

# Teaching Data Management to Health Science, Science & Engineering Students

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# Planning a Data Management Curriculum

Joint project of the libraries at the University of Massachusetts Medical School and Worcester Polytechnic Institute



# Initial Planning

## Education Committee

- Faculty
- Librarians
- Graduate student
- Consultants: curriculum, instructional design, evaluation

# Preliminary Activities

- Literature search
- Student interviews
- Faculty interviews
- Presentations by data librarians

# Findings

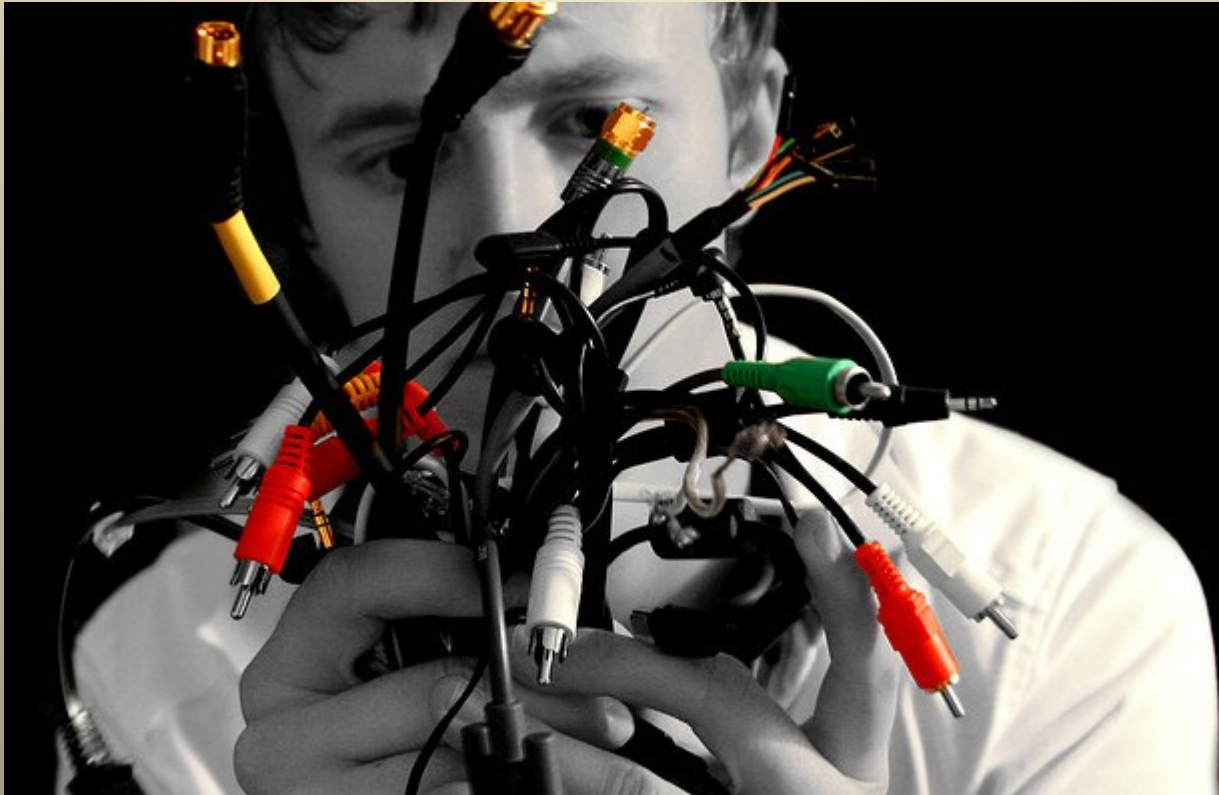


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# Course Modules

Introduction:  
Overview of Research Data  
Management

Module 1  
Data: Types, Stages, and  
Formats

Module 2  
Metadata

Module 3  
Data Storage, Backup, and  
Security

Module 4  
Legal and Ethical  
Considerations

Module 5  
Data Sharing and Reuse  
Policies

Module 6  
Archiving and Preservation

# Research Case Scenarios



Photo: CDC/Taronna Maines

- Aerospace engineering
- Biomedical lab research
- Clinical study on hip replacements



Gary Meek/NSF



NASA/Michael Soluri

# Customizing Data Management Instruction

- Mix and match modules as needed by discipline/course level
- Provide lesson plans for diverse modes of delivery: online, in person, hybrid
- Case based activities and assessment
- Readings
- Assignments



# Next steps...

- Develop a prototype online course module
- Lesson plans and research case scenarios will be available online
- With implementation funds: develop course content, pilot modules, develop data repository for data generated from student projects

**[http://library.umassmed.edu/  
imls\\_grant.cfm](http://library.umassmed.edu/imls_grant.cfm)**