BLACKBIRD FOR TRAINING

Advanced Technical Library Management & Digital Information Services

7 – 11 February 2027
Online



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Introduction

Technical libraries are essential hubs for supporting research, engineering, innovation, and organizational knowledge. With the rapid evolution of technology, library professionals must master digital resources, advanced cataloguing, knowledge management systems, and modern information retrieval tools.

This 2-week program equips participants with comprehensive skills in managing technical libraries, digital and electronic resources, classification and cataloguing standards, AI-powered search, knowledge management, cybersecurity, and emerging technologies in the library ecosystem.

Course Objectives

By the end of this course, participants will be able to:

- Understand the strategic role of technical libraries in organizational knowledge management.
- Apply modern cataloguing, classification, and metadata standards.
- Manage digital and electronic resources efficiently.
- Use library management systems and databases effectively.
- Implement advanced information retrieval and research support services.
- Apply knowledge management principles in technical environments.
- Utilize AI tools and emerging technologies in library operations.
- Develop digital archiving and document management practices.
- Enhance user services and stakeholder engagement.
- Integrate cybersecurity and risk management practices in library systems.

Course Outlines

Day 1: Foundations of Technical Libraries & Information Management

- Types of technical libraries: engineering, medical, legal, corporate.
- Role of libraries in research, innovation, and knowledge retention.
- Information lifecycle management.
- Collection development strategies.
- Policies, standards, and governance in technical libraries.
- Copyright and intellectual property considerations.



Day 2: Cataloguing Principles & Classification Systems

- Cataloguing standards and international best practices.
- Classification systems: DDC, UDC, LC Classification.
- Subject headings, taxonomy development, and authority control.
- Metadata standards: MARC, Dublin Core.
- Hands-on exercises in cataloguing and metadata creation.

Day 3: Digital Libraries & Electronic Resource Management

- Concepts and architecture of digital libraries.
- Managing e-books, journals, databases, and subscriptions.
- Institutional repositories and knowledge portals.
- Library automation systems and integrated platforms.
- Digital preservation, archiving, and open-access resource management.

Day 4: Advanced Information Retrieval & Search Strategies

- Database navigation and advanced search techniques.
- Boolean and semantic search applications.
- Reference and research support services for specialized users.
- Document indexing, abstracting, and data organization.
- Practical exercises in complex search queries.

Day 5: Knowledge Management in Libraries

- Knowledge management frameworks and principles.
- Organizing institutional knowledge and workflows.
- Version control and document management systems.
- Data analytics for library decision-making.
- Case study: applying knowledge management in technical libraries.

Day 6: AI and Emerging Technologies in Libraries

- AI-powered search, recommendation engines, and digital assistants.
- Automation tools for cataloguing and information retrieval.
- Machine learning applications in library systems.
- Digital repositories and AI-driven metadata enrichment.
- Hands-on workshop: using AI tools in library workflows.



Day 7: User Experience & Service Innovation

- Enhancing user services in physical and digital libraries.
- Designing intuitive interfaces for library portals and databases.
- Stakeholder engagement and personalized support services.
- Feedback collection, surveys, and improvement metrics.
- Practical activity: improving user experience in a technical library.

Day 8: Cybersecurity, Compliance & Digital Risk Management

- Cybersecurity essentials for digital libraries.
- Access control, authentication, and data privacy.
- Compliance with copyright, licensing, and regulatory frameworks.
- Managing risks in electronic and cloud-based library systems.
- Scenario-based exercises on library cybersecurity threats.

Day 9: Digital Transformation & Library Modernization

- Planning for library automation and digital transformation.
- Integrating AI, analytics, and knowledge systems into workflows.
- Emerging trends in information services and technical libraries.
- Change management strategies for library modernization.
- Workshop: developing a modernization roadmap for a library.

Day 10: Capstone Project & Strategic Implementation

- Comprehensive project: designing a modern technical library model.
- Integration of cataloguing, digital resources, AI tools, and knowledge management.
- Presenting solutions for improved user services and operational efficiency.
- Group presentations, instructor feedback, and action planning.

Why Attend This Course: Wins & Losses!

- Gain mastery of technical library operations, digital resources, and knowledge management.
- Develop practical skills in cataloguing, classification, and metadata standards.
- Learn to leverage AI and emerging technologies in library services.
- Enhance research support, information retrieval, and user engagement.
- Acquire expertise in digital archiving, document management, and cybersecurity.
- Overcome challenges in adapting to technological change and modern library systems.
- Build a roadmap for modernizing specialized or technical libraries.

Conclusion

By completing this 2-week program, participants will be fully equipped to manage modern technical libraries, integrate advanced digital technologies, and provide high-value information services.



Participants will leave with actionable knowledge to improve research support, implement knowledge management systems, utilize AI tools effectively, enhance user engagement, and drive innovation in technical library environments.

