Skill Development Course Syllabus

Course Title: Emerging Technology and Library (ET&L05)

Course Duration: 30 Hours

Units: 5

Structure: 4 key learning points per unit

Course Outcomes:

Upon completion of this course, students will:

1. Understand emerging technologies transforming library services and systems.
2. Develop practical skills in the application of automation, AI, Block chain, Cloud Computing, AR/VR, and other technologies in libraries.
3. Evaluate the impact of these technologies on library operations, resource management, and user services.
4. Be prepared for future trends in library technology and apply adaptive strategies for library innovation.
5. Implement technology-driven solutions in real-world library settings.

Topics Covered:

Unit 1: Introduction to Emerging Technologies in Libraries

- Overview of Emerging Technologies (AI, Block chain, Cloud Computing, IoT, AR/VR)
- Impact of these technologies on library operations
- Key challenges and opportunities of technology integration
- Understanding the evolution of library technologies

Unit 2: Digital Libraries and Information Management Technologies

- Digital library systems and platforms
- Tools and technologies for information retrieval and search optimization
- Managing and preserving digital resources
- Applying metadata standards in library systems

Unit 3: Library Automation and Artificial Intelligence (AI)

- Library Automation Systems (ILS, RFID, Self-checkout, etc.)
- Applications of AI in libraries (Chat bots, AI-driven recommendation systems, automated cataloging)

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- Ethical considerations and challenges of AI in libraries
- Analyzing data trends to improve library services

Unit 4: Block chain and Cloud Computing in Libraries

- Block chain technology and its relevance to libraries (authentication, copyright protection, secure transactions)
- Implementing cloud computing for resource sharing and collaboration
- Understanding the use of Block chain for secure library services
- Integrating cloud computing solutions for collaborative library work

Unit 5: Augmented Reality (AR), Virtual Reality (VR), and User Experience (UX) in Libraries

- Introduction to AR and VR technologies
- Designing interactive and immersive experiences in libraries (virtual tours, AR books, VR simulations)
- Developing AR/VR applications for library services
- Enhancing library environments with immersive technologies

Suggested Reference:

1. Cook, D. (2020). *Augmented Reality and Virtual Reality in Libraries*. Facet Publishing.
2. Trant, J. (2018). *Designing for the User Experience in Libraries*. Routledge.
3. Greenfield, D., & Gilbert, M. (2021). *Library Technology Reports*. ALA Editions.
4. Lankes, R. D. (2016). *The New Librarianship Field Guide*. MIT Press.
5. St. Jean, B. & Lee, D. (2021). *Cloud Computing for Libraries: A Practical Approach*. ALA Editions.
6. Tapscott, D., & Tapscott, A. (2016). *Blockchain Revolution: How the Technology behind Bitcoin and Other Cryptocurrencies is changing the World*. Penguin.
7. Breeding, M. (2020). *Library Technology Guides: Library Automation*. ALA Editions.
8. Joseph, K. (2022). *Artificial Intelligence in Libraries: Practical Applications*. Elsevier.
9. Houghton, S., & Hovey, B. (2019). *Building and Managing Digital Libraries*. Springer.
10. Koller, D. & Krenn, M. (2020). *Metadata for Digital Libraries*. Wiley.

Evaluation and Certification

- Quizzes and Discussions: 20%
- Practical Demonstrations and Role-Playing: 30%
- Final Project/Presentation: 50%

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