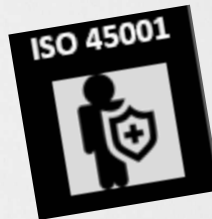


Standards in the Curriculum:

A Tale of Three Risk Domains



ANSI/NIST Symposium
Fostering Partnerships to Integrate
Standards into College Curriculum in the US
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Project Scope & Objectives

Scope: Integrating ISO risk-based standards into curricula for EHS, Civil Engineering & Construction Management

STD	Description
 ISO 14001	Environmental management framework for organizations to manage environmental responsibilities, enhance environmental performance, maintain legal compliance
 ISO 45001	Occupational health and safety management framework for organizations to improve health and safety performance and prevent injury and ill-health.
 ISO 37101	Community sustainable development framework for improving the contribution of communities to sustainable development and enabling them to achieve their vision with regard to sustainability

Objectives:

- Enhance student grasp of the application of risk management systems standards
- Provide coordinated view of the scope of risk
- Develop a portable, modular approach for standards education

Incorporation in the Classroom

Course Standards Content	Standards Modules	Clauses and Themes							
		1-3	4	5	6	7	8	9	10
		Over-view	Context & Stakeholders	Leadership & Oversight	Risk ID	Competence & Communication	Risk MGMT	Performance Evaluation	Continual Improvement
CVET 505 Sustainable Building Design	37101	✓		✓					✓
ESHS 515 Corporate EHS Management	14001 45001	✓		✓					✓
ESHS 500 Social Responsibility & Env. Sustainability	37101	✓	✓						
ESHS 720 EHS Management	14001 45001	✓	✓	✓	✓				
ESHS 740 EHS System Design	14001 45001				✓	✓	✓	✓	
ESHS 760 Integrating EHS in the Business	14001 45001	✓		✓					✓

Use Internal & External to RIT

- ISO 14001 & 45001 incorporated more broadly in other courses in EHS Management & Environmental Sustainability, Health & Safety programs at RIT
- ISO 37101 content incorporated into Construction Management M.S. program
- Modified module content disseminated in industry outreach/workforce development efforts

Measures of Success

Feedback & Testimonials

From Instructors: *“All students appeared to grasp concepts well and were able to successfully apply them to the project ...”*

“Students ... seemed to enjoy knowing that they ‘get’ this concept because they continued to use it – and use it correctly - in subsequent assignments.”

From Students:

“[The professor] did a great job of teaching the concepts of ISO...management systems. She used the discussions and homework assignments to solidify that knowledge ... [and] communicated the information in a way that made it very easy to grasp and commit to memory.”

“[Appreciated the] ... hands-on experience with ISO, homework that challenged us to dive deeper into concepts.

“[Standards-related] discussions were helpful and gave a better understanding of subject matter.”

	37101 Module	14001 Module	45001 Module	Total
Student Touches	52	273	273	598
Percent Achieving ≥ 80%	89%	96%	96%	

Wish List/Reflection

- ANSI/NIST Workshops & Standards Development Simulations – extremely valuable!
- Opportunities in academia-industry outreach for standards education
 - Early career professionals
 - Those in career transition