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Exploring an Information Literacy Approach to Standards Education

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Exploring an Information Literacy Approach to Standards Education

Prof. Margaret Phillips

Society of Standards Professionals (SES) webinar | May 20, 2020

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Overview

- Meet the research team
- Background
- Project objectives
- Project outcomes
- Where to learn more about this project
- References

Research Team



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Background

- Purdue Libraries & School of Information Studies – MET Program partnership
- MET 102 *CAD in the Enterprise* standards assignment
- Faculty discomfort
 - 49% of survey respondents reported “lack of faculty expertise” as an impediment to teaching about standards (*Khan, Karim, & McLain, 2013*)

Project Objectives

- Develop an open-access, introductory-level, interactive online standards education program
- Provide micro-credentials for students to demonstrate standards competence to potential employers, etc.

Project Outcomes

Tutorial Modules

-  **Introduction (2:27)**
Let's get started!
-  **Module 1**
An Overview of Standards for Product Design Needs (16:01)
This module provides a brief introduction to standards. It covers the definition of a standard, major kinds of standards, the benefits of standards, the standards development process, mandatory vs. voluntary standards, and standards developing organizations who create standards commonly used by product designers.
-  **Module 2**
Anatomy of a Standard (10:40)
This module examines the parts of a standard and provides guidance for navigating a standard.
-  **Module 3**
Discovering and Locating Standards (13:07)
This module covers developing appropriate terminology and strategies to search for standards, databases and websites available to conduct standards searches, and locating and accessing the full text of standards documents.
-  **Module 4**
Standards in Everyday Objects (3:45)
This module demonstrates how "Standards are Everywhere" and the ways in which they apply to our daily lives.

Resource: http://guides.lib.purdue.edu/NIST_standards

Case Study Database

Purdue University Standards Case Studies

Search for standards case studies created by undergraduate engineering technology students.

* Standards Research Guide: <http://guides.lib.purdue.edu/standards>

Search

Standards Development Organization:

Standard Number: or: Y14 ID

Year:

Title Keyword: or: D19

Category: Design Manufacturing/Processes Testing/Performance

Resource: http://guides.lib.purdue.edu/NIST_standards

Badges Platform

To demonstrate your expertise with standards, you can complete either or both of these badges.



Standards Explorer is a Developing level badge, indicating mastery of basic principles of technical standards.



Standards Integrator is a Proficient level badge, indicating the ability to apply information from technical standards to make decisions.

Resource: http://guides.lib.purdue.edu/NIST_standards

- **~750 undergraduate Purdue engineering technology and materials engineering students** reached since Fall 2017; **additional engineering faculty and students (~130)** at the **University of Buffalo**
- **4,500 Project website views (as of 5/4/2020)** https://guides.lib.purdue.edu/NIST_standards
- **79 students** – submitted materials to earn badges; **25 badges** awarded to date
- Three workshops conducted on project materials: **79 attendees** from **35 institutions**

Where to Learn More

- Project website: http://guides.lib.purdue.edu/NIST_standards
- Publications related to the project:
 - Phillips, M. (2019). Standards collections: Considerations for the future. *Collection Management*, 44(2-4), pp 334-347. <https://doi.org/10.1080/01462679.2018.1562396>
 - McPherson, P., & Phillips, M., & Reiter, K. (2019). Integrating technical standards into ET curricula to meet ABET standards and industry needs. Paper presented at the 2019 American Society for Engineering Education (ASEE) Conference for Industry and Education Collaboration (CIEC), New Orleans, LA. <https://peer.asee.org/31507>
 - Phillips, M., Fosmire, M., & McPherson, P. (2018, May/June). Standards are everywhere: A freely available Introductory online educational program on standardization for product Development. *Standards Engineering*, 70(3), 1-6. https://docs.lib.purdue.edu/lib_fsdocs/201

References

Khan, A. S., & Karim, A., & McClain, J. A. (2013, June), *The State of the Use of Standards in Engineering and Technology Education*. Paper presented at 2013 ASEE Annual Conference & Exposition, Atlanta, Georgia. <https://peer.asee.org/22618>