



**NITAS: Validation of Skills Beyond Certification  
Implication for Community College  
curriculum and students**

**Mesa Community College  
A Maricopa Community College**

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Executive Director Business and Industry Institute**

- Who are we:
  - Introduction of Mesa Community College.
  - Introduction of Business & Industry Institute Corporate Outreach Division of the College
- The NITAS story
- Securing WorkPlace experiences
  - Rewards and Challenges
  - Blending Community service as a venue for WorkPlace experiences
- NITAS specializations
  - Current enrollments
  - Future interests
- Conclusion Q&A

- The Maricopa Community Colleges are 10 independently accredited colleges governed by an elected 5 member board. The college district serves approximately 200,000 students, and a geographic radius of 100 miles from the center of Phoenix. The County Population is at 3.0 million.
- Mesa Community College (MCC) is the largest college in the Maricopa Community College District.
  - In 2004, we had 27,834 students enrolled.
  - 37% are full-time students
  - 63% are part-time students
  - The college has 2 comprehensive campuses, a new Downtown Urban campus under construction and 3 centers.
  - Accredited by the Higher Learning Commission of the North Central Accreditation Association, fulfills the mission of a comprehensive college by
    - Awarding two year degrees and certificates through programs that prepare students for transfer to 4 year degree granting institutions
    - Awards two year degrees and certificates in Career and technical programs that lead to employment (Vocational and Technical Education)
    - Provides Continuing education, community service programs

- The Business & Industry Institute (B&I) is Mesa Community College's Corporate-Outreach and Workforce Development Division.
- Serves the College purposes of workforce development, Business and Industry partnerships and Community linkages by:
  - Building partnerships with technology companies and associations to create custom and general training programs
  - Leverage partnerships to inform the broad college curricula, align courses, degree and programs to industry certifications and standards
  - Create custom training programs for local employers
  - Deliver academic degree based programs in Information technology
  - Explore new partnerships and linkages – such and international partnerships -- in progress with PRC(China), Ireland (Athlone College), Netherlands( William Koenig III, College)

- B&I specializing in Information technology curricula offers:
  - Degree focused programs and course offerings in IT specializations – Network Administration, Information assurance, Help Desk Analyst, BioInformatician, Database Administration, Software testing/assurance, Applications development, Home technology integration, Convergence Technology (Voice and Data) specialist
  - Non-credit (not for degree, and or academic credit) courses in vendor certifications, and IT workshops and seminars
  - Partnerships with IT industry partners to adopt and adapt training programs aligned with specific vendor certifications or Industry Certifications (CompTIA, BICSI)

- Profile of students enrolled in Certification and industry Aligned IT programs (degree seeking)
  - 49 % have a college degree (bachelors and or masters)
  - 63+ % are working.
  - 35-40 % are working in an IT related job.
  - 80% are male
  - Median age is around 29-32 years
  - 50 % are seeking a certificate or degree
  - 20% plan on continuing education in a related 4 year degree program
  - 60 % have currently completed or plan on completing a number of industry certifications ( CompTIA A+, Net+, Security +, MCSE, OCP(Oracle), SCJP, CISSP, CCNA, CCNP, CCIE).
- Industry partnerships – training partner
  - Sun MicroSystems, Oracle, Microsoft, SCP
- Industry partnerships – education partner (academic programs)
  - Cisco (Cisco Academy Training center-- CATC for Arizona, New Mexico, Colorado, Utah), Oracle, Microsoft, Novell,
- Academic Degrees offered (2 year degrees, articulated with the Arizona State University BAS degree programs: 60-64 credits of course work)
  - Associate of Applied Science in Network Administration
  - Associate of Applied Science in Information Assurance
  - Associate of Applied Science in BioInformatics (new)
  - Associate of Applied Science in Software Assurance (new)
- Certificates (courses are also accepted as part of the degrees)
  - Network Administration : Cisco certified network Associate, Cisco Certified Network Professional, Novell , Solaris, Linux.
  - Home technology Integration
  - Information Assurance: Network Security, Information Assurance, Cyber Forensics

# The NITAS College Approach

- Mesa Community College uses NITAS™ to manage IT students (*extending into high school*)



"The reason why we're here at Mesa is because you're doing a great job."

- President George W. Bush

photo by Dennis Mikulich Mesa Legend

## **PRESIDENT GEORGE W. BUSH VISITS MCC**

### **PRESIDENT PARTICIPATES IN CONVERSATION ON JOB TRAINING AND THE ECONOMY**

Mesa Community College (MCC) was pleased and honored to host The President of the United States, George W. Bush on Wednesday, January 21, 2004. To view the media coverage MCC received over the last couple of days, please refer to the following links:

- **The NITAS story**

- Involved in adopting the NITAS system as part of our programs since Jan 2004.
- Why?
  - Consider NITAS to provide a significant advantage for our students
  - NITAS central to emerging assessment initiatives in Assessment of Student Learning, Assessment of Program and Institutional Effectiveness
  - Influence and inform the curriculum and faculty preparation
- The Adoption process
- Current Status
- Future Expectations

## NITAS key elements of value to MCC

- **NITAS deploys**: an apprenticeship/internship model using job descriptions and skills standards defined by the industry
- **NITAS implements**: A contextualized approach to on-the-job learning:  
**classroom training+demonstrable skills+mentoring = competent worker**
- **NITAS delivers**: A more productive employee in a shorter amount of time (12% more productive)
- **NITAS provides**: A permanent on line career-ID for students. (follows the student irregardless of employment)



## **NITAS Provides the Foundation & Capstones**

**Infrastructure to Document Experience**

**Structured Coaching & Competency Validation**

**Instructor-lead  
Classroom  
Instruction**

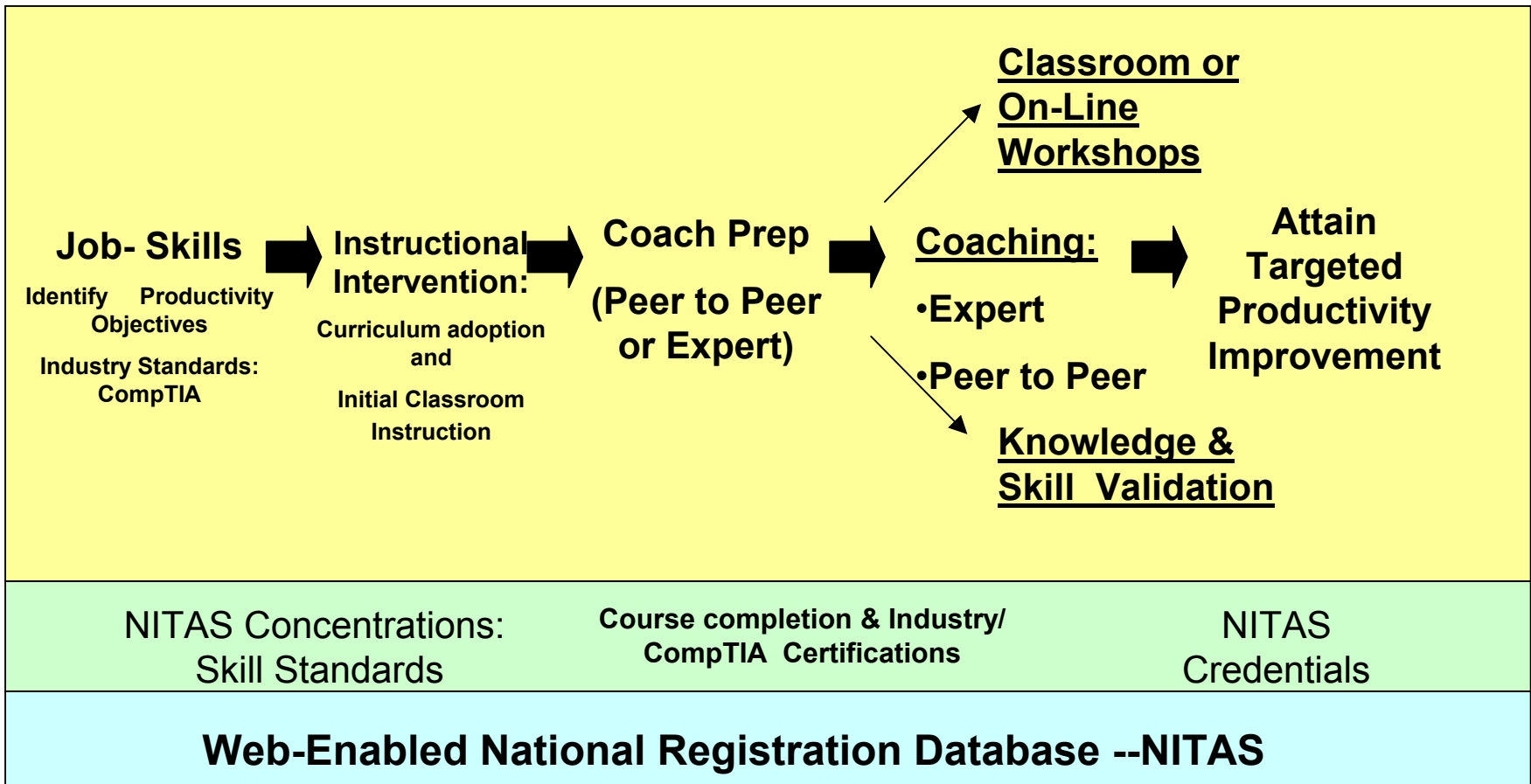
**On-the-Job  
training**

**Industry  
Certifications**

**Industry-specified skill standards**



# Model of 21<sup>st</sup> Century Apprenticeship NITAS Corporate Training Model



## **NITAS & the MCC Learners/ Students**

- Validation of skills beyond certification and academic transcripts
  - Certifications and academic transcripts may answer the question “Show me the Learning”
  - Resumes answer the question “ Show me the work history”
  - NITAS can answer the question “Show me the knowledge and Show me the work!”
- MCC considers the adoption of NITAS as providing the following advantages for our Learners/ Students
  - Providing students with work-place learning, that has a formal employer based validation of students knowledge and work skills
  - Providing students with life-long credentials (updated as student explores new and advanced skills)
  - Students skills validation becomes part of portfolio of accomplishments
  - Students gain advantage in answering the questions “show me the knowledge and show me the work”– significant advantage in an increasingly competitive job market.

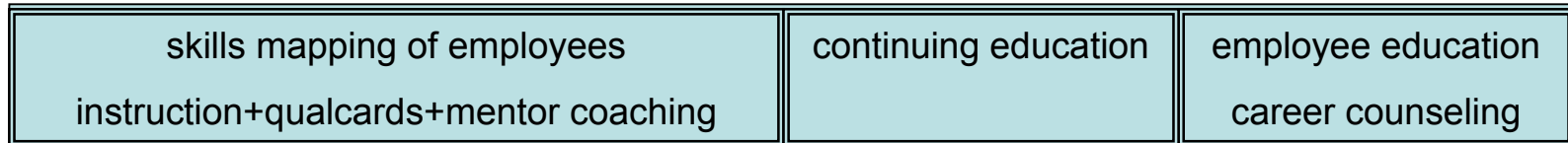
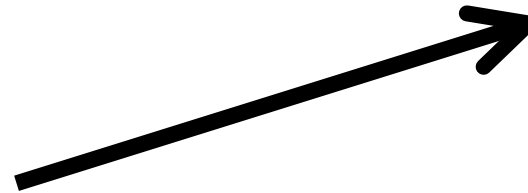
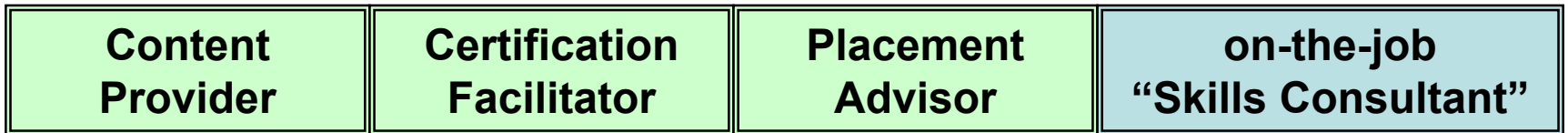
## NITAS & Assessment at MCC

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- **Assessment of student learning: emerging trends**
    - **Portfolio of work**
      - **Challenges to documenting work-skills and work products in areas such as computer repair, network technician, and or information security.**
      - **NITAS provides documentation of work-skills validated at workplace-experiences. Enhances adoption of portfolio's in assessment**
  - **Documenting relevance of curriculum to job market**
    - **Learners show learning – Certification and course assessment**
    - **Program assessment – includes NITAS data to validate work-place skills demonstrated as part of program experiences**
    - **Institutional effectiveness– are we preparing students for work, through appropriate use of resources to support programs.**

- NITAS™ and the DoL challenges Education institutions to extend their “mission”

### Traditional Education Role

### Extended Education Role





## **NITAS – Adoption process**

1. Inform and Influence the curriculum
  - a. Curriculum mapping --Course mapping to different concentrations
  - b. Gap analysis - course modifications, or new course development
  - c. Content selection for courses (e-learning modules, textbooks, labs assignments.. Etc)
2. Faculty credentialing
  - a. Upgrading certifications
  - b. NITAS training as coach/ mentors for students
  - c. Consensus building for standards based course assessment rubrics and measures
3. Inform and enroll students
  - a. Register for concentrations (required enrollment in Generalist concentration)
  - b. Recruit senior students for enrollment in additional concentrations
4. Secure internship and work-place assignments for students



## Example of Levels and Credentialing Criteria *IT Project Management Concentration Example*

Level	Required Hrs of PM Classroom Instruction	Required Hrs of OJL	Required Qualification and Skill Validations	Required Certifications
Level 1-Entry	24 hrs	---	5 items	---
Level 2-Full Working	60 hrs	2000 hrs in IT Project Management	42 items	IT Project+ or PMP
Level 3-Journey	60 hrs	2000 hrs in IT Project Management	40 items	
<i>Total</i>	<i>144 hrs</i>	<i>4000 hrs in IT project management</i>	<i>87 items</i>	<i>IT Project + or PMP</i>



## Example of Curriculum mapping

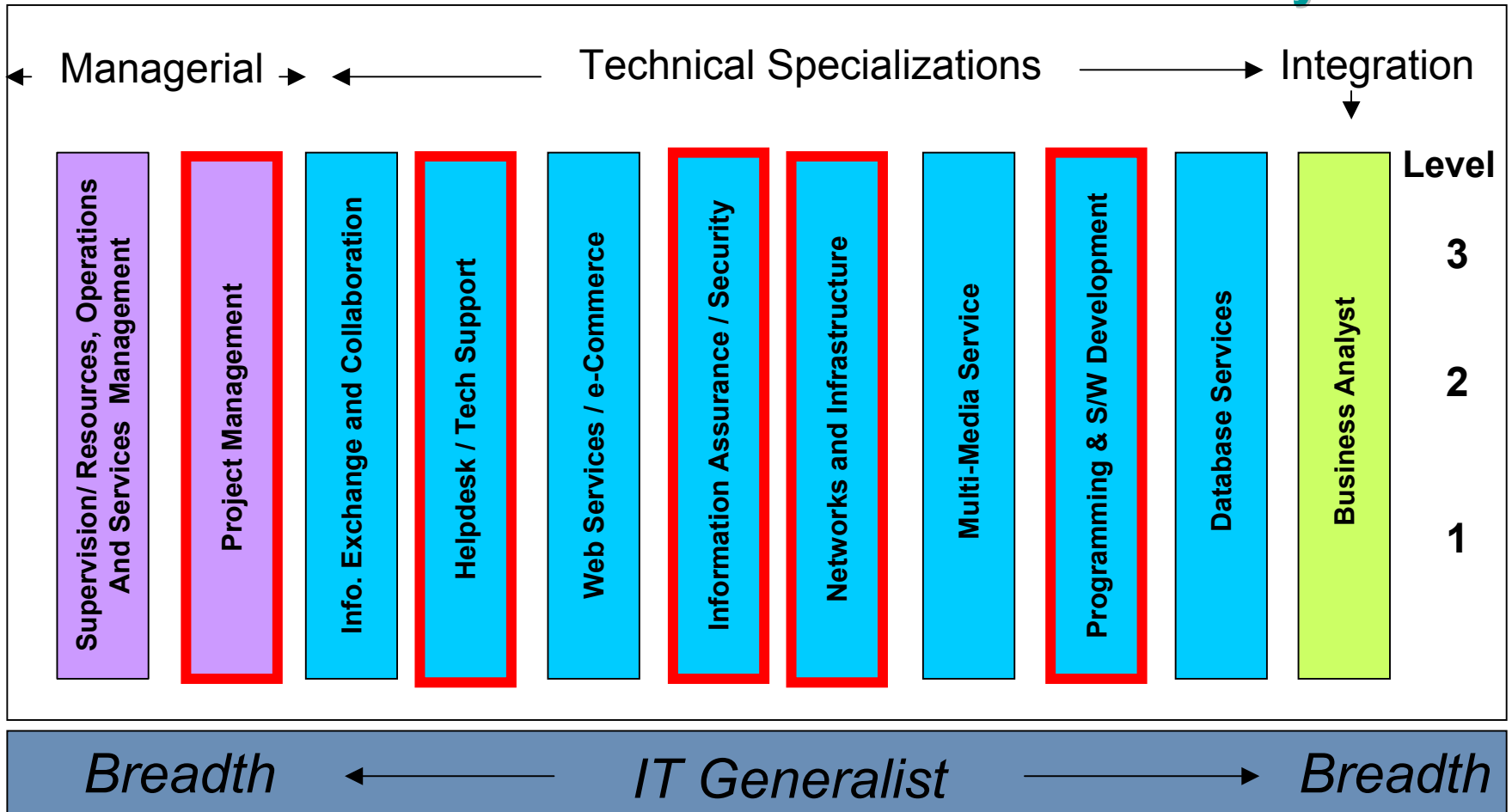
### *IT Generalist Concentration Example*

<b>Courses</b>	<b>Classroom Hours</b>	<b>Required Certifications</b>
BPC170 Microcomputer repair and maintenance	60 hrs 3.0 credits	A+ certification
<b>BPC110</b> <b>CIS105</b> Introduction to computers (desktop products, internet, history and general use of computers)	60 hrs 3.0 credits	none
CIS190 Introduction to Networking	60 hrs 3.0 credits	Net +
<i>CIS109 AM</i> Operating systems	25 hours 2.0 credits	<i>none</i>
BPC171 – Computer Repair lab class	40 hours 1 credit	none
OJL or course labs as defined by NITAS concentrations		



# MCC's Adoption of

# NITAS Framework of Skill Standards and Proficiency Levels



## NITAS – Current Status

1. Inform and Influence the curriculum
  - a. Curriculum mapping completed for IT generalist and Help desk concentrations
  - b. Faculty credentialing – Strong faculty base for implementing concentrations
  - c. Faculty (4 ) trained as NITAS coach/ mentors for students
  - d. In Progress-Consensus building for standards based course assessment rubrics and measures
2. Inform and enroll students
  - a. 46 apprentices registered as IT generalists.
  - b. Fall 2005 recruitment for other concentrations in progress
3. Secure internship and work-place assignments for students:
  1. Multiple challenges
    1. Job Market (in US) not as strong when we first began with NITAS
    2. Job market for internships more positive in the past three months
    3. Address alternative ways for providing work-place experiences



## **NITAS – Alternative approaches to providing workplace experiences**

Alternative approaches to obtaining workplace experiences:

1. Recruiting employers of enrolled students (30-40% working in the field) to become a NITAS Sponsor.
2. Recruiting Non-Profit agencies to become a sponsor– extending the Service learning program
  1. Service learning is the donation of students time for community based projects that extend their learning in the classroom.
  2. MCC has over 200 non-profit registered service learning sites.
  3. Launched recruitment effort Non-Profit sites to serve as workplace experience for students, providing IT support for these organizations
  4. 7 sites will enroll beginning in July of 2005.
  5. Expect to place from 15-20 students each semester at these sites.
3. Recruiting new Employer Sponsors: DHL internship program in development. A CompTIA member

## NITAS – Future Plans

1. Curriculum adoption – expand to other concentrations
  1. Software development (Software testing)
  2. Information Assurance
2. Inform and enroll students
  - a. Marketing advantage to include NITAS as part of program
3. Secure internship and work-place assignments for students:
  1. Add new non-profit sites
  2. Recruit additional employers





**Thank You for Attending!**  
**Q & A : Discussion**