago Manual of Style, MLA & APA Reference Management Software: Zotero or Mendeley	15

Learning Outcomes:Upon successful completion of the course, students will be able to:

- Familiarize with the process of research and different research methods.
- Develop the skills for quantitative data analysis and consolidation.

- Write cohesive and succinct reports
- Understand research Techniques& tools, style manuals and Reference management software.

Suggested Readings:

1. Andres,A.(2009). Measuring Academic Research. How to undertake a bibliometric study? Oxford:
2. Chandos. Cameron, D. &Ostapowicz, L. (Eds.). (2015). Research Methods in Library and Information Science. Oakville, Canada:
3. Delve. Connaway, L.S. & Radford, M.L. (2016). Research Methods in Library and Information Science. (6th Ed.). Englewood: Libraries Unlimited.
4. Creswell,J.W.(2009). Research Design: qualitative, quantitative and mixed methods approach. (3rd Ed.). New Delhi: Sage.
5. Creswell.J. W. (2014). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. (4th Ed.). New Delhi: Sage.
6. Dane, F.C. (2017). Evaluating Research: methodology for people who need to read research. (2nd Ed.). New Delhi: Sage.
7. Alvesson, M &Skoldberg, K. (2009). Reflexing Methodology: new vistas in qualitative research (2nd rev. Ed.). London: Sage Publications.
8. Devrajan, G. (2011). Prolegomena to Research Methodology. New Delhi:EssEss Publishing.
9. Das,S. (2012). Research Methodology: methods, tools & techniques. Jaipur:Yking books.
10. Sharma, C.K. & Jain, M.K. (2009). Research Methodology. New Delhi: Shree Publishers.
11. KrishanKumar (1992) Research Methods in Library and Information Science .NewDelhi:Vikas Publishing House.
12. Busha, C. H. & Harter, S. H. (1988). Research Methods in Librarianship:Techniques and Interpretations. New York: Academic Press.
13. Devarajan, G. (2011). Prolegomena to Research methodology. New Delhi:EssEssPublishing

14. Guthrie, G. (2010). Basic research methods: an entry to social science research. London: Sage.
15. Kothari, C.R. (2009). Research Methodology: Methods and Techniques. New Delhi. New Age
16. Leo, E. & Rousseau, R. (2001). Elementary Statistics for Effective Library and Information Service Management. London: Aslib.
17. Oliver, P. (2010). Understanding the Research Process. New Delhi: Sage Publication.

Suggestive Digital Platform Web links:<https://inflibnet.ac.in>

Paper Name: Application of Information and Communication Technology (Practical)

Paper Code:MLIS – 202SKE/EC

Course Outcome		
Credit :4		Core: Compulsory
Max. Marks :25+75		Min. Passing Marks:10+30
Number of Lecture (per week) :4 Hours		
Unit	Topic	No. of Lectures
I	Web Page/Blog Creation	15
II	Content Management System and Software's	15
III	Library Automation Software –SOUL	15
IV	Advance Search/Federated search Remote access tools-Team Viewer, AnyDesk, etc.	15

Note: -Only paper (MLIS-202) Information Technology (Practical) of 75 marks will be evaluated by an Internal and external Examiner appointed by the university.

Learning Outcomes: Upon successful completion of the course, students will be able to:

- Install and used library software and besides he/she will be able to design websites./blog content management software and LMS (SOUL).
- Understand the practical aspect and knowledge of remote access tools and advance search/federated search.

Suggested Readings:

1. Brown, Christopher & Bell, Suzanne (2018). Librarian's guide to online searching: cultivating database skills for research and instruction. 5th ed. London: Libraries Unlimited
2. Clayton, Marlene (2018). Managing library automation. 2nd ed. London: Routledge.
3. Markey, Karen (2019). Online searching: A guide to finding quality information efficiently and effectively. 2nd ed. Lanham, Maryland:Rowman& Littlefield Publishers.
4. Marmel, Elaine (2015). Office 2016 Simplified. Hoboken. New Jersey: John Wiley & Sons.
5. Mishra, Vinod Kumar (2016). Basics of library automation, Koha library management software and data migration: Challenges with case studies. New Delhi:EssEss Publications
6. Singh, Prem and Khanna, J. K. (1994). Information technology in the Libraries. Delhi:Pragati Publication.
7. Frye, Curtis. (2002). Microsoft Access Version 2002.Delhi: Prentice Hall.
8. Parashar, R.G. (1991). Indian Library in IT environment. Ludhiana:Medallian press.
9. Blake,U. Computer network: protocols, standard and interfaces 2nd edition, New Delhi:

Prentice hall

10. 10-Ackermann (Ernest). Learning to use the Internet: An introduction with examples and experiences. BPB.

Suggestive Digital Platform Web links:<https://inflibnet.ac.in>

Paper Name : Useful Skills and resources in open learning environment

(Open Elective Paper)

Paper Code : MLIS – 203SEC

Credit :4		Core: Compulsory
Max. Marks :25+75		Min. Passing Marks:10+30
Number of Lecture (per week) :4 Hours		
Unit	Topic	No. of Lectures
I	Open access and Open Publishing models Open education resources-Initiatives by India-SWAYAM, NPTEL, Shodhganga, NDL, ePGPathshala, IRINS, Vidwanetc	15
II	Internet Information resources and Evaluation of Internet Information resources	15
III	Research Writing Plagiarism Academic Integrity, Research Ethics Copyrights and licensing	15
IV	Research support Services Journal search and Citation databases: Web of Science, Scopus, etc. Impact Factor of journal as per journal citation report, SNIP, SJR, IPP, Cite Score	15

Learning Outcomes:Upon successful completion of the course, students will be able to:

- Capability to critically analyze open access resources and to make effective use
- Capable of demonstrating the ability to understand professional ethics along with moral values based on the Indian values and ethos.
- Capable of self-paced and self-directed learning aimed at personal development; for improving knowledge and skills through continuing educational opportunities.

- Apply problem solving skills while providing support services for teaching, learning and research and for formulating appropriate strategies to use technologies, databases, platforms, resources.

Paper Name: Introduction to Bibliometrics and Scientometrics(Theory)

Paper Code:MLIS -204 CORE/SKE

Credit :4		Core: Compulsory
Max. Marks :25+75		Min. Passing Marks:10+30
Number of Lecture (per Week) :4 Hours		
Unit	Topic	No. of Lectures
I	Informetrics/Scientometrics/Bibliometrics/and Webometrics <ul style="list-style-type: none">• Informetrics-Concept and definition, Evolution, Scope ,purpose• Scientometrics-Concept and definition, Evolution, Scope ,purpose• Bibliometrics-Concept and definition, Evolution, Scope , purpose• Webometrics-Concept and definition, Evolution, Scope , purpose	15
II	Theory and Laws <ul style="list-style-type: none">• Bradford Law• Lotka'sLaw• Zip's Law	15
III	Citation Analysis and relevance in research Definition, Scope, Evaluation& Overview	15
IV	Metrics- <ul style="list-style-type: none">• Journal Impact Factor• H Index• Index i-10• g-index	15

Learning Outcomes:Upon successful completion of the course, students will be able to:

- Be familiar with the concept of bibliometrics, informetrics, scientometrics, Journal Impact factor, cybermetrics, webometrics and altmetrics.
- Carry out quantitative studies on various subject fields.
- Get acquainted with the concept of citation analysis, different forms of citation, impact factor, theory and laws etc.
- Apply qualitative as well as quantitative techniques in library and information science.
- The courses focus on new trends in research perspective as Journal Impact factor, utility of bibliometric, informatics laws, cyber metrics laws. Information science and its features and relation with other subjects.

Suggested Reading:

1. Dhawan, K.S. (2001). Reading in Library Science. New Delhi: Commonwealth.
2. Sardana, J.L.,Ed. (2002). Libraries and information studies in retrospect and prospect: Essay in Honour of D. R. Kalia. New Delhi: Concept publishing company.

3. Baruah, A. (2004). Library Science: Prospects in 21st century. New Delhi: Kilaro Books.
4. Melntosh, J. (Ed.). Library and Information Sciences: Parameters and Perspectives. Canada: Apple Academic Press.
5. Kawatra, P.S. (2000). Textbook of Information Science. New Delhi: A.P.H. Publishing

Paper Name : Knowledge Organization and Information Processing:

Classification Practice(UDC) (Practice)

Paper Code : MLIS – 205CORE/SKE

Credit :6	Core: Compulsory
Max.Marks:25+75	Min.PassingMarks:10+30
Number of Lecture (Per Week):4 Hours	
Classification by Universal Decimal Classification Scheme(3rdAbridgedEd.1961)	
<ul style="list-style-type: none"> • Introduction of scheme: History, Structure, Principles • Introduction to common Auxiliaries and Special Auxiliaries • Adequate Number of titles from all Disciplines • Use of common and special Auxiliaries Candidates will be required to Classify 15 titles Note: The written Paper will be of 75 Marks. 	

Learning Outcomes: After practice this paper student shall be able to classify depthsubject in special libraries and institutes by using Universal Decimal Classification This scheme. Course will also make them efficient, to use and classify complex subjects.

Paper Name:Internship

Paper Code:MLIS -206 SEC

As per the ordinance of Department of Library Science of the CSJMUniversity Kanpur, each student shall have to undergo an internship of 30 days immediately after the second semester examination.

The original certificate of such training has to be submitted to the concerned college/university (where student is enrolled) for Final Result. Aviva–voce and report based on training will be evaluated by the internal examiner.

	Regional
	Global
	National
	Local