

Discipline-specific competencies

*These competencies are those knowledge and skill sets that are specific to a particular discipline, in this case Library and Information Science. This category of competencies may also be referred to as professional competencies, disciplinary competencies and sometimes, as jurisdictional competencies. They are essential **discipline-specific** competencies, which together with required **generic** competencies and **personal attributes** (covered in the next two sections of this index) enable the provision of effective and efficient library and information services (LIS) in the higher education sector in South Africa in the digital age.*

*For reasons already explained in the **Introduction and background**, this section of the index is provided in greater detail than the two sections which follow. Hence, where necessary and for clarification purposes, definitions are built into (embedded in) the competency narratives and in some instances, where required, explanations are provided in italics. Examples of tools and software applications are also provided, for purposes of enhancing clarity.*

It should be noted that some of the competencies outlined in this section of the index may involve inter-departmental efforts within an academic library and are not necessarily confined to a single section of the library. For example, management of the library's digital resources would involve the cataloguing, systems and (information technology) IT, preservation and digitisation sections.

The competencies relating to library ICTs are provided in more detail than perhaps any other knowledge and skill set in the index. This is a reflection of the centre stage ICTs have taken in academic library services particularly, to the extent that they have extended traditional LIS services into new and innovative areas of service delivery. The ubiquitous requirement for advanced technology knowledge and skills in the 21st century academic library is reflected in the research from which this index emanates as well as in the literature generally. It is for this reason that the compiler of the index categorises LIS-related technology competencies as discipline-specific – her research (Raju 2017a – in

press) recommends that the LIS discipline should “stake an intellectual claim on this technology-driven extension of its disciplinary domain” and that “emerging library IT knowledge and skill sets identified in this study and in many others ...[should be] pedagogically embedded in LIS curriculum design and development; that is, not as stand-alone or IT serviced courses but embedded in a curriculum located firmly within LIS epistemology and demonstrating the intellectual claim on this broadened disciplinary space resulting from a natural evolution of the LIS discipline in response to a technology-driven information environment”. Her findings advise that “LIS educators [and practitioners] may work with cognate partners [such as in IT], as long as it is the LIS discipline that assumes hegemony in the stewardship of this technology-driven extension of traditional LIS disciplinary space” (Raju 2017a – in press). Hence it is critical to locate library ICT competencies in the discipline-specific category of this index.

Relevant experience

- In a higher education library environment
- In a research environment (e.g. Human Sciences Research Council library, Medical Research Council library, etc.)
- In a relevant aspect of an academic library service (e.g. cataloguing experience, liaison librarian experience, systems librarian experience, etc.).

Relevant qualification

- In Library and/or Information Science/Studies at a relevant NQF (National Qualifications Framework) level
- LIS related specialist qualification (e.g. Computer Science, Information Technology, Information Systems)
- LIS service related subject knowledge e.g. undergraduate degree/major or postgraduate qualification in History, Music, Biology, Law, etc.

Professional foundation

- Understand the broad context of the library and information environment
- Know the history of libraries and the evolution of information resources
- Understand the theory of Library and Information Science and related disciplines
- Understand the contexts in which information originates and is described, stored, organised, retrieved, disseminated, adapted and used
- Understand the ethical, legal and policy issues that impact on the LIS sector in South Africa

- Understand the past, present and future trends of the LIS profession.

Active LIS [library and information services] professional involvement

- Know and understand the breadth and identity of the LIS profession, its role in and contribution to society; and be able to articulate this to users, to other relevant university constituencies and to the general public
- Participate in LIS and LIS related conferences, workshops, seminars, webinars and other engagement forums for purposes of personal continuing professional development and to contribute to that of others in the LIS sector
- Serve on professional body (e.g. Library and Information Association of South Africa (LIASA)) and related structures (e.g. Higher Education Libraries Interest Group or ICT in Libraries Interest Group) for advancement of the profession
- Assume leadership roles in LIS professional body and related structures (e.g. Executive Committee of LIASA or Chairperson of the Academic Libraries Section of the African Library and Information Associations and Institutions [AfLIA]).

Metadata creation and management

- Understand the structure and workflows of metadata creation within the library services platform
- Understand and implement descriptive metadata creation, and subject analysis of content for assigning classification numbers, subject headings, index terms and other subject descriptors towards the organisation and retrieval of information of all types (including research data)
- Understand and apply internationally recognised standards (e.g. Resource Description and Access (RDA), Machine-Readable Cataloguing (MARC), Dublin Core, Dewey Decimal Classification, Library of Congress Subject Headings, Medical Subject Headings, etc.) to organise print and digital information resources for in-person or remote accessing from electronic library catalogues, institutional repositories and other database formats
- Maintain authority control and provide necessary cross-referencing within an information retrieval system e.g. a library catalogue
- Pursue knowledge to identify and learn new tools and technical skills in metadata creation and management to promote discoverability and enhance access to the library's information resources in all formats and means of presentation
- Understand the broader context (national and international) within which bibliographic control of information resources in all formats, function
- Stay abreast of current trends and innovations in library and information service (LIS) resource management, identify how such developments may impact on bibliographic/metadata management and how they may be adopted to the benefit of the LIS service.

Library ICTs [information and communication technologies] and systems operations

- Assess technology trends impacting academic library services and advise relevant library and related stakeholders accordingly
- Demonstrate knowledge and understanding of the library services platform being used (e.g. SirsiDynix Symphony, Unicorn System, Aleph, Millennium/Sierra, Alma)
 - Understand the workflows of the library services platform (LSP)
 - Undertake periodic evaluations of the LSP and communicate with the vendor on services and any problems
 - Understand operating and database systems used by the LSP
 - Demonstrate understanding of the functions of the software used by the LSP
- Provide library ICT training and support for staff in the use of hardware, software and networks used in the library
- Install, configure and maintain computer hardware (e.g. (personal computers (PCs), Macs, tablets) and peripheral devices (e.g. printers and scanners)
 - Understand functions of computer hardware, internal components, peripherals and external storage drives
 - Perform troubleshooting for computer hardware and peripherals
 - Install and support audio and video equipment
- Ensure that required software is properly installed, licensed and ready to run in various sections of the library
 - Evaluate and select appropriate software applications for both library staff and users
 - Recognise when Software as a Service (SaaS – software distribution model in which software is licensed on a subscription basis and is centrally/cloud hosted) is a more appropriate solution than locally installed software; and develop and maintain effective working relationships with SaaS providers
 - Identify and communicate problems with software applications to relevant library and other staff
 - Understand and manage licensing for all library software applications
 - Understand and provide advice to library staff on open source software options
- Ensure that the library's network (both cabled and wireless) is running smoothly for optimal connectivity
 - Install, configure and maintain the library's local area networks
 - Support the library's telecommunications and wide area networks
 - Assess the library's Internet connectivity needs and liaise accordingly with relevant on-campus agencies for long-term sustainability of high-speed connectivity that meets these needs
 - Understand Internet protocol (IP) authentication for secure network access

- Understand the principles of identity and access management and integrate the library's need for authentication and authorisation with the university's identity management and access system
- Understand the infrastructure that supports the library's telephony and wide area networks
- Understand the library's site-specific telecommunication needs and advocate accordingly for increased bandwidth when needed
- Install, configure and maintain the library's wireless networks
- Provide support for wireless printing by library patrons using their own devices
- Troubleshoot problems with the library's networks to maintain optimal connectivity for staff and users of the library
- Employ practices in network security for maximum protection of the library systems, and staff and user information
- Configure and maintain the variety of servers relevant to the needs of the library (e.g. email, Web, file, print and database servers)
 - Understand the protocols of the various servers
 - Ensure server security
 - Consider the benefits of cloud-based/remote solutions to storage, hosting, etc. as opposed to locally-based solutions
- Install, configure, maintain and troubleshoot operating systems on library computers, including open source and mobile systems
- Install, configure, maintain and troubleshoot the library's public access computers
- Manage and maintain the library's collection of digital resources
 - Apply standards and best practices to ensure effective organisation, access, preservation and delivery of digital content
 - Understand and apply appropriate descriptive, structural and administrative metadata schemas (e.g. Dublin Core Metadata Element Set, Visual Resources Association (VRA) Core Categories, Encoded Archival Description (EAD)) and standards for expressing and storing data about information resources
 - Demonstrate knowledge of multimedia file formats, tools and methods for digital file format conversion, including knowledge of support for these formats via Web browsers on different platforms
 - Possess a working knowledge of best practices, industry standards and services for digitising text, image, audio and video media.
 - Demonstrate knowledge of content management and preservation systems, including open source content management software applications (e.g. Islandora)
 - Contribute to and apply library policies relating to digital resource holdings in areas such as collection of digital resources, digital preservation, rights management, emergency/disaster preparedness and recovery plans, etc.
 - Work in collaboration with institutional content enterprise systems, Web services, e-resource management, etc.

- Demonstrate a working knowledge of programming languages (and related standards and protocols) relevant to digital resources
 - Extensible Markup Language (XML), Extensible Stylesheet Language Transformations (XSLT) and XML Schema
 - XML-based application programming interfaces (APIs) for integrating systems and services
 - Web-based publishing tools and coding
 - Unix and relational database systems
 - Dublin Core, METS (Metadata Encoding and Transmission Standard) and OAI-PMH (Open Archives Initiative - Protocol for Metadata Harvesting)
 - System monitoring, testing and debugging
 - Semantic Web concepts (e.g. Linked Data)
 - Scripting languages (e.g. Python, Ruby, Perl) for processing textual data and managing system resources
- Develop interface services for integrated access to the library's digital resources
 - Drive the integration of discovery and delivery interface systems with the library services platform and other library digital information resources
 - Drive the integration of library digital resources with other systems in use in the university e.g. institutional website, learning management system (LMS), geospatial information system (GIS), etc.
- Demonstrate efforts to strengthen the library's digital resource systems and services
 - Manage a digital asset management infrastructure that supports access to digital content
 - Select and implement systems that are standards-based and that interoperate with the library's existing bibliographic systems as well as with emerging digital storage products and services e.g. cloud-based digital storage
 - Engage in ongoing re-designing of user interfaces based on the generation of objective data for evaluation purposes
 - Remain abreast of new developments in digital library systems and services (e.g. in metadata management, repository software, harvesting protocols, cloud hosted digital services, etc.)
- Evaluate, select, adapt and integrate social media, collaborative and mobile technologies and applications into the library's technology planning programme.

Information retrieval

- Locate and call up information from an information store (that is, retrieve required information using print or digital information resources)

- Demonstrate advanced information searching and retrieval skills using a variety of online or offline information resources
- Conduct a pre-enquiry interview on the basis of which to identify relevant information resources and construct a search strategy in response to a user's enquiry
- Understand and perform effective search queries using Boolean logic, where necessary, and multiple resources and search strategies
- Know of and be able to use relevant databases (e.g. EBSCOhost, ProQuest, JSTOR, ScienceDirect), search engines (e.g. Google, Google Scholar and other information gateways (e.g. subject portals as gateways to information in a particular field of study) - in order to guide users with scholarly enquiries
- Know how to navigate (methods/process of searching) online databases and the Web
- Synthesise search results from multiple information resources and evaluate for reliability, accuracy, currency and other quality related criteria.

Research support

- Understand the institutional and macro research landscape, particularly policies, funding structures and other services relating to knowledge production
- Understand the research needs of academics, researchers, postgraduate students and other user groups requiring research support
- Understand the knowledge structures of the particular discipline and its changing patterns of scholarly communication, including open scholarship
- Know and understand the research life cycle
- Know and understand the research proposal structure
- Know and understand research approaches, designs and methods (quantitative, qualitative and mixed)
- Know and understand literature reviewing
- Know and understand systematic review of literature as a research methodology
- Know and understand research data management (RDM) (e.g. policies, mandates, frameworks) as well as practise RDM (e.g. evaluation of data, ingesting, preservation, curation, sharing, re-use, RDM planning, policy development)
- Provide bibliometrics (quantitative analysis of citations and content of scholarly literature) services to ascertain research impact of published work as required by researchers for grant proposals, research rating applications, performance reviews, etc.
- Provide altmetrics (analysis incorporating social media, news outlets and scholarly commentary) services to supplement traditional journal metrics in reflecting research impact
- Provide research landscape analysis services using research evaluation tools (e.g. *SciVal*, *Web of Science*) to identify the following for use by researchers: disciplinary experts, research areas, potential collaborators, supervisors, publishing avenues, funding sources, etc.

- Know and be skilled in the use of referencing management tools (e.g. *RefWorks*, *Endnote*, *Mendeley*, *Zotero*)
- Know and understand plagiarism and its implications in research as well as plagiarism check software (e.g. *Turnitin*, *iThenticate*)
- Know and understand research ethics and their role in scholarship
- Know and understand intellectual property (IP) and copyright legislation as these pertain to knowledge production
- Build strong relationships with researchers and other campus professionals such as those in Information Technology (IT) and in the Research Office for collaborative initiatives in the promotion of research
- Know and understand computer software applications (e.g. *Excel*, *SPSS*, *NVivo*, *Atlas.ti*, *Provalis QDA Miner*) for data analysis, text mining and other research related activities.

Management of library and information services

- Understand and articulate to library staff and university constituencies how the library and information service aligns itself to the mission and vision of the parent organisation
- Undertake ongoing strategic planning for the library
 - Align strategic plans to the broader mission and vision of the parent organisation (the university) and to a 21st century library and information environment
 - Create strategic goals, objectives, actions and activities that reflect analysis of needs of user communities
 - Involve relevant stakeholder groups in developing and refining strategic plans
 - Ensure that strategic goals and objectives align with daily decisions and operations
 - Adjust strategic plans, as needed, in response to ongoing evaluation to ascertain success of strategic plans in meeting its objectives
- Understand the daily administration and supervisory management of the library
- Know, understand and apply service principles, theories, techniques and innovations for efficient delivery of LIS services to user communities
- Manage the library's physical environment (including physical facilities such as furniture, shelves, digital assets, aesthetic décor, cleaning, lighting and ventilation, air-conditioning, etc.), health and safety, and space planning, including the needs of those with disabilities
- Manage the library's human resources
 - Undertake effective recruitment and selection, taking into consideration organisational employment policies and procedures as well as national employment laws and regulations
 - Demonstrate leadership (foster a collaborative environment based on a shared vision, clear communication, open and transparent approach, being supportive and encouraging, valuing diversity, recognising achievements,

- etc.) to empower and inspire LIS staff to deliver effective and high-quality service
 - Promote staff training and development through strategies and initiatives that encourage both formal and informal learning processes in the LIS workplace
 - Create career development plans for library staff and support career development opportunities for staff to acquire necessary competencies to advance their career development plans
 - Establish effective strategies for performance management with clear performance expectations in an environment with resources and opportunities for continuous growth and learning based on regular and constructive feedback on performance
 - Understand and apply legal standards and requirements for performance management
- Embrace organisational change, and support and encourage stakeholders to recognise the benefits of change to the LIS service as a whole
- Evaluate performance of LIS services
 - Apply appropriate methods to continually evaluate efficiency and effectiveness of services in order to improve them (e.g. LibQUAL surveys)
 - Understand and use data collection (quantitative, qualitative and mixed), research and analysis methods to demonstrate the value of the library to organisational decision-makers
 - Use outcomes-based evaluations to measure the impact of programmes and services.

Information literacy training

- Plan and manage (strategic location, budgeting, marketing and promotion, collaboration, space and technology resources, trainers, etc.) information literacy (IL) training programmes for specific user groups to meet the lifelong learning skill of being able to recognise an information need, locate the required information, evaluate it and use the retrieved information effectively
 - Collaborate with faculty academic colleagues to integrate appropriate information literacy concepts and competencies into subject course content and assessment tasks
- Design (for face-to-face or online environments) IL training curricula targeting digital age information literacy skills to meet lifelong learning needs of various categories of users, including undergraduate and postgraduate students and those with disabilities
 - Identify outcomes for specific IL training programmes and build a curriculum to meet these outcomes
 - Understand and apply basic instructional design principles in building curriculum content for IL training programmes
 - Understand and apply learning theory and learning styles to the instructional design of IL training programmes

- Deliver an IL training programme (online or face-to-face) to meet its outcomes
 - Select appropriate presentation methods for delivery of IL training based on understanding of teaching methods
 - Produce a lesson plan for the training session, including selection and preparation of learning materials
 - Prepare the learning environment, including technology set up (e.g. computer laboratory)
 - Employ effective training techniques (e.g. clear, structured and logical presentation that encourages engagement from learners, accommodates different learning styles, and, is sensitive to input from learners, to their needs and abilities and to classroom diversity)
 - Develop assessment methods, undertake assessment of IL learning activities and provide feedback to learners
- Evaluate IL training programmes using appropriate evaluation methods and use results of the evaluation to improve the planning, design and delivery of IL training programmes
- Provide informal IL instruction to users as the need arises
 - Demonstrate willingness to assist at the level of need
 - Demonstrate patience and empathy for learner needs, abilities and disabilities
 - Assist library users with searching the library's online public access catalogue (OPAC) and with accessing and navigating the Internet
 - Help library users to develop the ability to recognise an information need, locate information to meet this need and to evaluate the information retrieved for purposes required
 - Respond to questions from users about use of their own devices (laptops, tablets, e-readers, smartphones, etc.) in the library or remotely to access library resources and services
 - Recognise a user's need for formal IL training and identify appropriate opportunities for the user in the library's formal IL training offerings.

Scholarly communication and open access

- Know and understand current trends, best practices and models in the creation, publication, dissemination and preservation for future use of research writings and other scholarly output (scholarly communication), both nationally and internationally
- Know and understand formal means of scholarly communication (e.g. peer-reviewed journals) as well as informal channels (e.g. electronic listservs, social media blogs and tweets, etc.)
- Understand the knowledge structures of the particular discipline and its changing patterns of scholarly communication (working knowledge of a subject)
- Know and understand traditional (subscription-based and governed by commercial entities or professional societies) and open access (free online availability of research

output) models of publishing, intellectual property issues and general economics of publishing

- Understand current trends and issues in open access and scholarly communication (e.g. that relating to digital repositories, open publishing of journals and books, open educational resources (OERs), open data, open science, etc.)
- Know open access policies and related requirements
- Know discovery tools used for discovering and accessing information
- Understand data curation (that is, the ongoing management of data throughout its lifecycle, from its creation and subsequent usefulness to science and education, to the time it is archived for posterity or becomes obsolete), including preservation practices for such data
- Know and understand scholarly publishing services in order for the library to provide such services for scholarly output and research data
 - Know commercial and open access publishing platforms
 - Know publishing workflows, operational models and editorial processes
 - Know publishing standards: Digital Object Identifier (DOI), International Standard Serial Number (ISSN), International Standard Book Number (ISBN), persistent uniform resource locator (PURL) and citation options (e.g. OpenURL, Corporation for National Research Initiatives (CNRI) Handle)
 - Know funder mandates and requirements (e.g. a research funding body (such as the National Research Foundation (SA) or the Wellcome Trust (UK) requiring a funded researcher to make published peer-reviewed research output freely available)
 - Know metadata standards (e.g. MARC, Dublin Core, etc.) used to describe information sources and their content for retrieval purposes
 - Understand licensing issues related to open access publishing (e.g. Creative Commons (CC) licenses)
 - Use open access publishing software (e.g. Open Journal System (OJS) or Open Monograph Press (OMP)) for journal and book publishing)
 - Work with IT professionals to develop capacity and IT infrastructure for storage, metadata management, access and long-term preservation of published content
- Know and understand open repository services in order to collect, manage and disseminate digital output generated within the university community
 - Know repository software (e.g. Dspace)
 - Know metadata standards (e.g. MARC, Dublin Core, etc.) used to describe information sources and their content for retrieval purposes
 - Know data formats, database design, data management and data manipulation tools relating to the storage, preservation and retrieval of information from digital repositories
 - Manage repository platform and update software when required
 - Support researchers with depositing of research outputs into the repositories, that is, with self-archiving

- Engage publishers on matters relating to archiving policies (e.g. embargo periods before an item may be available freely via the repository, article processing charges where required, etc.)
- Understand copyright and licensing issues as they relate to scholarly content
- Advise academic staff, researchers and postgraduate students on open access publishing and copyright using knowledge of both traditional copyright and publishing and, Creative Commons (CC) and other open access licenses and publishing models
- Raise awareness of open access, especially issues around open access policy adherence, compliance with funders' mandates and benefits for the end-user
- Assess quality of scholarly resources using traditional bibliometrics as well as new and emerging metrics
 - Know and understand bibliometrics and altmetrics theory and practice
 - Know institutional promotion policies and criteria relating to academics' scholarly output
 - Know institutional interests in scholarly output as this relates to institutional ranking (nationally, continentally and internationally)
 - Support academic staff, researchers and postgraduate students in assessing the quality of journals and other scholarly sources for publication and other purposes
 - Advise the library's acquisitions department on quality indicators to be used in the selection of scholarly resources.

Information management *is a generic competency that refers collectively to expert oversight of the acquisition, organisation, storage, security, retrieval and dissemination of information and information resources in all formats and includes technical infrastructure considerations for the management of these various processes and activities. Various entries in this section (that is, **Discipline-specific competencies**) of the LIS professional competency index cover aspects of this generic and all-encompassing competency. Hence this obviates the need to unpack this as a single, stand-alone competency.*

Collection development and management

- Build and maintain a collection of information resources in a variety of formats (print, digital and other) based on the information needs of the user communities being served by a higher education library
- Apply selection and evaluation criteria to build a collection of quality and relevant resources
 - Understand the acquisitions and collection development processes and policies of the library
 - Apply objective standards to evaluate the content of information resources for authenticity, accuracy, reliability, authority, currency and other relevant selection and evaluation criteria

- Follow trends in traditional and digital publishing to build a collection that is diverse, current and relevant to the mission of the library and to the needs of its user communities
- Combine knowledge of user communities and consultation with a variety of review sources to make informed judgement on the selection of information resources
- Research, customise and roll-out systems and services to provide effective access to the library's information resources in all formats
 - Identify and provide an appropriate mix of technologies, formats and delivery modes to meet the information needs of a diversity of higher education information users
 - Collaborate with IT and other relevant departments to research, develop, assess and implement new systems, services and emerging technologies for enhanced delivery of information resources to meet users' needs
 - Collaborate with other libraries or organisations to share information resources to promote wider access to information
- Develop collection develop policies for the library
 - Develop policies and procedures for identifying and selecting information resources in all formats
 - Possess current knowledge of legislation governing access to information resources
 - Develop policies for weeding the collection, managing donations and gifts to the library, and disposing of library materials that are no longer required
- Conduct inventory checks and analyses of usage of library materials, where relevant, for purposes of repair and maintenance, duplication, replacement, de-selection, etc.
- Recognise items of historic value for the special and rare collections of the library
- Develop and be able to implement appropriate emergency and disaster preparedness and recovery plans for library collections, including digital resources.

Digitisation and preservation

- Develop and implement policies and procedures for digitisation of library resources for access and preservation
 - Understand and articulate the value of increasing accessibility of library materials, especially those of rare and historic nature, via digitisation
 - Understand the preservation role of digitisation of such library materials
 - Know and understand the theory, best practices, standards, processes and procedures relating to digital resource acquisition (of born-digital materials), creation (from physical artefacts e.g. printed text, images, sound – that is, digitisation/preservation reformatting), management, storage and preservation
 - Source, acquire and maintain digitisation hardware and software and/or identify vendors for outsourcing digitisation and preservation functions

- Manage digitisation projects (scoping, costing, collaborating with other departments, protection of intellectual property, managing the timeline, promoting, delivering the project)
- Promote greater visibility of digital collections by making digital content discoverable via a variety of online channels
- Use appropriate techniques for the preservation and conservation of library materials
 - Understand preservation and conservation issues, including those relating to archival preservation, refreshing, integrity and migration in digital preservation, and appropriate handling of physical materials
 - Apply suitable methods and techniques for storage and conservation of library materials, including archival storage of digital content
 - Timeously apply effective techniques for the repair and preservation of all formats of library materials
 - Understand the impact of environmental conditions on the physical state of library materials and accordingly provide guidance for monitoring and responding to these conditions
 - Understand and apply appropriate standards in respect of digitisation formats and media
 - Understand and abide by the library's collection development policies
 - Understand and abide by the library's policies for emergency and disaster preparedness and recovery of information resources, including digital resources
- Identify resources for, select and maintain the library's special and rare collections
 - Demonstrate an expansive knowledge of the history of the evolution of the book, including rare books and manuscripts
 - Identify collections of historic and significant value to the parent institution (e.g. the university) and articulate the value of building and maintaining such special collections
 - Apply special requirements for storage (physical and digital) of materials which are of important historical value
 - Develop policies and procedures to ensure security of rare and valuable library materials
 - Develop policy and procedures for backup and restore operations for digital archives.

Curation of digital content/research data

- Understand and carry out a range of activities delineated in the [Digital Curation Lifecycle Model](#) (which includes the creation or selection, acquisition, ingestion and archiving, management, maintenance [to prevent digital obsolescence], representation [metadata], discoverability and access, enhancing/adding value, preservation and portability of digital content [including research data]) for present and future use in research and scholarship

- Contextualise and present digital resources in a manner that contributes to the ethical construction of knowledge within and between artefacts and collections
- Identify, use and specify software tools and applications to support digital curation activities in a context of information technology infrastructure deployed to support digital/research data curation
- Identify and use resources to stay abreast of trends, technologies and practices relating to the field of digital curation
- Plan, co-ordinate, implement and evaluate digital curation projects and services
- Identify, understand and build services in response to the university's or the library's user communities' digital curation needs
- Engage in high-level, abstract and critical rationalisation of complex systems, workflows and conceptual models relating to digital curation
- Communicate with and relate effectively to content creators, users, researchers, library managers, institutional collaborators, etc. on matters such as research data archiving, data mining, research data management planning, advocacy and promotion of digital curation services, etc.

E-resources management

- Understand the concepts defining e-resource management systems, and understand electronic resources management software as well as the administrative functions of propriety databases
- Identify and use resources to maintain awareness of relevant vendors and available products
- Select, evaluate, organise and maintain the library's collection of e-resources
- Evaluate periodically the library's e-resources spending by assessing vendor options available in the context of interrelationships with its library services platform as well as its strategic plan governing its service delivery to users
- Understand e-resource licensing issues so as to be able to negotiate with vendors licensing terms that advantage the library and its users
- Maintain and make available reports (coverage of disciplinary content, usage rights and statistics, licences, etc.) on the library's e-resources subscriptions and/or purchases
- Collect, analyse and provide meaningful interpretation of usage data for electronic journal and database subscriptions in order to ascertain adjustments required for allocation of resources or re-negotiation of license agreements with vendors
- Understand current e-reader technologies and formats (e.g. Kindles, ePub readers, Windows Media Audio [WMA], audiobook mp3 players, etc.) for purposes of ascertaining compatibility with the library's e-resources requiring e-readers
- Train library staff to access e-books from the library catalogue or from shared publisher platforms using devices such as e-readers, tablets, smart phones, laptops, e-labs, etc.
- Evaluate, implement and maintain an OpenURL service for linking resources available online to relevant library services (e.g. library OPAC, indexing and

abstracting databases) so that the user may find a copy of the e-resource that s/he is allowed access to

- Understand metadata schemes, standards (for cataloguing, classification, subject headings, indexing, etc.) and emerging trends and how they impact on the discoverability of e-resources
- Evaluate, administer and maintain metasearch tools for efficient and seamless access to the library's e-resources
- Understand and administer options for authenticated access to the library's e-resources as applicable within the university context (e.g. use of password and user name for university staff and students in order to gain access to the library's e-resources collection)
- Research and ascertain means of providing access to the library's e-resources to users with mobile devices such as cellular phones.

Acquisitions processes and practices

- Establish processes for the selection, negotiation of contracts and procurement of resources and services for the library
- Establish procedures for the physical processing of library materials (where required)
- Understand the information supply chain of publishers, vendors, libraries and other sources, including new developments in the purchasing process, which impact on quality, costs and efficiencies of the final products and services
- Keep up with changes and new developments in this information supply chain
- Establish procedures for acquiring a diversity of materials for information use (e.g. printed periodicals and other serials, electronic media, audio-visual sources, government publications, historical manuscripts for special collections, donations, etc.)
- Ascertain the most efficient, cost effective and user-centred means to procure materials requested for teaching, learning and research
- Identify and adopt new technologies that would enhance the efficiency of the acquisitions process
- Establish procedures for tracking ordered material and for negotiating on issues such as returns, incorrect orders, items not received and price anomalies
- Manage the acquisitions budget
 - Allocate the materials budget for purchase in different disciplinary domains
 - Negotiate the purchase and licensing of materials
 - Demonstrate proficiency with software used to manage acquisitions accounts
 - Work in partnership with other higher education libraries to form co-operative arrangements in order to leverage discounted purchase/subscription options.

Reference work

- Assess the reference information needs of higher education user communities being served (that is, the need for relatively small 'bites' of authoritative information)
- Develop and maintain a collection of reference sources (e.g. dictionaries, handbooks, encyclopaedias, etc.) of a general and subject/discipline specific nature, to meet the ready reference information needs of higher education users
- Demonstrate knowledge of the library's reference collection (both print and online sources)
- Compile bibliographies, libguides, tutorials and other user guides to the library's reference sources to assist users to navigate this collection of reference sources in a variety of formats
- Ensure virtual access to the library's reference collection, including access via cellular phones
- Evaluate the reference collection on an ongoing basis to ensure currency and relevance to user needs and based on this make recommendations for new acquisitions and possible de-selections/weeding of items
- Demonstrate ability to conduct an effective reference interview to determine the nature, level and quantity of information required
- Demonstrate good communication skills in both face-to-face and online reference interactions
- Provide user instruction (in-person or virtually) for the reference collection to empower users to become independent information seekers and to enhance their critical thinking, self-directed learning and problem-solving abilities
- Respond to reference enquiries using current technology for maximum satisfaction of users' information needs
- Explore the use of new tools and platforms (e.g. virtual reference) for enhanced reference service delivery
- Demonstrate advanced information searching skills using effective search queries, multiple resources and search strategies
- Use feedback from users and other relevant stakeholders to evaluate the effectiveness of the library's reference service.

LIS research and publication

- Know and understand research principles, theories and methodologies (for quantitative, qualitative and mixed methods research)
- Demonstrate application of research methods to the LIS profession
- Demonstrate awareness of important research findings and research literature in the LIS field
- Demonstrate the ability to evaluate completed research and to use it to improve library and information services
- Conduct user studies to analyse information use behaviour and users' information needs

- Conduct evaluation studies of various library services or operations for quality improvement of LIS services
- Conduct research to advance LIS theory and its application to the provision of information services as a contribution to the advancement of knowledge in the LIS discipline
- Publish research conducted in peer-reviewed journals and other publications for purposes of disseminating research findings
- Observe ethics protocols when conducting LIS research, particularly when dealing with human subjects as data sources.

