TITLE: Implementing a graduate-level data information literacy curriculum at Oregon State University: approach, outcomes and lessons learned.

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ABSTRACT

Purpose
This poster examines the development and inaugural offering of a credit-bearing graduate-level course in data information literacy (DIL). The purpose of the course was to enable students to acquire foundational knowledge and skills in DIL that would support long-term habits in planning, management, preservation and sharing of research data.

Setting/Participants
Oregon State University Libraries partnered with the Graduate School to facilitate the process of establishing a new credit-bearing course in the OSU catalog. The course is open to graduate students from all disciplines without any prerequisites, and is taught by the Libraries' Data Management Specialist.

Brief Description
This poster describes the development and implementation of a new course in data information literacy for graduate students. Curricular materials were drawn from the New England Collaborative Data Management Curriculum (NECDMC), the DataONE Education Modules, and the MANTRA online course materials. The pedagogical approach for the course combined outcomes-centered course design with active learning techniques. The approach was predicated on the idea that getting the students actively engaged with the content and techniques of data management would be more effective than lecture alone. This approach was also driven by the practical reality that while the course content was necessarily discipline agnostic, successful learning outcomes depended on the students' ability to apply the material to discipline specific standards of practice (e.g. metadata and data documentation, data sharing formats and methods, etc.). The goal was that after taking the course, the students would successfully incorporate data management best practices into their daily workflow. Such behavioral change takes self-reflection ("*How does this material relate to me?*") and practice, both of which I strove to offer during class meetings.

The 2-credit class met twice per week for 50 minutes. For each meeting a lesson plan was created that included anticipated timing, learning outcomes, lecture content, teaching strategies, student products, the DIL core competency addressed and assessment approach, if any. Lesson plans also included the associated readings and homework assignment, if any. Not every specific learning outcome had an assessment component, but closely related outcomes were assessed together. Periodic course assessment was also performed through anonymous student surveys, with the objective of gauging course efficacy and quality, and to obtain suggested modifications or improvements. The midterm assignment for the course was a scaled back Data Curation Profile, and the final exam assignment was to create a data management plan for their research project.

Results/Outcome
The inaugural course had an official enrollment of 11 students, including one faculty member enrolled for credit and two as non-credit auditors. I also had an additional faculty member "sitting in" on lectures who did not complete any of the outside assignments. The disciplinary range of the students was broad:

six students from the College of Public Health and Human Sciences, two from the College of Forestry, and one each from the Colleges of Veterinary Medicine, Science, and Agriculture. Aside from the faculty members, student degree paths ranged from non-thesis master's to Ph.D., with some of the students having a very well defined research project already planned and others much less so.

With all of the variability in student disciplinary background and experience, in-class learning activities and the homework, midterm and final exam assignments were relied upon to facilitate application of the generalized course content to their individual, discipline-specific circumstances. The content and quality of the students' assignments demonstrated that this approach was successful.

Conclusions
The course is not yet complete at the time of this abstract submission, but the poster will summarize the during- and post-class surveys that were used to determine the success and impact of the instruction. Suggested modifications for next year's course will also be discussed.