Maintaining Business Relevance

Contextualizing Curriculum Development
Developing the Workforce: An Essential Partnership

**Business**

**Industry & Labor**

**Educators**
Building and Using Skill Profiles

1. Background Research
2. Industry Focus Groups
3. Draft Skill Profiles
4. Verify Draft or Revise
5. New Curriculum/Revisions
A Little More Detail

• Industry and Labor (I&L) task-force selected the occupation clusters for research
  – Given the choice to select two occupation clusters for curriculum development they chose
    • Energy Program/project management
    • Commercial Building Analysis
  – Why did they choose these two?
Core Business Processes

• Two fundamental processes energy efficiency firms must be proficient at:
  – Business development –
    • Finding and assessing energy efficiency opportunities
    • Developing proposals for clients
  – Managing service delivery for accepted proposals
In Short

• Finding potential, profitable opportunities
• Creating a proposal (making a promise)
• Following through on that promise

• Analysis, proposal, delivery
Occupation Clusters

- Commercial Building Analysis (CBA)
  - Finding potential opportunities
- Program/project management (PPM)
  - Delivering results promised in proposal

- Both occupations participate in proposal development
Business Process Constituents

• Critical Work Functions (CWA)
  – Steps in the business process

• Key Activities (KA)
  – Foundation for the process steps
  – Industry thinks in these terms – not teachable

• Skills/core competencies
  – Required to implement the CWF
  – Teachable
Business Development Process/Commercial Building Analysis

- Critical Work Functions (CWA) for Commercial Building Analysis are the steps in the business development process
- Key Activities are the foundation for the process steps – business thinks in these terms
- Skills/core competencies are required to implement the CWF and are teachable
Service Delivery Process
Program/Project Management (PPM)

• Critical Work Functions (CWA) for Program/project management are the steps in the service delivery process
• Key Activities are the foundation for the PPM process steps – business thinks in these terms
• Skills/core competencies are required to implement the PPM CWF and are teachable
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Educators
Relevant Curriculum

• Teaches core competency and skills
• Retains industry and labor process context

• Important for educators to retain the business process context when developing courses
• Benefits ??
The Program/Project Opportunity

• In industry a program is a collection of interacting projects managed together

• Example – building analysis, proposal development, equipment selection and installation, verification, monitoring system deployment

• Example – community energy projects
  – Solar PV generation, distribution, consumption
Programs and Systems

- Components (courses)
- Systems
- Projects
- Programs

The diagram illustrates the relationship between components (courses), systems, projects, and programs, showing how they interconnect and influence each other.
Systems are Interacting Components

- **Energy Systems**
  - Generation (solar PV, biomass, wind)
  - Distribution (microgrid, DC subgrids)
  - Consumption (energy audit, HVAC design)

- We often use projects to teach students system components

- We teach students introductory project management and basic team skills
Program Opportunity

• What if we taught students enough program management that they could work collaboratively to design systems?
• Many of the colleges have areas of expertise that are components of the energy system
• Couldn’t our students start working together to create integrated systems designs?
• Benefits ??
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Educators
Creating a Career Lattice: Terms

- Educational Pathway: Collection of courses at an institution
- Career Pathway: Education pathway evaluated for industry specified skills
- Educational Lattice: Education pathways from more than one institution
- Career Lattice: Educational lattice evaluated for industry specified skills
Steps in Career Lattice Process

• Identify pathways and courses at your institution
• Find related pathways to form potential education lattice
• Develop or modify new courses as needed
• Evaluate existing or developed courses using industry skills
A Little More Detail

• A collaborative effort – YOU do not need to create the entire educational or career lattice

• We have developed simple, easy to use tools and aids to assist you with assessing courses for industry skills
Choose a Work Group: Sign Up!

• Choose where you would like to work today
  – Evaluating existing course (Tom Barr)
  – Developing new course (Mel Oyler)
    • Commercial building analysis
    • Program/Project management
    • Other energy related area
  – Strategy (Alison Pugh and Randy Sibley)
Programs and Systems

- Components (courses)
- Systems
- Projects
- Programs
One More Time

• Relevant Curriculum
  – Teaches core competency and skills
  – Retains industry and labor process context

• Program Opportunity
  – What if we taught students enough program management that they could work collaboratively to design systems by integrating components?
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