Advanced Materials Manufacturing Initiative (AMMI)

Workforce Development: Preliminary Findings and Status Report to Industry

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Feb. 6, 2014
Utah will need a training infrastructure to support a world class employee pipeline for the advanced materials and aerospace industries.
Focus of Workforce Dev. Plan

Phase I
• Capacity Building
• Robust Education and Training Pathways

Phase II
• Faculty Development
• Access to Research and Technologies

Phase III
• Small Business Supply Chain Integration
• Company Certification
• Identify industry-driven skill sets and complete a gap analysis

• Create and implement a model to fill skill sets

• Establish 4-5 core measurement metrics
• Review of Existing Resources/Materials
  ◦ DWS Manufacturing Criteria (tab 2) from previous aerospace and manufacturing initiatives
  ◦ Criteria comparison to Industry Surveys and Response (tab 3)
Current “hot button” skill gaps

- “Super technician” beyond basics composites certification programs
- Lack of hands-on/early-on project design work for undergraduate students in related engineering and technologies fields
- Multiple entry points in post-secondary education to quickly access and engage in training
- K-12 STEM Pipeline Awareness
Proposed ROI Model (tab 4)

**Immediate Workforce ROI**
- Non-credit delivery module
- CFTI/STI Short term training certification
- Flexible applied training
- ATC/SLCC Applied Division
- Entry-level Technician training

**Mid-range ROI**
- Academic 1 year certificate
- Two year work-ready degrees
- Engineering BS Degree

**Capacity Building ROI**
- K–12
- STEM Education emphasis
- Exposure to industry

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**Sample Populations Served**
- Dislocated Workers
- At-risk incumbent workers
- Underserved populations, such as refugees, immigrants, minorities, etc.
- At-risk Youth
- Veterans--PLA

- Traditional high school STEM pipeline
- Adult learner returning to complete degrees
- Non-credit/credit trainee
- Veterans--PLA

- Traditional STEM high school
Sample Education Pathways

Occupations / Careers
- Operators
- Installers
- Machinists
- Repair
- Technicians
- Technical Maintenance
- Drafter Machinists
- Technologist
- Manufacturing Engineer
- Process Engineer
- Test Engineer
- Field Engineer
- Design Engineer
- Research Engineer
- Field Engineer
- Project Manager

Job Functions
- Operate
- Install
- Repair
- Install, certify, and maintain
- Apply technologies, develop manufacturing processes and monitor quality
- Develop new technologies, design new products

Stackable Credential Education Pathways (tab 4)
• SLCC “clearing house” for education/training partners

• Current state of “academic affairs”

• Leverage and Leadership from education/training partners reflecting industry needs
• Survey to Educational/Training Partners
  ◦ Identify Gaps and Prioritize Planning for ROI
    Workforce Model:
    • Partner and leverage existing resources for efficiency
    • Determine additional needs to fill training gaps
    • Design career/educational pathways
    • Provide best practice for public/private partnerships
• Industry endorsed certifications

• Application of certifications to National Career Readiness Certification (NCRC) through Work Keys

• Customized company Work Keys job profiling and assessment for ongoing certification
- Thoughts?
- Recommendations?
- Additional gaps?