Anekant Education Society's

Tuljaram Chaturchand College, Baramati

(Autonomous)

One Year Degree Program in Library and Information Science

(Faculty of Library and Information Science)

CBCS Syllabus

B.Lib.I.Sc. Semester – I
For Department of Library and Information Science
Tuljaram Chaturchand College, Baramati

REVISED SYLLABUS
Choice Based Credit System Syllabus (2022 Pattern)

To be implemented from Academic Year 2022-2023

Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(AUTONOMOUS)

Course and Credit Structure B.Lib.I.Sc. 2022 Pattern

Class	Pattern	Semester	Course Code	Course Title	Course Type	No. of Credits
				Semester I		
B.Lib.I.Sc.	2022	I	UBLIS 111	Foundations of Library & Information Science	Theory	4
	2022	I	UBLIS 112	Information management and Organizations	Theory	4
	2022	I	UBLIS 113	Reference Service & Sources	Theory	4
	2022	I	UBLIS 114	Information Science	Theory	4
	2022	I	UBLIS 115	Knowledge Organization: Classification–I (Theory)	Theory	4
	2022	I	UBLIS 116	Information Processing: Cataloguing -I (Theory)	Theory	4
	2022	I	UBLIS 117	Information Communication Technologies (ICT) in Libraries (Theory)	Theory	4

Programme Specific Outcomes (POs)

On completing Bachelor of Library and Information Science Programme, students shall be able to realize following outcomes:

PO1 Research-Related Skills and Scientific temper:

Infer scientific literature, build a sense of enquiry and be able to formulate, test, analyse, interpret and establish hypothesis and research questions; and to identify and consult relevant sources to find answers. Able to plan and write a research paper/project while emphasizing on academics and research ethics, scientific conduct and creating awareness about intellectual property rights and issues of plagiarism.

PO2 Effective Citizenship and Ethics:

Demonstrate empathetic social concern and equity centred national development and act with an informed awareness of moral and ethical issues and commit to professional ethics and responsibility

PO3 Social competence and communication skills:

Demonstrate ability to accommodate the views of others and present their own opinions and complex ideas, in written or oral form, in a clear and concise manner in group settings. Exhibit thoughts and ideas effectively in writing and orally; communicate with others using appropriate media, build effective interactive and presenting skills to meet global competencies. Elicit views of others, present complex information in a clear and concise and help reach conclusion in group settings.

PO4 Disciplinary Knowledge: Demonstrate comprehensive knowledge and a strong theoretical grounding in their area of work.

PO5 Personal and professional competence:

Perform independently and also collaboratively as a part of a team to meet defined objectives and carry out work across interdisciplinary fields. Execute interpersonal relationships, self-motivation and adaptability skills and commit to professional ethics.

PO6 Self-directed and Life-long learning:

Demonstrate attitudes of being a life-long learner who passionately pursues self determined goals in the broadest context of socio-technological changes. Acquire the ability to engage in independent and life-long learning in the broadest context of socio technological changes.

PO7 Environment and Sustainability:

Understand the impact of the scientific solutions in societal and environmental contexts and demonstrate the knowledge of and need for sustainable development.

PO8 Critical Thinking and Problem solving:

Identify problems by closely examining the situations around them and think holistically about the phenomena and generate viable solutions to these problems. Exhibit the skill of critical thinking and understand scientific texts and place scientific statements and themes in contexts and also evaluate them in terms of generic conventions. Identify the problem by observing the situation closely, take actions and apply lateral thinking and analytical skills to design the solutions.

Paper Code : UBLIS 111

Title of Paper : Foundations of Library and Information Science

Course Objectives (COs):

1. To understand purpose, role and importance of libraries in society
2. To familiarize students with development of libraries in global and India in particular.
3. To make them aware about the five laws of library science.
4. To know about various types of libraries, their objectives & functions.
5. Will be learn enhance the understanding of Library and Information Science Education and Library Fields.
6. Knows laws related to libraries.
7. Awareness about the five laws of library science.

Course Outcomes (COs):

CO1. The foundational aspects of library and information science (LIS), in terms of history, significant developments, major themes, organizations and institutions.

CO2. To examine major conceptual frameworks for LIS practice and theory, the user perspectives and the history of the modern libraries in India;

CO3. Knowledge about different types of libraries

CO4. Awareness of different Indian library legislation acts.

CO5. To be familiar with the five laws of library science, profession and professional ethics.

CO6. Awareness about the five laws of library science.

CO7. Know about various types of libraries, their objectives & functions.

Total No. of Credits = 04		
UNIT 1	**Development of Libraries: An Overview**	**(10L)**
	1.1 History of library movement in India.	
	1.2 Development of Libraries in India With Special Reference to Maharashtra	
UNIT 2	**Role of Libraries in Society**	**(12L)**
	2.1 Library as a Social Institution	
	2.2 Reading, Reading Habits	
	2.3 Education & Libraries	
	2.4 Role of Libraries in national development	
	2.5 Culture & Libraries	
UNIT 3	**Laws of Library Science**	**(12L)**
	3.1 Normative Principles of library and information science	
	3.2 The five laws library science and their implications	
UNIT 4	**Types of Libraries**	**(14L)**
	4.1 National libraries: Definition, Objectives, functions, history & brief Outline of National Library of India.	
	4.2 Public Libraries: Definition, Objectives, Development and Functions	
	4.3 Academic Libraries: School, College & University Libraries- Definitions, Objectives, Functions	
	4.4 Special Libraries: definition, objectives and Brief outline of the Development of Research Libraries In India.	

Class : B.Lib.I.Sc. (Sem-I) **Subject** : Library and Information Science
Course : Foundations of Library and Information Science
Course Code : UBLIS 111
Weight age : 1= weak or relation, 2= moderate or partial relation, 3= strong or direct relation

Programme Outcomes (POs)							
Course Outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8
CO 1	3	2		3	2	3		
CO 2		2			2			2
CO 3	3	2		3	2			
CO 4		2	3		1	2		3
CO 5	2	2	3		1			2
CO6	2	2			2		2	
CO 7	3	2	2		2	3		

Justification for the mapping

PO1: Research-Related Skills and Scientific temper:

CO1: This CO involves exploring the history and significant developments in Library and Information Science (LIS). Research-related skills are developed through studying historical perspectives, understanding the evolution of information systems, and analyzing major themes.
CO 3& CO7: Research-related skills are honed as students gather and analyze information about different

types of libraries. awareness of the various types of libraries and their specific objectives and functions
CO5&CO6: These COs involve understanding and being aware of the foundational principles governing library science. Research skills are employed to explore and critically evaluate these principles, fostering a scientific temper in approaching the profession.

PO2: Effective Citizenship and Ethics:

CO1 to CO7: the mentioned COs contribute to the development of Effective Citizenship and Ethics by providing a comprehensive understanding of the historical, conceptual, legal, and ethical dimensions of Library and Information Science. This knowledge equips professionals with the skills and values necessary to contribute ethically and responsibly to the information needs of diverse communities.

PO3: Social competence and communication skills:

CO4 and CO5: which focus on awareness of Indian library legislation acts and familiarity with the five laws of library science and professional ethics, highlight the importance of ethical behavior in the field.

CO7: Understanding and communicating the objectives and functions of different types of libraries involve social competence in conveying the value and role of libraries in diverse communities.

PO4 :Disciplinary Knowledge:

CO1: This CO contributes to disciplinary knowledge by covering the historical background, significant developments, major themes, organizations, and institutions in LIS.

CO3: This CO builds disciplinary knowledge by familiarizing students with the various types of libraries.

PO5 :Personal and professional competence:

CO1 to CO7: the course outcomes contribute significantly to the development of personal and professional competence in Library and Information Science by covering foundational knowledge, theoretical frameworks, legal considerations, ethical principles, and practical aspects of library management.

PO6 :Self-directed and Life-long learning:

CO1: Understanding the history and significant developments in library and information science encourages self-directed learning by requiring students to delve into the roots of the discipline independently

CO4: Understanding Indian library legislation acts requires students to engage in independent research, contributing to self-directed learning

CO7: Knowing about various types of libraries and their objectives necessitates self-directed exploration of the diverse roles libraries play.

PO7 :Environment and Sustainability:

CO6: Reiterating awareness of the five laws emphasizes their importance in guiding ethical and sustainable practices in library science.

PO8 :Critical Thinking and Problem solving:

CO2: Exploring conceptual frameworks demands critical thinking to evaluate their relevance and effectiveness in library and information science.

CO4: Understanding and being aware of different Indian library legislation acts necessitates critical thinking to evaluate their impact on the profession.

CO5: The five laws of library science and professional ethics provide a framework for ethical and effective library practice.

Paper Code : UBLIS 112   **Title of Paper :** Information Management and Organizations

Course Objectives (COs):

1. To understand the meaning and purpose of document selection and collection development including books and non book materials in the libraries

2. To train students in the organization of library work & collection development.

3. To familiarize with various library procedures & library housekeeping activities.

4. Maintain the library statistics and prepare annual report

5. To Understand the concept of Circulation

6. To understand Purpose & Types of Library Statistics

7. To provide knowledge about basics of book selection

Course Outcomes (COs):

CO1: Can apply the skills and attitudes of visioning, entrepreneurship, advocacy, planning and Management of libraries and information centers (LICS) and effective leadership in the LIS field

CO2: Training in organization of library work & collection development.

CO3: Make aware of principles & functions of management & their application to Librarianship.

CO4: Understand the concept and history of Charging methods

CO5: Elaborate role and functions of Acquisition

CO6: Carry out various operations of Library and Information Centres

CO7: Manage, preserve and provide access to various print and non-print information sources

Total No Of Credits = 04	
UNIT 1	**Document Selection & Collection Development** (12L)
	1.1 Definition, Need, Purpose of book selection
	1.2 Principles (Drury, Dewey & Mc Colvin, practices-books on approval process etc.
	1.3 Book Selection policy in different libraries
	1.4 Book Selection tools: Online, Reviewing tools, Publisher's Catalogue, National Bibliographies in global.
UNIT 2	**Technical Services –Acquisition of books & periodicals** (12L)
	2.1 Acquisition of books and e books: objectives, role and functions. sources of Acquisition
	2.2 Acquisition of Serials Publications : Types of periodicals, selection tools, procurement: their pros & cons, receipt & recording of periodicals (three card, kardex)
	2.3 Shelving, Routing of Periodicals, Collation of completed volumes
	2.4 Good Offices Committee : History, Role in acquisition work
UNIT 3	**Circulations- Work & Methods** (14L)
	3.1 Circulation :Concept, Meaning, Definition, Importance & Activities in circulation work, Registration, Reservation, Renewal and overdue reminders etc.
	3.2 Pre-requisites of a Good charging and Discharging system
	3.3 Charging methods : History & Development , Detailed study of Browne Charging system, Newark charging system
	3.4 Use of Bar-Coding and RFID System
UNIT 4	**Library Reporting** (10L)
	4.1 Library Statistics: Purpose, Sources & Types
	4.2 Library Rules and Regulations: Need, Purpose& Draft of the rules
	4.3 Annual Report: Definition, Purpose, Contents & its Compilation

Class : B.Lib.I.Sc. (Sem-I) **Subject** : Library and Information Science
Course : Information Management and Organizations
Course Code : UBLIS 112
Weight age : 1= weak or relation, 2= moderate or partial relation, 3= strong or direct relation

Programme Outcomes (POs)								
Course Outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8
CO 1	2			2				
CO 2				3	3		2	2
CO 3	3	2	3		2	2		
CO 4		3			3			
CO 5		3	3				2	
CO 6						2	2	3
CO 7								

<p align="center">Justification for the mapping</p>

PO1: Research-Related Skills and Scientific temper:

CO1: The ability to apply research skills is implicit in the skills of visioning, entrepreneurship, advocacy, planning, and management.
CO3: Management in librarianship requires an understanding of research methods to inform decision-making, assess the effectiveness of library services, and continuously improve operations.

PO2: Effective Citizenship and Ethics:

CO3: Understanding the principles and functions of management in librarianship is essential for effective citizenship within the LIS profession.

CO4: The concept and history of charging methods in libraries tie into effective citizenship by ensuring fair and equitable access to information resources.

CO5: Elaborating on the role and functions of acquisition is crucial for effective citizenship in the LIS field.

PO3: Social competence and communication skills:

CO3: Understanding and applying management principles in librarianship involve effective communication with staff, users, and other professionals.

CO5: The role and functions of acquisition involve communication with publishers, vendors, and other stakeholders in the acquisition process. Social competence is necessary for negotiating terms, discussing budgetary constraints, and building effective professional relationships

PO4 :Disciplinary Knowledge:

CO1: This CO demonstrates the application of a broad range of skills and attitudes necessary for effective library and information center management, aligning with the overall disciplinary knowledge in LIS.

CO2: Directly addresses the practical aspects of organizing library work and developing collections, contributing to the graduates' disciplinary knowledge in library operations.

PO5 :Personal and professional competence:

CO2: This directly contributes to personal and professional competence by providing training in organizing library work and collection development.

CO3:Understanding the principles and functions of management is crucial for personal and professional competence.

CO4: Knowledge of charging methods is essential for personal and professional competence in managing library services.

PO6 :Self-directed and Life-long learning:

CO3: Understanding and applying principles and functions of management to librarianship is a lifelong learning process.

CO6: The ability to carry out various operations in library and information centers requires ongoing learning.

PO7 :Environment and Sustainability:

CO2: Efficient organization of library work and collection development involves considerations for sustainability.

CO5:Acquisition in the context of LIS involves obtaining resources, and this can include a focus on acquiring materials that support environmental awareness and sustainability

CO6:Library operations, when aligned with sustainability principles, can contribute to environmental conservation

PO8 :Critical Thinking and Problem solving:

CO2: Organizing library work and developing collections involve addressing various challenges such as budget constraints, user needs, and technological advancements. Students are expected to develop problem-solving skills in these areas.

CO6: Carrying out various operations in library and information centers requires both critical thinking to assess the effectiveness of current processes and problem-solving skills to address any inefficiencies or challenges encountered.

Paper Code   : UBLIS 113   **Title of Paper**   : Reference Service & Sources

Course Objectives (COs):

1. To familiarize students with nature & organization of reference service in libraries.
2. To develop the skills for providing reference and information services.
3. To understand the role of reference sources in reference service & sources
4. To educate and train students in understanding the nature, structure and uses of reference and information sources.
5. To familiarize about the primary sources of information and their content, characteristics etc.
6. To train the students in acquiring knowledge and skills about secondary sources of information, their use with required information searching skills
7. To provide in-depth knowledge about information services and products.

Course Outcomes (COs):

CO1. Will learn skills of organizing information and recorded knowledge

CO2. Will be to provide traditional and modern information and reference services for users

CO3. Develop the skills for providing reference and information

CO4. Understand the nature, structure and uses of reference and information sources

CO5. Identify the primary sources of information and their characteristics

CO6. Understand, identify and explore different types of information sources.

CO7. Acquire the understanding of reference services.

Total No Of Credits = 04		
UNIT 1	**Introduction to Reference Service** 1.1 Reference Service: Definition, Needs, Scope and Objectives. 1.2 Theories of Reference service: James I. Wyer and Samuel Rothstein 1.3 Functions of Reference service: by Dr. S.R.Ranganathan and Prof. A.K.Mukherjee	**(10L)**

UNIT 2	**Types of Reference Service**.
	2.1 Ready- Short and Long Range Reference service,
	      Reader Advisory and guiding services, Bibliographical and fact finding
	      assistance, Literature search, Document Delivery service, User education
	      and information literacy, Referral service, web based Information services.
	2.2 Reference service in different types of libraries : Public, Academic, National
	       and Special Libraries.
		(12L)

UNIT 3	**Organization & Management of Reference Sources** 3.1 Organization of Reference Sources. 3.2 Reference Librarian – Role , Functions 3.3 Referral Service: Concept & Importance	**(12L)**

UNIT 4	**Introduction to reference sources & their Evaluation**
	4.1 Evaluation of Different types of Reference Sources.
	4.2 Difference between general book and reference book.
	4.3 Electronic Information sources : e-documents & Data bases
	        (refer list of reference books)
	4.4 Study of Encyclopedia & Handbook : Concept,Defination,Online reference
	        sources
		(14L)

Class   : B.Lib.I.Sc.   (Sem-I)   **Subject   :** Library and Information Science
Course : Reference Service & Sources **Course Code   :** UBLIS 113
Weight age : 1= weak or relation, 2= moderate or partial relation, 3= strong or direct relation

Programme Outcomes (POs)								
Course Outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8
CO 1	3	2	3			2	1	
CO 2	2				3			
CO 3				3	3	3		2
CO 4		2		2				
CO 5	3		3	2				
CO 6								
CO 7			2	3	3		2	

Justification for the mapping

PO1: Research-Related Skills and Scientific temper:

CO1: This aligns with Research-Related Skills as it emphasizes the development of organizational skills necessary for effective research. The ability to organize information is crucial for conducting thorough research and contributing to the scientific knowledge base.

CO2: This supports Scientific Temper by recognizing the importance of both traditional and modern information sources.

CO5: Identifying primary sources is a key skill in conducting rigorous research. This CO directly aligns with Research-Related Skills by emphasizing the importance of primary sources, which are foundational to building scientific knowledge.

PO2: Effective Citizenship and Ethics:

CO1: Effective citizenship involves being informed and knowledgeable about various aspects of society.

CO4: Understanding the nature and structure of information sources contributes to ethical citizenship by promoting critical thinking

PO3: Social competence and communication skills:

CO2: Providing information services involves effective communication with users. Social competence is crucial in understanding users' inquiries, while communication skills are essential for delivering information in a manner that is understandable and helpful.

CO5:Social competence is necessary when interacting with users to identify their specific information needs. Communication skills are crucial in clarifying these needs and then identifying the most suitable and relevant information sources.

CO7: Acquiring an understanding of reference services requires both social competence and communication skills.

PO4 :Disciplinary Knowledge:

CO3: This CO is directly related to the development of skills within the disciplinary knowledge framework. Reference and information services are integral components of library and information science, and developing these skills contributes to a comprehensive understanding of the field.

CO4: Understanding the nature, structure, and uses of reference and information sources is foundational to disciplinary knowledge.

CO7: Acquiring an understanding of reference services is essential for disciplinary knowledge in library and information science. This CO suggests that students will grasp the principles, processes, and importance of reference services in providing effective access to information.

PO5 :Personal and professional competence:

CO2: This directly contributes to personal and professional competence by ensuring that individuals are equipped to provide both traditional and modern information services. Adapting to diverse information needs reflects a high level of competence in the profession.

CO3: This CO emphasizes the development of specific skills for providing reference and information services, aligning with the overarching goal of personal and professional competence in the field.

CO5: Identifying primary sources and understanding their characteristics is crucial for personal and professional competence.

CO7: Acquiring an understanding of reference services directly contributes to personal and professional competence. It ensures that professionals have the necessary knowledge and skills to provide effective reference services to users.

PO6 :Self-directed and Life-long learning:

CO1: Organizing information and recorded knowledge is a foundational skill for effective self-directed learning

CO3: Developing skills for providing reference and information services suggests that students are actively engaged in acquiring practical skills on their own, contributing to self-directed learning.

PO7 :Environment and Sustainability:

CO1: Understanding how to organize information is crucial in managing data related to environmental and sustainability initiatives.

CO7: Acquiring an understanding of reference services ensures that students can effectively guide others in accessing relevant information on environmental conservation and sustainability.

PO8 :Critical Thinking and Problem solving:

CO3: Developing skills in providing reference and information services requires critical thinking to assess the reliability and relevance of information sources. Problem-solving is necessary to address users' queries, especially when faced with complex or ambiguous information needs.

Paper Code   : UBLIS 114   **Title of Paper**   : Information Science

Course Objectives (COs):

1. To provide an overview of Information Science to the students.
2. To understand the concept of sources of the information, consolidating and repackaging
3. To familiarize the students with various Sources of Information & their Categorization.
4. To study the information needs of end users.
5. To Understand the concept of Information User
6. To Understand the Types of Needs, Use Studies & Approaches to Information.
7. To Understand the Barriers in free flow of Information

Course Outcomes (COs):

CO1: Posses the skills to respect engage and collaborate with a diverse community in order to advocate for and construct inclusive, meaningful, and participatory library services programs and resources

CO2: Acquaint with concept of information users.

CO3: To make them understand the concept and need of user study, information user.

CO4: the basics of information sources and services and how to critically analyse and evaluate the information sources;

CO5: Requirements and step-by-step process for handling their information queries;

CO6: the knowledge about various Internet resources in the areas of Science and Technology, Social Sciences and Humanities.

CO7: the process of retrieving databases and on-line /web information resources in network environment.

	Total No Of Credits = 04	
UNIT 1	**Information science** 1.1 Definition, need and Scope : Active & Passive 1.2 Documentation Work & Documentation Service: Characteristics, Steps, difference between Documentation Work & Documentation Service	**(12L)**
UNIT 2	**Sources of Information** 2.1 Documentary Sources & Their Categories: Primary, Secondary and Tertiary 2.2 Print and Non-Print Sources: Offline and Online , Documentary – Non Documentary	**(10L)**
UNIT 3	**Information & Information Needs of Users** 3.1 Information : Definition, Characteristics, Properties, Information as a Resource & Commodity 3.2 Information User and Types of Users: Concept, Types of Needs, Information Seeking Behavior of Users. 3.3 Techniques & Methods of Evaluation Information Needs : General & Special Methods: Behavior Studies, Use Studies & Approaches to Information.	**(14L)**
UNIT 4	**Information Transfer: Communication of Information** 4.1 Concept & Definition of communication 4.2 Methods and flow of Information 4.3 Barriers in free flow of Information	**(12L)**

Class   : B.Lib.I.Sc.   (Sem-I)   **Subject   :** Library and Information Science
Course : Information Science **Course Code :** UBLIS 114
Weight age : 1= weak or relation, 2= moderate or partial relation, 3= strong or direct relation

Programme Outcomes (POs)								
Course Outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8
CO 1		3		2	2			
CO 2	3		2	3				3
CO 3				2				3
CO 4	2			2	2	2		
CO 5			2	1			2	
CO6				1		3		3
CO 7		2		2			3	

Justification for the mapping

PO1: Research-Related Skills and Scientific temper:

CO2: Understanding the concept of information users is fundamental to research-related skills. It lays the groundwork for tailoring information services and resources to meet the specific needs of users, aligning with the principles of user-centered design in research.

CO4: Developing the ability to critically analyze and evaluate information sources is a key research skill.

PO2: Effective Citizenship and Ethics:

CO1: This CO directly aligns with the Effective Citizenship and Ethics by highlighting the importance of respecting and engaging with a diverse community. It emphasizes the ethical responsibility of library professionals to ensure inclusivity, meaning, and participation in the services they provide.

CO7: Understanding the process of retrieving information from databases and online resources in a network environment is essential for effective citizenship.

PO3: Social competence and communication skills:

CO2: Understanding the concept of information users requires students to develop empathy and social awareness. By familiarizing themselves with the needs and preferences of information users, students are better equipped to communicate effectively and provide relevant information services.

CO5: This outcome involves effective communication skills in understanding and addressing information queries. Social competence is demonstrated through the ability to interact with users, comprehend their queries, and provide relevant information in a clear and concise manner.

PO4 :Disciplinary Knowledge:

CO1 to CO7: the listed Course Outcomes are justified in the context of Disciplinary Knowledge in Library and Information Science. They cover essential aspects such as user understanding, information retrieval, and the ability to critically evaluate and provide inclusive services in a diverse community.

PO5 :Personal and professional competence:

CO1: This CO demonstrates the development of interpersonal and professional skills essential for a librarian.

CO4: Personal and professional competence in information science requires a solid foundation in understanding information sources and services.

PO6 :Self-directed and Life-long learning:

CO4: Critical analysis and evaluation are key components of self-directed learning. This CO encourages students to independently assess the reliability and relevance of information sources, fostering a habit of critical thinking and continuous learning.

CO6: Staying informed about various Internet resources aligns with the self-directed learning principle of seeking and acquiring knowledge

PO7 :Environment and Sustainability:

CO5: Efficiently handling information queries is important for providing timely and accurate information on environmental topics. The ability to guide users to relevant resources supports informed decision-making related to sustainability.

CO7: In a digital age, being proficient in retrieving online information is essential for accessing the latest research, news, and initiatives related to environmental and sustainability issues.

PO8 :Critical Thinking and Problem solving:

CO2 & CO3: understand the needs of information users and the importance of conducting user studies. This involves critically assessing user requirements and applying problem-solving skills to tailor information services to meet those needs effectively.

CO5: Problem-solving skills are highlighted in this CO as students need to understand the requirements of information queries and develop a step-by-step process to handle them. This involves identifying information needs, finding relevant resources, and effectively addressing user queries.

Paper Code: UBLIS 115

Title of Paper: Knowledge Organization: Classification –I   (Theory)

Course Objectives (COs):

1. To introduce various concepts, theories and principles in classification.
2. To understand the role of Library classification in knowledge organization.
3. To understand mode of formation of subjects in the universe of knowledge.
4. To understand the various classification schemes concepts such as DDC, CC and UDC to accurately classify the documents
5. To Understand the concept of library classification.
6. Comprehend various inner and outer forms of library classification.
7. To Understand various Normative Principles of Classification

Course Outcomes (COs):

CO1: Will be Useful to understand the basic functions and Practical work in Library Classification.

CO2: Will be Useful to understand principles of theory in Library Classification.

CO3: It will be learning to various classification Schemes.

CO4: Explain the nature and attributes of universe of knowledge

CO5: Elaborate meaning and types of subjects and modes of subject formation

CO6: Illustrate knowledge as mapped in different classification schemes

CO7: Express the meaning, purpose, functions, theories and canons of library classification

	Total No Of Credits = 04	
UNIT 1	**Classification: An Overview** 1.1 Definition, Need, Purpose 1.2 Inductive & deductive process 1.3 Rules for division 1.4 Rules of Porphyry	(10L)
UNIT 2	**Library Classification** 2.1 Concept, Meaning and Definitions 2.2 Need, Purpose and Features of Library Classification 2.3 Knowledge classification v/s book classification 2.4 Features of book classification 2.5 Knowledge Organization : concept, types: Vedic classification, Greek classification, Baconian classification 2.6 Notation: Meaning, Need, Types, Qualities and Mnemonics. 2.7 Call No: structure, various parts & their functions	(12L)
UNIT 3	**Universe of Knowledge** 3.1 Concept, Meaning and Definitions 3.2 Structure and attribute of Universe of knowledge 3.3 Types of Subjects: Basic, Compound & Complex. 3.4 Modes of formation of subjects 3.5 Universe of subject as mapped in different types of classification Schemes: CC, DDC, & UDC.	(14L)
UNIT 4	**Normative Principles of Classification & their application** 4.1 Brief introduction to Canons(Canons of characteristics and notation) 4.2 Principles of Richardson, Sayers, Browne, Bliss, Hulme and Ranganathan, 4.3 Canon for Three planes: Idea, Verbal and Notational. 4.4 APUPA arrangement.	(12L)

Class : B.Lib.I.Sc. (Sem-I) **Subject** : Library and Information Science
Course : Knowledge Organization: Classification –I (Theory)
Course Code : UBLIS 115
Weight age : 1= weak or relation, 2= moderate or partial relation, 3= strong or direct relation

Programme Outcomes (POs)								
Course Outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8
CO 1		2	3	2	3	3	2	
CO 2			3	2	3		2	3
CO 3					2	3		
CO 4	2	3	2	2	2			
CO 5	3				3	3		
CO 6		3			2			
CO 7					1			3

PO1: Research-Related Skills and Scientific temper:

CO4: Understanding the nature and attributes of the universe of knowledge requires research skills to explore the vastness of information.

CO5: Research-related skills are enhanced as students delve into the meaning and types of subjects, requiring them to analyze how subjects are formed. This involves a research-oriented exploration into the structure of knowledge.

PO2: Effective Citizenship and Ethics:

CO1: Knowledge of library classification is essential for effective citizenship as it empowers individuals to navigate and contribute to the wealth of information available.

CO4: Understanding the nature of knowledge encourages responsible citizenship by fostering an appreciation for diverse viewpoints. It promotes ethical behavior by encouraging individuals to seek a balanced and comprehensive understanding of various subjects, contributing to a well-informed and respectful society.

CO6: Understanding how knowledge is mapped in different classification schemes promotes effective citizenship by providing individuals with tools to critically analyze and interpret information

PO3: Social competence and communication skills:

CO1& CO2: Students engaging in practical work in library classification need to communicate effectively with peers and instructors. This involves collaboration, active listening, and articulating ideas during discussions and practical activities.

CO4: Explaining the nature and attributes of the universe of knowledge requires effective communication skills to convey complex concepts to diverse audiences.

PO4 :Disciplinary Knowledge:

CO1& CO2: CO1 emphasizes understanding basic functions and practical work in Library Classification, while CO2 focuses on grasping the principles of theory in Library Classification.

Both these outcomes contribute to a solid foundation in the fundamental concepts and theories within Library Science.

CO4: Understanding the nature and attributes of the universe of knowledge is fundamental to library science. This contributes to disciplinary knowledge by providing students with insights into the vastness and diversity of information, enabling them to appreciate the challenges and nuances of classifying information across different subjects.

PO5 :Personal and professional competence:

CO1 to CO7: these Course Outcomes directly align with the development of personal and professional competence in Library Science, providing a well-rounded education that combines theoretical understanding with practical skills.

PO6 :Self-directed and Life-long learning:

CO1: This outcome encourages self-directed learning by requiring students to grasp the fundamental functions and practical aspects of library classification.

CO3: This outcome contributes to life-long learning by exposing students to various classification schemes. As the landscape of knowledge organization evolves, individuals need to adapt and acquire knowledge about new schemes.

CO5: This outcome fosters self-directed learning by requiring students to delve into the meaning and types of subjects, as well as modes of subject formation.

PO7 :Environment and Sustainability:

CO1: Libraries play a crucial role in disseminating information related to environmental sustainability. A well-organized classification system enables efficient retrieval of resources, including those focused on environmental issues.

CO2: Principles of classification can be applied universally, including in the organization of environmental information.

PO8 :Critical Thinking and Problem solving:

CO2: Critical thinking is essential in grasping the theoretical principles of library classification. Students need to analyze these principles, understand their underlying concepts, and evaluate their applicability in different contexts. Problem-solving skills are developed when students apply these theoretical principles to real-world classification challenges.

CO7: Students may need to address practical issues related to the application of library classification theories, fostering problem-solving skills.

Paper Code: UBLIS 116   **Title of Paper :** Information Processing: Cataloguing - I (Theory)

Course Objectives (COs):

1. To understand the role of cataloguing for retrieving library materials.
2. To introduce the fundamentals, various concepts, theories and principles in Cataloguing
3. To Introduce the concept of Catalogue Entries .
4. Catalogue, list out and describe according to a consistent plan , the Print and non-print resources available in the library.
5. Direct the users to similar materials
6. Record the collection of the library
7. Indicate the location of the resources

Course Outcomes (COs):

CO1. How to develop knowledge organization systems;

CO2. The implications of knowledge organization systems and approaches;

CO3. The principles and theories of library cataloguing;

CO4. The cataloguing rules of CCC and AACR;

CO5. To study the various standards available and used in cataloguing.

CO6. Will be useful to understand the basic functions and practical work in library cataloguing.

CO7. Will be useful to understand principles of theory in library cataloguing.

CO8. It will be learning to various library cataloguing schemes.

Total No Of Credits = 04		
UNIT 1	**Parts of a book** 1.1 Reading a Book technically 1.2 Role of a cataloguer in library system	**(10L)**
UNIT 2	**Library Catalogue and Its Forms** 2.1 Library Catalogue**:** Definition, objectives, functions. 2.2 Library Catalogue and Bibliography, difference between library catalogue & bibliography 2.3 Kinds of catalogue: Outer (physical) forms of Library catalogue- Book, card, sheaf, printed, 2.4 Inner forms of Library catalogue - Classified, dictionary, alphabetico Classed catalogue.	**(12L)**
UNIT 3	**Catalogue Entries** 3.1 Kinds of Entries (AACRII-R & CCC) : Main, Added, Analytical, Reference Entry. 3.2 Filing of Entries : alphabetical, classified Alphabetization- letter by letter, word by word.	**(14L)**
UNIT 4	**Principles of Cataloguing** 4.1 Normative Principles of Cataloguing: Canons, Laws, Principles. 4.2 Recent Trends in Cataloguing : Current developments: Web OPACs ,Z39.50 and MARC-21	**(12L)**

Class **:** B.Lib.I.Sc. (Sem-I)   **Subject** **:** Library and Information Science
Course **:** Information Processing: Cataloguing - I (Theory)
Course Code **:** UBLIS 116
Weight age : 1= weak or relation, 2= moderate or partial relation, 3= strong or direct relation

Programme Outcomes (POs)								
Course Outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8
CO 1	3	3		2		3		
CO 2	2						2	
CO 3		3	3		3	2		3
CO 4						3		2
CO 5	3							2
CO 6		3	3		3			
CO 7								

Justification for the mapping

PO1: Research-Related Skills and Scientific temper:

CO1: Research in library science often involves the development and improvement of knowledge organization systems. This CO equips students with the skills to create effective systems for organizing and managing information, enhancing their research-related skills.

CO2: Mastery of the principles and theories of library cataloguing is essential for conducting scholarly research in library science. This CO contributes to the development of research-related skills by providing students with a theoretical foundation, fostering a scientific temper through the understanding of underlying principles in information organization.

CO5: This CO enhances research-related skills by familiarizing students with various cataloguing standards. It cultivates a scientific temper by emphasizing the importance of following standardized practices in information organization.

PO2: Effective Citizenship and Ethics:

CO1: Understanding how to develop knowledge organization systems is crucial for effective citizenship as it enhances an individual's ability to access and contribute to information.

CO3: Understanding the principles and theories of library cataloging is foundational for effective citizenship, as it empowers individuals to navigate information resources ethically.

CO6:Acquiring practical skills in library cataloging is essential for effective citizenship, as it empowers individuals to actively participate in and contribute to information systems.

PO3: Social competence and communication skills:

CO3: Learning the principles and theories of library cataloguing is fundamental for effective communication within the library community. Social competence is developed by understanding and applying these principles in a way that supports the needs of library users

CO6: Practical experience in library cataloguing enhances social competence by providing hands-on skills in managing information resources.

PO4 :Disciplinary Knowledge:

CO1: Understanding how to develop knowledge organization systems is fundamental to disciplinary knowledge in library and information science

PO5 :Personal and professional competence:

CO3: Familiarity with the principles and theories of library cataloging is foundational to personal competence in the library profession. It equips individuals with a theoretical framework for organizing information, enhancing their understanding of the profession.

CO6: Acquiring practical skills in library cataloging is directly aligned with professional competence. The ability to apply theoretical knowledge to real-world scenarios enhances efficiency and effectiveness in cataloging tasks, contributing to overall professional competency.

PO6 :Self-directed and Life-long learning:

CO1: This CO promotes self-directed learning by requiring students to develop knowledge organization systems.

CO3: To comprehend the principles and theories of library cataloguing, students need to engage in self-directed learning to delve into theoretical frameworks and historical developments.

CO4: Familiarity with cataloguing rules requires ongoing self-directed learning to adapt to changes and updates in standards like CCC and AACR.

PO7 :Environment and Sustainability:

CO2: Grasping the principles and theories of library cataloging enables professionals to design systems that prioritize sustainability.

PO8 :Critical Thinking and Problem solving:

CO4: Comparing and contrasting cataloging rules from different standards (CCC and AACR) involves critical thinking to understand the nuances and make informed decisions about their application.

CO5: Studying various cataloging standards requires critical thinking to assess their relevance, strengths, and weaknesses in different library settings.
CO6: Engaging in practical cataloging work requires problem-solving skills to address challenges that may arise during the cataloging process.

Paper Code   : UBLIS 117

Title of Paper: Information Communication Technologies (ICT) in Libraries (Theory)

Course Objectives (COs):

1. Students able to understand the ICT application in libraries for providing seamless access to knowledge.
2. Students able to design and develop the library management software for application in different Libraries.
3. To introduce the concept of Operating System & its functions.
4. To provide knowledge about basics of ICT.
5. To introduce students with network technology, library automation and software packages.
6. To make the students acquainted with the applications of computers in Libraries and Information Centers
7. To discuss library consortia in India, such as E-ShodhSindh, CSIR, and other e-resource Consortia.

Course Outcomes (COs):

CO1. We learn the skills of ICT application in Information environment including Network and Communication systems.

CO2. Familiar with Computer system including hardware and software.

CO3. Skillful use of Internet and its services.

CO4. To provide a foundational understanding of information communication technology (ICT) and its components and applications.

CO5. To explore the evolution and generations of computers, computer hardware components and software types.

CO6. To explain the meaning, purpose, planning, and steps involved in library automation**.**

CO.7 To introduce popular library software packages such as KOHA and SOUL and their features like OPAC, and Web OPAC etc**.**

Total No Of Credits = 04	
UNIT 1	**Information Communication Technology** (12L) 1.1 Introduction, Definition, Need, Scope, Function, Components and Objectives
UNIT 2	**computer Basics** (12L) 2.1 Introduction to Computer – Definition, Characteristics, Components & their Functions and types, Generations of Computer 2.2 Overview of Historical development of computer 2.3 Software – meaning, purposes, types-system & application software 2.4 Operating System: definition, function and types. Windows, Linux, MS Office (Word, Excel, Power Point and Access), Antivirus, DBMS (Database Management System): an introduction
UNIT 3	**Computer Application to Libraries & Information Centers** (12L) 3.1 Library Automation : Concept, Need and importance -In-house operations (acquisition, serials control, circulation, cataloguing) 3.2 Library software: Concept, need and application -Digitization –concept
UNIT 4	**Computer Networks** (12L) 4.1 Network : Types ,Topology & components 4.2 Internet : concept & services , standards,Protocols 4.2.1 Browsing and Searching the Internet 4.2.2 Use of General Search Engines & Meta Search Engine strategies

Class   : B.Lib.I.Sc.   (Sem-I)   **Subject**   : Library and Information Science

Course   : Information Communication Technologies (ICT) in Libraries (Theory)

Course Code   : UBLIS 117

Weight age : 1= weak or relation, 2= moderate or partial relation, 3= strong or direct relation

Programme Outcomes (POs)								
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	3	3	3	3	3	3	3
CO2			3	3	3	3	3	3
CO3	2	3	3	3	3	3		
CO4			2	2	2	3	3	
CO5			2	2	2			
CO6				2	3			
CO7	3			1	2			3

<center>Justification for the mapping</center>

PO1 : Research-Related Skills

CO1:Learning skills of ICT application in the information environment, including network and communication   systems, is vital for research-related skills. Researchers often need to access and share information through these systems, and understanding them is crucial for effective research.

CO3: Skillful use of the Internet and its services is a fundamental requirement for research. It provides access to a vast repository of information, academic databases, and research resources, which researchers heavily rely on for their work.

CO7: Introduction to popular library software packages such as KOHA and SOUL, along with their features like OPAC (Online Public Access Catalog) and Web OPAC, is directly related to research-related skills. Researchers can benefit from using these systems to locate and access research materials efficiently.

PO2 : Effective Citizenship and Ethics

CO1:Understanding network and communication systems in the context of ICT is essential for ensuring ethical behavior in an increasingly interconnected world. Students can learn about responsible use of these technologies and the ethical considerations related to data privacy, security, and online behavior.

CO3:The Internet is a powerful tool that can be used for both positive and negative purposes. Educating students about the responsible and ethical use of the internet can help promote good digital citizenship, reduce cyber bullying, and foster respectful and responsible online communication.

PO3 : Social competence

CO1& 2 : Proficiency in ICT applications, computer systems, and software can enhance students' ability to communicate and collaborate effectively in a digital environment. These skills are essential for working in modern social and professional settings where communication often occurs through digital means.

CO3,4 & 5 : A solid understanding of internet usage and ICT components can help students become more adept at sharing information and knowledge. In a social context, this can enable them to contribute to online discussions, disseminate information, and engage in knowledge-sharing platforms, enhancing their social competence.

PO4 : Disciplinary Knowledge

 All Course Outcomes are directly aligned with Program Outcomes related to disciplinary knowledge, ensuring that students in the field of ICT and Library Science acquire essential skills and understanding of core concepts and technologies in their domain of study.

PO5 : Personal and professional competence

 These all Course Outcomes (COs) are directly aligned with the development of personal and professional competence in the field of Information and Communication Technology. They equip students with the knowledge and skills required to excel in a technology-driven world and are particularly relevant for those pursuing careers in information management and related fields.

PO6 : Self-directed and Life-long learning

CO1 : This outcome enables students to develop practical skills in the application of ICT in an information environment. It promotes self-directed learning as students are encouraged to explore and adapt to the ever-evolving field of ICT.

CO2 :This outcome encourages students to stay updated with the latest technology trends, fostering a culture of life-long learning.

CO3 : This outcome empowers students to continuously improve their internet-related skills and adapt to new online services. Being adept at using the internet is essential for self-directed learning and staying current in the field.

CO4 : This CO sets the foundation for a comprehensive understanding of ICT. It motivates students to keep exploring new components and applications on their own, aligning with self-directed learning.

PO7 : Environment and Sustainability

CO1 : ICT skills can contribute to sustainability efforts by enabling efficient communication and data management, which reduces the need for physical resources, such as paper, and minimizes environmental impacts.

CO2 : Knowledge of computer systems can lead to the efficient use of resources through optimized hardware and software, contributing to sustainability by reducing energy consumption and electronic waste.

CO4 : A foundational understanding of ICT can lead to the development of eco-friendly solutions and technologies that promote environmental sustainability.

PO8 : Critical Thinking and Problem solving

CO1 : Critical thinking is required to understand how different ICT applications function within an information environment. Problem-solving skills are essential to troubleshoot issues that may arise when working with network and communication systems. Students need to analyze and find solutions to complex technical problems.

CO2 : Critical thinking is involved in understanding the intricate relationship between computer hardware and software. Problem-solving skills come into play when diagnosing and resolving issues related to computer systems, which require logical thinking and decision-making.

CO7 : Critical thinking is involved in assessing the features and capabilities of different library software packages. Problem-solving skills are required to determine the most suitable software for a specific library's needs and to troubleshoot any issues that may arise during software implementation.

References for UBLIS-111

1. Burahohm, Alka. Various aspects of librarianship and Information Science. New Delhi: Ess Ess, 2000
2. Chapman, Elizbeth A and Lyden, Frederick C. Advances in Librarianship. 24th Vol. San Diego: Academic Press, 2000
3. Graham P. Cornish ; Copvright : Interprethig the law for libraries. archives and Information services. Rev.3rd ed. London : Facet Publishing, 2001.
4. IFLA Standards for Library Services, 2nd Ed. Munich: Verlag, 1977
5. Khanna, J.K. Library and Society, Kurukshetra: Research Publisher, 1987
6. Kumar, P.S.G. Fundamentals of Information Science. Delhi: S.Chand, 1997
7. Kumar, P.S.G. Indian Library Chronology, Ed.2 Bombay: Allied 2000.
8. McGarry.K.J Changing Context of Information, 1993
9. Ranganathan, S.R. The Five Laws of Library Science, Ed. 2 Bangalore: Sarada Ranganathan Endowment for Library Science, 1999
10. Sahai, Srinath. Library and Community. New Delhi: Today & Tomorrow, 1992
11. Sandy Norman. Practical Copvright for information Professional. London : Faeet, 2001.
12. Sharma, Pandy.S.K Library and Society. Ed. 2 Delhi Ess Ess, 1992
13. Stella Pilling & Stephanie Kenna (Eds). Co-operation in action :collaboratise initiatives.in the World of Information.
14. Surendra Singh and Sonal Singh. Ed. Library, Information and Science and Society. New Delhi: Ess Ess, 2002
15. Vyas, S.D Library and society, Jaipur: Panchasheel.1993

References for UBLIS-112

1. Brophy, Peter and Courling Kote, Quality Management for Information and Library Managers. Bombay: Jaico, 1997
2. Bryson, J.O. Effective Library and Information. Bombay: Jaico, 1996
3. Evans, Edward g. Ed. Management Information Systems. New Delhi S. Chand & Co. 1986
4. Deshpande, N.J &Patil, S.K, Ed, University and College Librarianship in India in the 21st Century. Prof. S.G. Mahajan Felicitation Committiee , DLISc, University of Pune. 2004.
5. Katz, W.A Collection Development Selection of Materials for Libraries. New York; HRW. 1980
6. Krishna Kumar. Library Administration and Management. New Delhi: vikas, 1987
7. Kumar, P.S.G. Management of Library and Information Centres. New Delhi: B.R. Publishing Corporation. 2003
8. Martino, R.L. Information Management: Dynamics of Management Information Systems. New York. McHill, 1969
9. MeDick, Robert G. Et.al. Information Systems for Modern Management. New Delhi: Prentice Hall, 1992
10. Mittal, R.L Library Administration: Theory and Practice. Ed. 4 New Delhi, Metropolitan, 1984
11. Paliwal, P.K Compendium of Library Administration. New Delhi: Ess Ess, 2000
12. Parker, Charles and Café. Thomas. Management Information Systems: Strategy and Action. New York: McGraw Hill, 1993
13. Pearson, R.J Ed. Management Process: Selection of Reading for Librarians.Chicago:ALA, 1983
14. Stuart, Robert. D and Moran, Barbara B. Library and Information Centres Management. Colorado: Libraries Unlimited, 2004

References for UBLIS 113

1. Alan, Poulter, Growth Tsend and Goff Sargent: The Library and Information Professional's Guide to the WWW: London: Facet Publishing, 1999. Bangalore 2000 Crest, New Delhi

2. Beandiquee Marcelle: Bibliographic Services through the World. UNESCO, 1980
3. Bopp Richard and Linda Smith: Reference and Information Services.Libraries Unlimited, 2000
4. Chowdhary G.G and Chowdhary Sudatta : Searching CD-ROM and Online
   Information sources. London: Facet Publishing,2001
5.Chowdhary G.G and Chowdhary Sudatta. Information Sources and Searching on theWWW.
6. Chakraborti, A.K.:Reference Service,A.P.Public Library,1983
7. Chakraborti, M.L.: Bibliography: theory and practiceLondon: Facet Publishing, 2001
8. Gopinath, M.A: Information Sources and Communication Media. DRTC Annual Seminar,
   Bangalore,1984
9. Grogan, Dennis: Science & Technology: An Introduction to Literature London, Clive Bingley, 1982
10. Katz, W.A: Introduction to Reference Work, London, Butterworths, 2000, @V.
11. Krishanakumar: Reference Service, Ed.3 New Delhi, Vikas, 2003
12. Kumar (PSG). Ed. Indian Encyclopedia of Library and Information Science. New
    Delhi: S. Chand & Co. 2001
13. Olle James G.:Guide to Sources of Information,Gower Pub.Co.Ltd, 1984
14. Rao, I.K.R: Electronic Sources of Information, DRTC Annual Seminar, 2001
15. Sewasingh: Hand book of International Sources on Reference and Information.
    New Delhi: Crest Publication.2001
16. Sharma, J.S & Grover, D.R.: Reference services and sources of Information, New
    Delhi: Ess Ess, 1998
17. Subramanayam, K: Scientific and Technical Information Resources, New Delhi:Anmol, 2001
18. Teague, S Johnn: Microforms, Video and Electronics media Librarianship,
    London, Butterworths, 1985.
19. Walford, A. J: Guide to Reference Materials, London, Library Association, 1950, 3V
20. www.libraryspot.com
21. www.refdesk.com
22. www.infolibrarian.

References for UBLIS-114

1.Bose. H. Information Service : Principles and Practice. New Delhi; Sterling, 986.
2.Chakrborthy, A R and Chakraborthy. B. Indexing: Principles, processes and
   producers. Caleunqa ; World Press,1984
3. Coblans, Herbet. Librarianship and documentation. An International
4. Guha, B. Documentation and information. 2nd ed. Calcutta : world Press, 1983.
5. Husain, Shabahat:Library Classification: facets and analyses .New Delhi.Tata
   McGraw Hill Pub.Co.Ltd.,
6. Kawatra. P. S. Fundamentals of docoumentation with special reference to India.
   New Delhi. : Stering ,1982
7. International and National Library and Information Services : A review of some
    recent developments, 1970-80. Oxford. Pergamon Press,1982.
8. Rajan, TN. Indexing Techniqnes. Calcutta. : IALIC,1981.
9. Setence, White Plams. N.Y.Knowledge Industry, 1985
10. Satyanarayana, N.R and Satyanarayana,.. Problems in Information Science Rev. ed , 1996
11. Varma. AK. Trends in subject indexing. Delhi : Mittal,1984.

References for UBLIS-115

1. Dhyani, Pushpa, Library Classification: theory and practice. New Delhi: Vishwa Prakashan, 1998
2. Krishan Kumar. Theory of Library Classification, Ed.2 New Delhi, Vikas, 1980
3. PSG, Kumar. Knowledge Organisation, Information Processing and Retrieval: Theory. Delhi: BR, 2003
4. Ramalingam, MS. Library Cataloguing and Classification Systems. Delhi: Kalpaz, 2000
5. Ranganathan, SR. Colon Classification, 6th ed. Banagalore: Sarada Ranganathan
   Endowment for Library Science, 1960
6. Ranganathan, SR: Prolegomena to Library Classification, Ed2, London, LA 1957 & 1965
7.Sayers Berwick ,WC Introduction to Library Classification. London, AndraDautch, 1950

References for UBLIS-116

1. Anglo American Cataloguing Rules, 2nd Edi Rev. New Delhi, Oxford, 1988
2. Barbara, M Westby. Ed. Sears List of subject Headings, New York. HW. Wilson, 1977
3. Fritz, Deborah, A. Cataloguing with AACR2 and US-MARC Records. Chicago ACA, 1998
4. Gernert Leigh: A Textbook of cataloguing New Delhi .Dominant Publishers, 2003
5.Holled Robert P.: Subject Control in Online Catalog.New York.Howarth Press,1989.
6. Malavya V.C.: Multimedia library and online cataloguing, New Delhi 2004.
7. Mahajan, S.G. Granthalayin Talikikaran: Pratyakshik, Vol.1 CCC Pune, Suvichar
   Prakashan, 1974; vol.2 Dictionary Catalogue (AACR) Pune, G.Y.Rane Prakashan, 1979.
8. Maxwell, Robert and Maxwell, Margaret F. Maxwell's handbook of AACR-2R: Explaining and
   illustrating the Anglo American Cataloguing Rules and the 1993 amendments. Chicago: ACA, 1997
9. Ramalingam, MS. Library Cataloguing and Classification Systems. Delhi: Kalpaz, 2000
10. Ramalingan M.S. : Library Cataloguing and Classifcation Systems, Delhi 2003.
11. Ranganathan, SR. Library Catalogue: Fundamentals and Procedures, Madras, LA, 1950
12. Ranganathan, SR. Heading and Canons. Madras, S Vishwanathan, 1955
13. Ranganathan, SR :Classified Cataloguing Code. Madras, UBSPD, 1988.
14. Sengupta, Benoyendra, Cataloguing: Its theory and practice. Edn 3. Calcutta, World Press, 1980
15. Singh S.N. and Prasad H.N.: Cataloguing Manual: AACR II, New Delhi.BR Pub.1985
16. Varma A.K.:Classified Catalogue Code: entries and procedure. Criterion Publication, 1988
17. Vishwanathan, C.G Cataloguing: Theory and Practice. Edn.4 New Delhi, Today and Tomorrow, 1980

References for UBLIS-117

1. Arvind Kumar. Ed. Information Technology for all (2Vol). New Delhi, Anmol, 2006
2. Bansal, S.K. Information Technology and Globalisation, New Delhi: A.P.H. Publishing Corporation,
   2005
3. Basandra, S.K: Computers Today, New Delhi: Galgotia, 2002
4. Decson, Eric. Managing with Information Technology, Great Britan, Kogan page Ltd.2000
5. Forrester. W.H and Rowlands, J.L: The Online searcher's Companion London,
   Library Association, 2002
6. Haravu, L.J.: Library Automation: Design, Principles and Practice New Delhi:
   Allied Publishers, 2004
7. Kumar, P.S.G.: Information Technology: Basics, New Delhi: B.R. Publishing Corporation,
8. Hunter & Shelly: Computer and Common sense, New Delhi, Prentice Hall, 2002
9. Kashyap, M.M: Database Systems, New Delhi, Vikas, 2003
10. Phadke D.N.:Granthalaya Sanganikaran aani Aadhunikaran(5th ed).Pune:
    Universal Prakashan,2012
11. Rao I.K.Ravichandra: Library Automation.New Delhi: Wiley Eastern Ltd., 1990.
12. Rowley, Jennifer: Information Systems, Ed.2 London, Clive Bingley, 2001
13. Rowley, Jennifer: The Electronic Library London: Lib, Association Publishing, 2001
14. Satyanaranyana, R. Information Technology and its facets, New Delhi, Manak.2005
15. Singh Gurderv: Introduction to Computer for Professional, ESS ESS New Delhi,2007
16. Suders, R: Computers Today Ed.2, John Wiley, 2000
17. Taxali Ravikant: PC Software Made Easy, New Delhi, 2006
18.Haravu, L.J.: Library Automation: Design, Principles and Practice New Delhi:
   Allied Publishers, 2004