Post Graduate Diploma in Digital Information Management (PGDDIM)
Syllabus

Semester – I

Paper I: Knowledge Organization (KO) and Management (KM)
- Knowledge Organisation Systems (KOS): Thesauri, Taxonomies
- Knowledge Organisation; Metadata: Role of Metadata in Digital Resource Management; Harvesting, Metadata Standards –MARC XML, Dublin Core (DC), METS SRU/SRW etc.,
- Ontologies: Concept, Types; Knowledge Representation: extensible Markup Language (XML), Resource Description Framework (RDF) , Simple Knowledge Organization System (SKOS), Web Ontology language (OWL)
- Knowledge Management: Historical Development of Knowledge Management (KM), Concept of KM, Components of KM, Nature of Knowledge; Types of Knowledge; KM Cycle; KM Systems; Knowledge Repositories. Implementation of KM in organizations, KM in Higher Education.
- Data Mining and Data Warehousing: Concept, Tools, techniques and methods, Applications, OLAP, OLTP.
- E-Education: e-Governance, Need and Scope, E-Government Initiatives in India, Telegram, Digital India

Paper II: Digital Libraries (Theory)
- Digital Libraries: Conceptual Framework; Definitions, Models and Theories
- Digital Libraries of the World – Gutenberg, Alexandria, World Digital Library.
- Open Access Initiatives – India and Global, Its implications for empowering society
- Digital Libraries: Role in Education and Research. Project Management, Best Practices and Case Studies
- Digital Archiving and Preservation: Issues and challenges; Methods/Techniques, Policy, Evaluation, Cost issues, PREMIS Framework
- Information Representation: ASCII, ISCII, Unicode
- Harvesters , Search Engines, Federated Search Engines, Meta Search Engines.
- Subject Gateways, List-Serve, E-Learning, Folksonomy, RSS Feed, Youtube, blogs,
- Academic and Research Perspective: Challenges and Concerns for Digital Library
- Web 2.0 technologies

Paper III: Digitization Process (Theory)
- Digital Resources: Nature, Types and Characteristics; e-Journals, e-Books, Multimedia Resources and Online Resources
- Building Digital Library Resources – Born Digital and Digitized Selection and Acquisition of materials for Digitization
- Digitization Process: Steps in digitization
- Scanners: Types, Sheet-fed scanner, Drum Scanner, Flatbed Scanner, Hand-held Scanner, Selection Criteria for Scanners
- OCR Software: Features, Examples (Commercial and FOSS)
- Digital / Electronic Formats
- Image Formats: JPEG/GIF/BMP
- Audio Formats: WAV, MIDI, MP3, MPEG, AVI,
- Storage Media Formats: ISO 9660, CD/DVD/HDD.
- Digital Preservation Legal Issues, Technical Issues, Intellectual Property Rights.
- Digital Preservation Strategies, Migration, Data Refreshing, Emulation.
- Digital Curation: Archiving, Preservation.

Paper IV: Digital Library Management
- Preparing a Digital Library Project: Cost, Storage, Manpower, Licensing, Outsourcing, Training, Security, Technology Management, Selection of software and hardware.
- Issues and challenges in management of Digital Libraries: Digital Collection Management and Evaluation – Strategies; Economic Issues: Costing and Funding

- Users and Use of Digital Library - Usability Assessment, Information Literacy; Online Information Services: Search and Retrieval Strategies
- Intellectual Property Rights: definition, components; The Information Technology Act, 2000; Digital Rights Management (DRM); Copyleft / Open Access Licensing: Creative Commons, GNU Public License (GPL)

Semester – II

Paper V: Design and Development of Digital Libraries

- Architecture Overviews, Principles and Types: Distributed, Federated, Service Oriented and Component based Architectures.
- Planning a Digital Library.
- Digital Library Components: Persistent Identifiers [Uniform Resource Identifier (URI); Handle System, Digital Object Identifier (DOI)]; Metadata Standards; Metadata Harvesting (OAI-PMH); Interoperability; Security.
- Open Source Software: definition, history, philosophy.
- Digital Library Software: Open Source – EPrints, DSpace, Fedora, GSDL and Proprietary/Commercial
- User Interfaces – Multilingual, Personalization and Visualization
- Evaluation of Digital Libraries
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Paper VI: Knowledge Management (Practice)
- KM Case studies in India: Infosys, GE, Capgemini, TCS
- KM Software/Tools: FOSS – Knowde/AllocSA – An overview
- Content Management Systems (CMS) – Joomla and Drupal
- Reference Management Systems - Zotero, Mendeley

Paper VII: Digital Libraries (Practice)
- Ubuntu GNU/Linux Operating System
- Installation and Configuration of : DSpace

    Administration – Managing Communities and Collections, Metadata Registry, Workflow management

    Collection Development: Selecting, Submitting of digital documents; Metadata Entry

    Search and Retrieval Strategies

    Backup and Restore
- Digitization process (Practice)
- Using OCR Software – ABBYFINE READER, etc.
- Using Adobe Photoshop for editing scanned images

Paper VIII: Project Work

Internship Programme
Compulsory Internship Programme for 2-3 weeks

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Scheme of Papers

Semester I:

Paper	Total Marks
Paper I: Knowledge Organization and Management	100 Marks
Paper II: Digital Libraries (Theory)	100 Marks
Paper III: Digitization Process	100 Marks
PaperIV: Digital Library Management	100 Marks

Semester II:

Paper	Total Marks
Paper V: Design and Development of Digital Libraries	100 Marks
Paper IV: Knowledge Management (Practice)	100 Marks
Paper VII: Digital Libraries (Practice)	100 Marks
Paper VIII: Project Work	100 Marks

Annexure-I

Reading List
1. Greenstein, Daniel I., Thorin, Suzanne Elizabeth. The Digital Library: A Biography. Digital Library Federation (2002) ISBN 1933645180. Accessed June 25, 2007.
2. Kahn, R. E., & Cerf, V. G. (1988). The Digital Library Project Volume I: The World of Knowbots, (DRAFT): An Open Architecture For a Digital Library System and a Plan For Its Development. Reston, VA: Corporation for National Research Initiatives.
3. Edward A. Fox. The Digital Libraries Initiative - Update and Discussion, Bulletin of the America Society of Information Science, Vol. 26, No 1, October/November 1999.
4. Koehler, AEC. Some Thoughts on the Meaning of Open Access for University Library Technical Services Serials Review Vol. 32, 1, 2006, p. 17
5. "Fedora Commons and DSpace Foundation Join Together to Create DuraSpace Organization". http://www.duraspace.org/pressrelease.html. Retrieved on 2009-08-01.
6. "The DSpace team recognized the value of the OAIS framework and recast the repository's architecture to accommodate this archival framework" Baudoin, P.; M. Branschofsky (2004), MIT's DSpace experience: a case study, http://www.dspace.org/implement/case-study.pdf
7. Agosti, M., Candela, L., Castelli, D., Ferro, N., Ioannidis, Y., Koutrika, G., Meghini, C., Pagano, P., Ross, S., Schek, H.-J., & Schuldt, H. (2006). A Reference Model for DLMSs Interim Report. In L. Candela, & D. Castelli (Eds.), Deliverable D1.4.2 - Reference Model for Digital Library Management Systems [Draft 1]. DELOS, A Network of Excellence on Digital Libraries -- IST-2002-2.3.1.12, Technology-enhanced Learning and Access to Cultural Heritage. Online at: http://146.48.87.122:8003/OLP/Repository/1.0/Disseminate/delos/2006_WP1_D142/content/pdf?version=1
8. Gonçalves, M. A., Fox, E. A., Watson, L. T., & Kipp, N. A. (2004). Streams, Structures, Spaces, Scenarios, Societies (5S): A Formal Model for Digital Libraries. ACM Transactions on Information Systems (TOIS),22 (2), 270-312.
9. Gertz, Janet. "Selection for Preservation in the Digital Age." Library Resources & Technical Services. 44(2) (2000):97-104.
10. Cain, Mark. "Managing Technology: Being a Library of Record in a Digital Age", Journal of Academic Librarianship 29:6 (2003).
11. Breeding, Marshall. "Preserving Digital Information.". Information Today 19:5 (2002).
12. Teper, Thomas H. "Where Next? Long-Term Considerations for Digital Initiatives." Kentucky Libraries 65(2)(2001):12-18.
13. Pymm, Bob. "Building Collections for All Time: The Issue of Significance." Australian Academic & Research Libraries. 37(1) (2006):61-73.
14. Kelly, Kevin (2006-05-14). "Scan This Book!". New York Times Magazine. http://www.nytimes.com/2006/05/14/magazine/14publishing.html?_r=1&oref=slogin&pagewanted=all
15. Snell. NED. Teach yourself the INTERNET in 24 hours. 3rd ed. Indian Polis: Sams, 1999.
16. Haywood, Trenor. Only connect: Shaping networks and knowledge for the new Millennium East Grinstead: Bowker-Saur, 1999.
17. Dilip C. Naik. Internet Standards and Protocols. New Delhi : PHI, 2001.
18. G. G. Chowdhury and Sudatta Chowdhury. Information Sources and Searching on the World Wide Web. London : Facet Publishing, 2001.
19. Alan Poulter, Gwyneth Tseng and Goff Sargent : The Library and Information Professional's Guide to the World Wide Web. London : Facet Publishing, 1999.
20. Alan Poulter, Debgra Hiom and Gwyneth Tseng. The Library and Information Professional's Guide to the Internet. 3rd Ed. London : Facet Publishing, 2000.
21. John M. Cohn, Ann L. Kelsey, Keith Michael Fiels. Planning for Integrated Systems and Technologies: A How-to-do-it manual for Librarians. Neal-Schuman.
22. Thomas R. Kochtanek [and] Joseph R,. Mathews. Library Information Systems : From Library Automation to distributed information access solution. [S.I] Libraris Unlimited, 2002.
23. Paul Pedley. The invisible Web : Searching the hidden parts of the Internet. London : Aslib, 2001.
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25. "Liberty: A genuine, web-based, integrated Knowledge Management System". Softlink website. North Leigh, Oxfordshire: Softlink Europe. http://www.softlink.co.uk/gateway/gateway.gbw?TIMESTAMP=12604410746&X_=00ae&displayform=index&category=solutions&section=Liberty3.

26. Knowledge Management (Paperback) by Carl Frappaolo . Publisher: Capstone; 2 edition (March 31, 2006) ISBN-10: 1841127051 , ISBN-13: 978-1841127057
27. Learning to Fly: Practical Knowledge Management from Leading and Learning Organizations (Paperback) by Chris Collison , Geoff Parcell. Publisher: Capstone; 2nd edition (January 14, 2005) ISBN-10: 1841125091 , ISBN-13: 978-1841125091
28. Organising Knowledge: Taxonomies, Knowledge and Organisational Effectiveness (Chandos Knowledge Management) (Paperback) by Patrick Lambe. Publisher: Chandos Publishing (Oxford) Ltd (February 8, 2007) ISBN-10: 1843342278 , ISBN-13: 978-1843342274
29. The Blackwell Handbook of Organizational Learning and Knowledge Management (Paperback)
30. by Mark Easterby-Smith (Editor), Marjorie A. Lyles (Editor) Publisher: Wiley-Blackwell (August 26, 2005) ISBN-10: 140513304X , ISBN-13: 978-1405133043
31. Knowledge Management in the Public Sector: A Blueprint for Innovation in Government (Hardcover) by David E. McNabb Publisher: M.E. Sharpe (October 31, 2006) ISBN-10: 0765617277 , ISBN-13: 978-0765617279
32. Knowledge Management: Historical and Cross-Disciplinary Themes (Libraries Unlimited Knowledge Management Series) (Hardcover) by Danny P. Wallace Publisher: Libraries Unlimited; 2 edition (December 30, 2007) ISBN-10: 1591585023 , ISBN-13: 978-1591585022
33. Knowledge Management in Organizations: A Critical Introduction (Paperback) by Donald Hislop
34. Publisher: Oxford University Press, USA (January 27, 2005) ISBN-10: 0199262063 , # ISBN-13: 978-0199262069
35. Knowledge Management by Dell; ISBN: 0070605076; Publisher: Tata Mcgraw Hill (Published: 2005)
36. Arms, William Y. (2001) *Digital Libraries.* USA: MIT Press.
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40. Kamalvijayan, D. (2005). *Information and Knowledge Management.* Delhi: MacMillan.
41. Sinha, Amitesh. (2001) *Datawarehousing.* Bangalore: Thomson.

It is proposed to involve the following institutions as Academic Partners for providing practical/hands-on experience to the course participants of PGDDIM:

- Indira Gandhi Memorial Library, University of Hyderabad
- Tata Consultancy Services (TCS), Hyderabad
- Eenadu TV, Hyderabad
- Acharya N.G. Ranga Agricultural University (ANGRAU), Hyderabad
- IICT / CCMB, Hyderabad
- Osmania University Main Library and Constituent College Libraries