Data Curation Education in Research Centers (DCERC)

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Collaborators

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Rationale

- Increased need for data curation professionals to support emerging requirements of digital scientific practices
- Increase engagement of data curation practitioners with formal education process as instructors and mentors
- Bring current issues and experiences to professional education
- Bring library and information skills and expertise to data centers to facilitate “disciplinary engagement with preservation institutions”
DCERC Goals

• Develop sustainable and transferable model for educating Library and Information Science students in data curation

• Build capacity in LIS community to engage in data curation

• Provide real-world experiences in research and data centers for students to engage with current practices and challenges of data curation

• Evaluate model effectiveness with the intention of scaling the program to a larger cadre of partners and participants
DCERC Program Components

• Education program at partnering iSchools

• Integration through inter-institutional communications to build strong DCERC cohort

• Foundations in Data Curation Course at UIUC

• Internship Program at NCAR

• Mixed method evaluation
Internship Overview

- Multiple mentor model (scientist, data manager, peer, and institutional)
  - Mentor training
  - Student / mentor matching based on research interests and background
  - Collaborative project development to meet student and mentor goals and conduct project
- Workshops and seminars
- Weekly progress reporting
- Formal project reporting / presentation and dissemination
Masters Student Projects

- Evaluating climate model metadata
- Preparing data sets for ingest into a repository
- Assisting scientists with data and metadata organization
- Auditing data management workflows
- Assessing analog data holdings for digital access

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Student Reflections

Experience synthesized theoretical and practical skills, providing more confidence in skills and better preparation for future work environments.

Improved understanding of role as integrator and how to communicate with scientists and data managers in their language.
Mentor Reflections

• Science mentors
  – Recognized need to focus on improving data management practices, specifically with regard to making data accessible to outsiders
  – Improved understanding of mental models of data curators

• Data mentors
  – DCERC students bring “data life cycle” perspective: a conceptual understanding of data management and curation issues
  – Still need to develop skills on the job
Ongoing work

• Evaluation
  – Surveys, focus groups, and interviews with students and mentors
  – Employer interviews and analysis

• Sustainability and Scalability
  – Intensive mentorship model
  – Grant-based educational program development
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Students, Scientists and Data Mentors at NCAR

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Foundations of Data Curation

• Semester-long graduate course, providing overview of theoretical and practical problems in data curation

• Examines current issues from an information science perspective, including:
  • appraisal and selection
  • preservation
  • research lifecycles
  • workflows
  • levels of representation
  • metadata
  • legal and intellectual property issues