A Digital Preservation Curriculum for University Staff

This draft curriculum outlines both broad and specific topics that should be covered in education and training for different groups of university staff. Full development of the curriculum and the training program will need to be undertaken. It is recommended that IS and other staff involved in the creation and support of digital information participate in the development, implementation and assessment of the specific training modules.

Audience:					
	Digital Preservation Awareness	Life Cycle Management	Storage Management / System Maintenance	Standards/Best Practices	Legal Issues/ Security
Senior Administrators	Basic	Basic	Basic	Basic	Basic
IS Operational Managers	Basic	Level 2	Level 2	Level 2	Level 2
IS Operational Staff Who Support End Users	Basic	Level 1 or 2	Level 1 or 2	Level 1 or 2	Level 1 or 2
IS General	Basic	Level 1	Level 1	Level 1	Level 1
Creators	Basic	Level 2	Level 1	Level 2	Level 1

I. General Awareness

- What is Digital Preservation?
  - Definition
    - "Backup does not equal preservation"
    - "Archiving does not equal preservation"
  - Examples/scenarios
- Why is Digital Preservation important?
  - Importance to the University
  - Importance to Departments / Units
  - Importance to Individuals
- Who is sponsoring the Digital Preservation program at KU?
- What is the role of IT at KU in Digital Preservation?
  - Leadership
  - Consultation with Constituencies
  - Adherence to Best Practices & Standards in:
    - Developing Current Systems
    - Acquiring New Systems
    - Managing information repositories, storage systems
- What is your role in Digital Preservation?
  - As creator
  - As manager
  - As researcher/user
- How can you learn more?

II. Life Cycle Management (2 levels, basic and expert)

- The lifecycle of information management
- Introduction to the OAIS model
  - Submission and "pre-ingest" activities
  - Ingest
  - Archival Storage
  - Data Management
  - Preservation Planning
  - Archive Administration
  - Access/Dissemination
- Information Lifecycle Management Issues
  - Selection
  - Migration
  - Object integrity
  - Authenticity
  - Emulation
    - Software tools
    - Hardware issues
- Stewardship issues (responsibility, ownership, cost)

III. Storage Management/System Maintenance (2 levels, basic and expert)

- Archiving Your Existing Data [basic]

- Where to Store Your Data: Storage Management Decisions for Preserving Data
  - Where to store: centralized versus local or departmental issues.
  - Frequency of Access & Data Retrieval
  - Documenting stored data (databases versus file systems)
  - Longevity: Livespan and Lifecycle issues
- How to Store Your Data [advanced]
  - Bits & Bytes
    - Backup frequency
    - Location of backup data
    - Data restoration Issues
    - Compression & efficiency
    - Storage medium
    - Cost
- What to Store [basic]
  - Masters and derivations
  - Documenting and describing stored comments
  - File naming conventions

- Considerations for New Systems
  - Who controls the data? [basic]
  - Standards, Information Architecture [basic]
    - Object formats [basic]
    - Metadata options [basic]
    - Information architecture [advanced]
      - Database & data access
      - Portability & migration for metadata and content objects
  - Accessibility [advanced]
    - Support for OAI harvesting tools and/or federated searching
    - Ability to utilize "name resolution" services, supporting persistent identifiers
  - Security [basic]
    - Authenticity of objects & metadata
    - Digital rights management (DRM)
    - Authentication / authorization

IV. Standards (2 levels, basic and expert)

- Enhancing the chances that important information can be preserved (Best Practices & Standards)
  - Managing administrative data
    - Introduction – description of administrative data systems and rationale (Student, Financial, Human Resources, Academic Planning)
    - Software
    - Hardware
    - Data Stewards and Data Managers
    - Metadata
    - Data Warehousing
  - Managing Electronic Records (including e-mail)
    - Introduction
    - Long-term preservation

- Metadata
- Storage
- File-naming, file formats
- E-mail management
- Electronic and digital signatures
- Legal and statutory requirements
- Record Retention schedules

- Creating Digital Collections
  - Overview
  - Principles of good digital objects
  - Types of digital collections—surrogates and "born digital"
  - Examples of digital collections
    - Images
    - Documents
    - Multimedia
    - Geospatial
- Format standards
  - Overview
  - Data type, formats and standards
    - Alphanumeric
    - Images
      - Still
      - Moving (video)
    - AudioText
    - Databases
    - Numeric data
    - Spatial data
- Metadata
  - What it is and what it does
  - Metadata standards in general
    - Standards specific to topics or disciplines
    - Standards specific to kinds of materials
    - Standards to support specific functions
  - Types (descriptive, administrative, technical, structural, preservation)
  - Standards
    - MARC
    - Dublin Core
    - Encoded Archival Description (EAD)
    - Text Encoding Initiative (TEI)
    - Instructional Management Systems Metadata (IMS)
    - Visual Resources Association Core Categories (VR)
    - Content Standard for Digital Geospatial Metadata (CSDGM, aka FGDC)
    - Categories for Description of Works of Art (CDWA)
    - Consortium for the Computer Interchange of Museum Information (CIMI)
    - Resource Description Framework (RDF)
    - Metadata Encoding and Transmission Standards (METS)
  - Harvesting / searching

V. Legal and Policy Issues (2 levels, basic and expert)

- Copyright / DMCA
- Privacy
- HIPPA
- Records management
- Granting agency policies