

# ARIZONA SKILL STANDARDS ASSESSMENT SYSTEM

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## 2010 Annual Report

presented to

**Arizona Skill Standards Commission**

and

**Arizona Stakeholders Committee**

**July 18, 2010**



Arizona Department of Education  
Tom Horne, Superintendent of Public Instruction



Arizona Department of Education in partnership with Arizona State University

# ARIZONA SKILL STANDARDS ASSESSMENT SYSTEM

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Annual Report, July 18, 2010

## LETTER OF TRANSMITTAL

The Arizona Career and Technical Education System was conceived in 2006 in response to both state and federal legislation requiring students to pass end-of-program assessments leading to industry certification. The Arizona Department of Education/Career and Technical Education (CTE) Section took the lead in forging a partnership with Arizona State University/Workforce Education and Development Office to design and implement key system components to not only meet legislative requirements but to provide “added value” to all users of the system: business and industry, districts, schools, postsecondary institutions, and most especially to students and adults seeking entry into the workforce.

The 2010 Annual Report contains background material dating to the inception of the Arizona Skill Standards Assessment System; accomplishments, results, and ongoing processes of a continuous improvement work cycle; and projections for next year and beyond. Additional documents that provide further elaboration on various items have been added as appendices.

Just this year, over 600 business and industry representatives, teachers, and administrators have been directly involved in various facets of assessment development – from leadership roles through standards validation and item development. Over 15,000 CTE students have participated in the spring 2010 online, end-of-program assessments offered in 49 program areas. Over 12,000 CTE students were awarded certificates and transcripts documenting their skill attainment, readying them for their next steps on their career journeys.

The establishment of the Arizona Skill Standards Assessment System is having salient effects on all those involved. For students, the immediate delivery of assessment results and the Commission’s awarding of certificates and transcripts are fostering a culture of more engaged and responsible learners. For teachers and administrators, the analyses of assessment results and the active involvement in assessment development are contributing to overall improvement of classroom instruction in all parts of the state. Increasingly, Arizona business and industry leaders are witnessing the value of documented skill attainment.

This year marks “a coming of age” for the Arizona Skill Standards Assessment System, the year that marked the implementation of the state’s own online delivery system. We wish to thank the Commission, the Stakeholders Committee, teachers, administrators, and business/industry representatives who have generously given time and expertise to make this year a banner one.



Barbara Border  
Deputy Associate Superintendent and  
State Director of Career and Technical Education  
Arizona Department of Education



Margaret A. Mangini, Ed. D.  
Executive Director  
Arizona State University, University College  
Workforce Education and Development Office

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## 2010 Annual Report

### Arizona Skill Standards Assessment System

#### I. BACKGROUND

The short-three year history of the Arizona Skill Standards Assessment System is best understood through the following: legislation as a call to action; characteristics of the vision, system overview and decision-making entities.

##### LEGISLATION

The Arizona Skill Standards Assessment System was established in response to both federal and state legislation.

The system is being developed to assist local districts in meeting the requirements of the Federal Carl D. Perkins Act of 2006, which requires that secondary and postsecondary CTE programs lead to industry certifications. The US Department of Education has identified valid assessments as industry, third-party assessments or state assessments that meet the requirements of this law. Each state must identify the percentage of students at secondary and postsecondary, separately, that will take these assessments each year and the percentage of each that will pass these assessments. These are part of the performance measures that the US Department of Education negotiates each year through the five year period of this Act.

The Arizona Joint Technological Education District (JTED) legislation of 2006 requires that JTED students pass end-of-program assessments leading to industry certification. The system is being developed to assist JTEDs in meeting accountability requirements of the 2006 state legislation.

##### VISION

From its conception, the Arizona Skill Standards Assessment System's vision was characterized as follows:

- Statewide
- Assessments based on industry-validated standards
- Valued by stakeholders – business, education, students
- Online delivery with “real time” feedback
- Comprehensive – no cost to students
- End-of-Program
- Expandable
- Credentials students

## **SYSTEM OVERVIEW**

The Arizona Department of Education (ADE)/Career and Technical Education (CTE), in partnership with Arizona State University (ASU)/Workforce Education and Development Office (WEDO), has joined forces with others to establish a skills assessment system that meets the needs of Career and Technical Education in Arizona. The outcome ensures industry-validated standards for all CTE programs and an online skills assessment delivery system that serves secondary, comprehensive Career and Technical Education, Joint Technological Education Districts, Community Colleges, and the Arizona Department of Economic Security One-Stop Centers (APPENDIX A).

## **DECISION-MAKING ENTITIES**

The Arizona Skill Standards Assessment System was structured with the following decision-making entities:

- The Arizona Skill Standards Assessment Commission  
Arizona business and industry leaders who hire a skilled technical workforce
- Stakeholders Committee  
Local education administrators and instructional staff from secondary and postsecondary education and Workforce Investment Act (WIA) representatives
- Industry Associations  
Representatives of trade groups, professional associations, unions, and state certifying agencies
- Validation Committees  
Incumbent workers from Arizona businesses and industries representing occupations from regions across the state
- Item Development Committees  
Secondary and postsecondary program instructors

The functions of each of the system's decision-making entities are described in APPENDIX B.

# ARIZONA SKILL STANDARDS ASSESSMENT SYSTEM

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## II. ASSESSMENT LEADERSHIP GROUPS

A structure of leadership was developed to bring representation of all groups who have interest in advancing a more knowledgeable and skilled workforce for Arizona's economic future. Major leadership functions for the Arizona Skill Standards Assessment System reside in two groups.

### THE ARIZONA SKILL STANDARDS COMMISSION

Co-chaired by Tom Horne, Arizona Superintendent of Public Instruction, and Carolyn Warner, President of Corporate Education Consulting and former Arizona Superintendent of Public Instruction, the Commission is composed of over 40 Arizona business and industry leaders (APPENDIX C). The Commission presides over the Arizona Skill Standards Assessment System and performs the following functions:

- Approve industry-validated standards that have been established.  
*The Commission officially accepted and adopted the state CTE standards for Fire Science that were presented by the Validation Committee led and endorsed by the Arizona Fire Marshal's Office (January 27, 2010).*
- Provide certificates to students who pass the assessments  
*The Commission awarded 12,137 CTE students certificates and transcripts documenting skill attainment along with a congratulatory letter signed by the Commission Co-chairs (APPENDIX J) to those who successfully passed assessments.*
- Serve as a conduit to business and industry  
*Some members of the Commission served on Validation Committees and/or provided contacts for others to serve as needed.*

The Commission met on the following dates:

July 19, 2009

January 27, 2010

Tucson, Westin La Paloma

ASU Downtown Phoenix Campus, Cronkite School

Fall meetings of the Commission were delayed because of the stringent schedule for implementation of the ADE/CTE online delivery system. Minutes of Commission meetings are archived.

### STAKEHOLDERS COMMITTEE

Co-chaired by Barbara Border, ADE/CTE, and Maggie Mangini, ASU/WEDO, the Stakeholders Committee is composed of over 40 CTE administrators and instructional leaders from secondary and postsecondary education, along with Workforce Investment Act (WIA) representatives (APPENDIX D). The functions of the Stakeholders are as follows:

- Develop administrative processes  
*After considerable study and deliberation, this year the Stakeholders developed assessment pass score recommendations and a standing committee structure for the future.*

- Ensure the usability of the assessment system  
*The Stakeholders provided leadership and support for all phases of the establishment and implementation of the ADE online delivery system.*
- Assist with the delivery of assessments  
*The Stakeholders reviewed and approved calendars for assessment delivery which included meetings for item analyses and development.*

The Stakeholders met on the following dates:

July 19, 2009	Tucson, Westin La Paloma
December 16, 2009	Phoenix, ADE/CTE
February 5, 2010	Phoenix, ASU/Mercado
March 25, 2010	Mesa, EVIT
June 16, 2010	ASU Downtown Phoenix Campus, England Building

Minutes are archived for each of the meetings.

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## III. ADE/CTE ASSESSMENT DELIVERY SYSTEM

This year marked the development and implementation of the state's own ADE/CTE online assessment delivery system.

### ONLINE DELIVERY SYSTEM PROJECT

During the school year 2009-2010, the Arizona Department of Education (ADE) Career and Technical Education (CTE) Section in partnership with the Arizona State University Workforce Education and Development Office launched the Arizona CTE Assessment System on the Arizona Department of Education server. Arizona CTE assessments were previously administered by a private vendor. Beginning in school year 2009-2010, the Arizona CTE Assessment System is now owned by the State of Arizona. The test application and data are housed at the Arizona Department of Education.

The CTE Assessment System is a secure application that follows state-established security principles and requirements. All assessment data reside on the ADE server. It is available for districts to access the system on the ADE home page. Districts access this link to register students for assessments, conduct assessments, and access summary reports, 24-7. After assessments are completed, the assessment system also is used to generate individual student transcripts and certificates.

The CTE Assessment System is written to ADE IT specifications and takes advantage of the MS.NET framework. The technical specifications are commonly available at each of the school districts with only a few districts having reported any technical difficulties which were resolved. It is maintained and supported by the Arizona Department of Education Information Technology Project Manager, Bob Lee.

This year's development and successful implementation of the state-owned online delivery system marks a major milestone for the Arizona Skill Standards Assessment System. The members of the Project Team engaged in intense collaboration throughout a year of deadlines as evidenced in APPENDIX E.

### END-OF-PROGRAM ASSESSMENTS

This year, 49 end-of-program assessments were delivered via the ADE/CTE Assessment Delivery System. What started with 13 end-of-program assessments in the spring of 2008 has now been increased more than three-fold within two years (APPENDIX F). The process steps ensure continuous development and improvement of assessments with plans for online delivery of 51 end-of-program assessments in fall 2010.

The CTE assessments are designed for CTE students who are in their final Carnegie Unit of the state-identified sequence of courses for a specific CTE program. Some Arizona students complete more than one CTE program and, therefore, take two assessments.

## USER TRAINING AND REGISTRATION

Numerous training webinars were provided to districts in preparation for Spring 2010 assessments. A CTE Assessment Administration Guide was created to provide additional detail and remains available online as a resource for districts.

As district administrators prepared to register their students, the first step was to set up permission levels for various testing administrators including CTE teachers. The system supports an easy upload for student registration as well as re-registration. Easy edit features make the system user-friendly for district staff.

## ASSESSMENTS AND RESULTS

During school year 2009-2010, there were two four-week windows for districts to conduct assessments in 49 of the CTE program areas. The first assessment window was in March when students took the practice (diagnostic) assessment. Upon completion of their Practice Assessments, the students received a printed copy of their success on each of the standards and measurement criteria to use as a study guide prior to taking their Final Assessment at the end of the school year. Their teachers automatically received an email message with the same information to provide direction for the students to prepare for their final assessments. Analysis of the data revealed that, in most program areas, student scores increased 5-10 percent when they took the Final Assessment in May.

One of the unsigned comments received from a CTE educator on a post-assessment survey states:

*The reports are a great tool to assist instructors in identifying and adjusting curriculum to minimize instructional gaps or to re-teach certain concepts.*

In May, Final Assessments were available for students in the 49 CTE program areas. Over 15,000 CTE students who had completed the CTE program sequence participated in Spring 2010 Final Assessments. Over 12,000 students passed their assessments. The results of the Final Assessments are presented in APPENDIX G. Comments received from the field, such as the one below, indicate a successful implementation.

*Hats off to you! This year's testing was successful without so much as a hitch. And we just received the CTE Assessment Certificates and they are very nice. Thank you for your patience in years gone and "congrats" on a job well done by ADE with the Certificates.*

**Diane Fletcher**  
**Miami Unified School District**  
**Miami, Arizona**

Students tested in 44 of the 49 available program assessments. One-third (4,920 students) of all students participating (15,114) were in three program areas: Culinary Arts (2,595); Early Childhood Education (1,240); and Business Management and Administrative Services (1,085). There are seven programs that each had between 500 – 1,000 students assessed: Professional Sales and Marketing (918); Nursing Services (859); Automotive Technologies (854); Sports Medicine and Rehabilitation Services (580); Advanced Construction Technologies (578); Welding Technologies (550); and Law, Public Safety and Security (532). Together, students assessed in these seven programs constituted approximately one-third of the total number assessed.

The remaining one-third of students assessed participated in 34 different program assessments. The five assessments not used in spring 2010 reflect new and emerging programs.

Overall, four out of five (80%) of students assessed passed final assessments.

## **SPECIAL POPULATIONS RESULTS**

The disaggregation of Final assessment results for special populations is required for accountability reporting. APPENDIX H presents data for the following: economically disadvantaged individuals; individuals with disabilities; individuals with limited English proficiency; and single parents. The remainder are designated in the category of “no special population.” The analysis of special populations by percent who passed the assessments indicates the following: single parent (93.8%); economically disadvantaged (75.4 %); limited English proficiency (59.6%); and individuals with disabilities (55.3%). Over 80% (84.7%) of those designated by “no special population” passed the assessments.

## **DISTRIBUTION OF TOP SCORES**

Analysis of top scores by program, district, and school indicates a wide distribution throughout the state. The data presented in APPENDIX I cite 40 districts and three JTEDs as having “top scores” in one or more program areas.

## **CERTIFICATES AND TRANSCRIPTS**

After the close of the assessment window on May 14, 2010, files were created to generate and print certificates and transcripts for all students who passed their assessments. The ADE Print Shop printed certificates, transcripts, and congratulatory letters for 12,137 students (APPENDIX J). They were delivered to districts the following week. Many districts used the certificates and transcripts for celebratory events including graduation. A sample of comments indicates the certificates and transcripts were well-received.

*I wanted to let you all know how impressed I am with the Certificate of Arizona Skill Standards. The end-of-program assessments are great and the transcript of the standards is a wonderful resume tool and something to take to job interviews. The various elements that are succinctly listed that the students have accomplished are excellent. I am very thankful that CTE is so well-represented at the state level and believe that we are ahead of the game. Thanks fro all you do to help us prepare our students for the world of work and college.*

**Betsy Parker, Superintendent  
Western Arizona Vocational Education**

*Wow...what a great set of accomplishments! Congratulations to all who made this set of initiatives a success...this is one for the ages.*

**Donald J. Houde, Chief Information Officer  
Deputy Associate Superintendent for Information Technology  
Arizona Department of Education**

*We have received our certificates and they are beautiful. CTE program accountability and professional representation with these certificates affirms the CTE Mission. Thank you for your hard work. We got them in time before school is released for the summer. I can just imagine all the hours this takes. You make us look good. Thank you.*

**Irma Fontes, CTE Local Director  
Nogales Unified School District**

*My students were very excited to get them. I had the school principal hand them out to the students and congratulate each on a job well done. All of my students passed the assessment.*

**Unsigned survey comment**

## **ASSESSMENT REPORTS**

All assessment reports are accessible to districts at the numerous levels: student level, teacher level, high school site level, district level, and JTED level. The four reports available from the CTE Assessment System are listed below:

1. Student Status Report shows a breakdown of measurement criteria with how many answers were correct, incorrect, and skipped.
2. Standards and Measurement Criteria Results Report shows a breakdown of measurement with a graph of percentage correct.
3. Score Distribution Report is a summary of assessment date regarding scores, time on assessment, and a cumulative line graph indicating percent of students at score levels.
4. Total Results Report is a download of assessment results and complete student information as CSV file.

Reports may be accessed by program, by school, and with any or all of the special population filters included in the system. While individual student assessment results are made immediately available to the student and a designated teacher, aggregate assessment reports are useful in identifying program strengths and areas for improvement. An example of a statewide report indicating program standards and measurement criteria and how the total students performed on the assessment is presented in APPENDIX K.

## **POST-ASSESSMENT SURVEY**

A Zoomerang survey was conducted with Assessment Coordinators after the close of the spring assessment window. The results provided input for continuous improvement in six areas: communication, training, connectivity, conducting the assessments, accessing the reports, and certificates and transcripts. The results showed improvement in all areas from the prior year, particularly in the area of connectivity. All technical support was provided to districts by the ADE IT and CTE staff. The results of the survey indicated a high level of satisfaction with ADE technical support.

# ARIZONA SKILL STANDARDS ASSESSMENT SYSTEM

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## IV. STANDARDS VALIDATION AND ASSESSMENT DEVELOPMENT

The work cycle for continuous improvement of the Arizona Skill Standards Assessment System is year-round and involves planning, communication, management, and the contributions of literally hundreds of others.

### ASSESSMENT CALENDAR

The year's Assessment Calendar (APPENDIX L) indicates work that began in July 2009 and continued heavily into fall 2009 with a series of "Super Saturday" meetings with teachers, scheduled to prevent loss of instructional time with students. The calendar also indicates not only Standards Validation (11) and Item Development (74) meetings, but also meetings with the Commission, Stakeholders, and Local Directors as well as webinars for training users of the new online system and combined meetings of the ASU and ADE facilitation teams to plan and implement CTE Teacher Institutes in June 2010. In all, the calendar encompasses some 100 formal meetings with all that entails: planning, communication, logistics, material preparation, food, parking, and follow-up.

### STANDARDS VALIDATION COMMITTEES

Arizona businesses and industries contribute to the success of the Arizona Skill Standards Assessment System through their service on Standards Validation Committees. Without industry-validated standards, assessments cannot be created. This year, 11 Standards Validation Committee meetings were conducted with some results of their work being presented to the Commission for acceptance and adoption, other results to be presented to the Commission, and still other as works-in-progress.

This year, business and industry business and industry participants contributed over 450 hours to the standards validation process. APPENDIX M contains the committees, dates, and participants, all of whom received certificates of appreciation for their contributions to the assessment system.

### ITEM BANK DEVELOPMENT AND MANAGEMENT SYSTEM

To develop an assessment item bank in each of the program areas that contain valid and reliable items, a management system and item development tool has been developed at ASU. The Assessment Team receives assessment results from the ADE/CTE Delivery System and to develop criterion-referenced assessments that contain valid and reliable items, aggregate student performance on each item is analyzed by the Assessment Team and groups of teachers as content experts. Each assessment item is analyzed for item difficulty, item discrimination, and distractor pattern. APPENDIX N contains further information on item analysis and the contents of the Management System: catalog of assessments; sample program indicating standards, measurement criteria, items; and a sample of one assessment item.

An Assessment Management System and Assessment Item Development Tool has been in development and use over the past year. The system is providing a repository of assessment items for each program. After each administration of assessments, the empirical data on actual performance of the item allows the

Assessment Team and content experts to tag items in four categories: Active (items that have successfully met criteria for difficulty and discrimination); Edited (items that have been modified or changed); New (items that have recently been created and for which there are no performance data); or Retired (deemed unsuitable for use). The Management System is designed to trace the history of each assessment item within the many item banks. Other features are in development for expanding item modalities (scenarios), for encompassing employability standards and measurements, and for tagging each item using Bloom's Taxonomy for underlying knowledge/domains and cognitive processes.

The contents of the 49 Item Banks within the Management System range in size from 60 items to almost 400 items, for the total number of items exceeding 7,000.

## **ITEM DEVELOPMENT COMMITTEES**

Secondary and postsecondary CTE teachers serve as content experts on Item Development Committees. This year, 455 educators participated in the item development and item analysis process. The 74 meetings extended throughout the year – with many dates being Saturdays or in the summer to prevent loss of instructional time. Each of the 455 participants engaged an average of six hours per meeting totaling over 2,700 hours of time-on-task. APPENDIX O contains the names and schools of those participating from every part of Arizona as well as the programs and meeting dates.

The expertise of Arizona CTE teachers is contributing to the continuing improvement of CTE Assessments. Each participant was awarded a certificate of appreciation documenting the hours each has contributed to the improvement of the Arizona Skill Standards Assessment System.

## **CTE TEACHER INSTITUTES**

A new feature was added this year for the improvement of CTE Assessments: CTE Teacher Institutes. With the combined efforts of the ASU and ADE Assessment Team, four two-day summer institutes were conducted in 33 CTE program areas. Some 180 teachers from all parts of Arizona assembled in June 2010 at the ASU Downtown Phoenix Campus and worked on analyzing student assessment results, modifying items for future use, and creating new items to build item banks for each program.

A community-of-practice was formed for participants in each of the program areas. An opportunity for applying technology to a "virtual community-of-practice" was extended to all program areas. Twenty-eight of 33 groups accepted the invitation to extend their work, which will be implemented and reported on during the next year.

APPENDIX P contains further information on the CTE Teacher Institutes, a practice which is being reviewed for continuation, contingent upon budget limitations, resources of time, and need for further development.

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## V. POSTSECONDARY ASSESSMENTS

Community colleges receiving federal Perkins funding for programs are subject to providing documentation of end-of-program skill attainment, similar to secondary institutions. A sub-committee of the Stakeholders Committee, chaired by Mary Vanis of the Maricopa Community College System, has been formed to review postsecondary assessments. The three-year plan for assessment of community college programs funded under the Carl Perkins Act is presented in APPENDIX Q.

# ARIZONA SKILL STANDARDS ASSESSMENT SYSTEM

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## VI. PROJECTION FOR 2010-2011

To continue the advancement of the Arizona Skill Standards Assessment System, an action plan for reaching the 2010-2011 goals is being implemented. In addition to a progress report on processes and systems in continuing development and implementation, the 2011 Annual Report will report on the following:

- Employability skills for a 21<sup>st</sup> century workforce  
*identification, validation, measurement using scenarios developed with assistance from Arizona business and industry*
- International benchmarking of standards and skills  
*review of standards and skills against European Union (EU) standards*
- Review of standards by Arizona business and industry for potential alignment with international standards
- Additional Professional Association endorsements of standards
- Inclusion of more CTE program areas with assessments  
*Precision Machining, Hospitality Management, Multimedia Technologies, and others contingent upon need and resources*
- Improved validity, reliability, and interpretation of assessments with assessment items categorized using Bloom's Taxonomy
- Expanded postsecondary use and accessibility of assessment system for Arizona community colleges
- Pilot of performance task assessment captured and transmitted via applied technology and scored by occupational experts using a rubric developed specific to the task being assessed
- Continuing system development and online delivery of CTE assessments according to assessment overview and timeline presented in APPENDIX R.

### 2010-2011 Assessment Windows

- Fall 2010      November 1 through December 3, 2010
- Spring 2011    April 4 through May 5, 2011

Here's to a new year of continuing progress for the Arizona Skill Standards Assessment System.

## **APPENDIX A**

### **System Overview**

# ARIZONA SKILL STANDARDS ASSESSMENT SYSTEM

## System Overview

**The Who.** The Arizona State University is working in partnership with the Arizona State Department and Corporate Education Consulting, Inc. to establish a skills assessment system that meets the needs of Career and Technical Education in Arizona.

**The What.** The outcome ensures industry-validated standards for all career and technical education programs and an online skills assessment delivery system that serves secondary comprehensive Career and Technical Education, Joint Technical Education Districts, Community Colleges, and the Department of Economic Security One-Stop Centers.

**The Why.** In 2006, Congress reauthorized the Perkins legislation that requires accountability for industry-validated technical skills for all Career and Technical Education (CTE) Programs. In the same year, the State of Arizona enacted legislation for Joint Technical Education Districts (JTEDS) that requires accountability for program-specific, industry-validated skills attainment for all students.

**The How.** The Arizona Skill Standards Commission is composed mainly of business and industry leaders, with additional representation from government, education, labor, and other key organizations. The Commission verifies the validity of the standards, ensures consistent documentation across the state, and works with the business/industry community to provide students with certificates detailing their skill attainment. Occupational-specific committees, composed principally of incumbent workers, assemble to validate standards and measurement criteria for CTE programs. Teams composed principally of educators assemble to adapt, adopt, and develop test items related to the standards and measurement criteria for CTE programs. A Stakeholders Committee, represented by the JTEDS and CTE program instructors and administrators, provides input and support for the implementation and sustainability of the assessment system.



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## **APPENDIX B**

### **Decision-making Entities**

# Arizona CTE Skill Standards and Assessment System

Arizona Department of Education in partnership with Arizona State University

## Decision-making Entities

### ◆ **The Arizona Skill Standards Assessment Commission**

Co-chaired by Superintendent Tom Horne and Carolyn Warner, President, CECi

■ *Arizona business and industry leaders who hire a skilled technical workforce*

- Approve industry-validated standards that have been established
- Provide certificates to students who pass the assessments
- Serve as a conduit to business and industry

### ◆ **Stakeholders Committee**

■ *Local education administrators and instructional staff from secondary and postsecondary education and WIA representatives*

- Develop administrative processes
- Ensure the usability of the assessment system
- Assist with the delivery of the assessments

### ◆ **Industry Associations**

■ *Representatives of trade groups, professional associations, unions, and state certifying agencies*

- Endorse program standards, measurement criteria, and assessments
- Make recommendation to the Arizona Skill Standards Commission for the acceptance and adoption of industry-validated standards

### ◆ **Validation Committees**

■ *Incumbent workers representing occupations from regions across the state*

- Review, revise, and develop standards to meet business/industry needs
- Engage in vetting standards with others in the field
- Assist in securing endorsements from professional associations and agencies

### ◆ **Item Development Committees**

■ *Secondary and postsecondary program instructors*

- Develop assessment items linked to industry-validated standards and measurement criteria
- Review psychometric analyses of item performance for further development of item banks and assessments
- Engage in ongoing professional “communities of practice”

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Since 2008, more than 500 business and industry representatives, teachers, and administrators have been involved in various facets of system development from leadership roles through standards validation and item development. In 2009-2010, 76 business and industry representatives served on Standards Validation Committees; 455 teachers and leaders served on Item Development Committees.

## **APPENDIX C**

**Arizona Skill Standards Commission**



Arizona Department of Education and Arizona State University  
Arizona Career and Technical Education  
Skill Standards Assessment System



**Arizona Skill Standards Commission**

**2009-2010**

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Arizona Career and Technical Education  
Skill Standards Assessment System



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## **APPENDIX E**

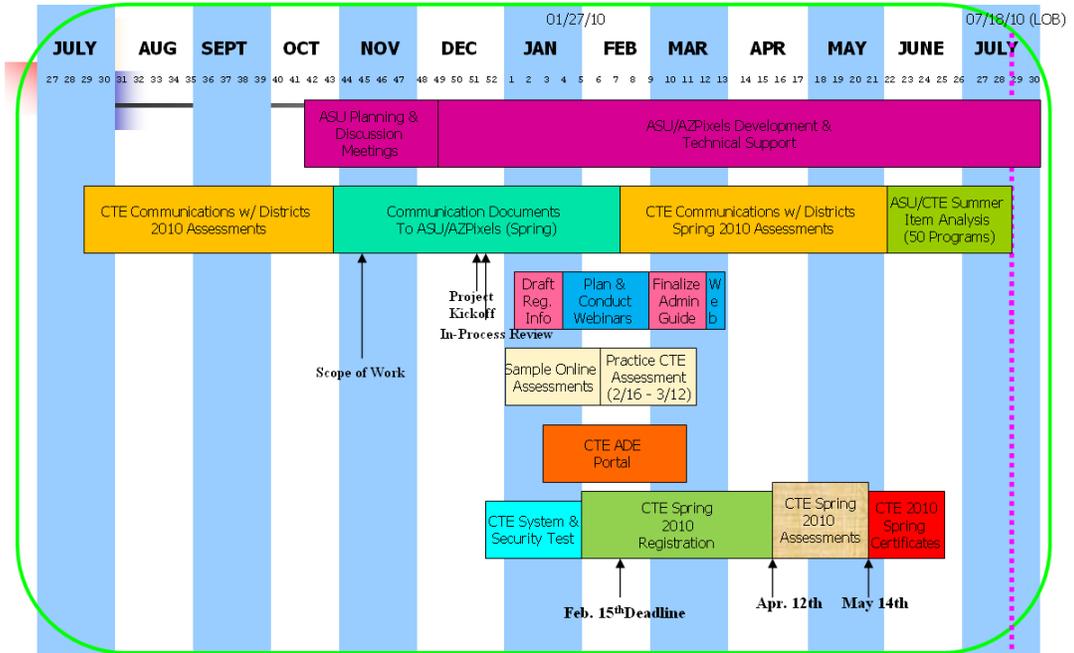
### **ADE/CTE Online Delivery System – Project Team, Timeline, and Milestones**

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# CTE ASSESSMENT PROJECT TIME LINE

Big Picture: 2009/2010



Bob Lee

4

18 July 2010

## 2010 CTE ASSESSMENT PROJECT MILESTONES

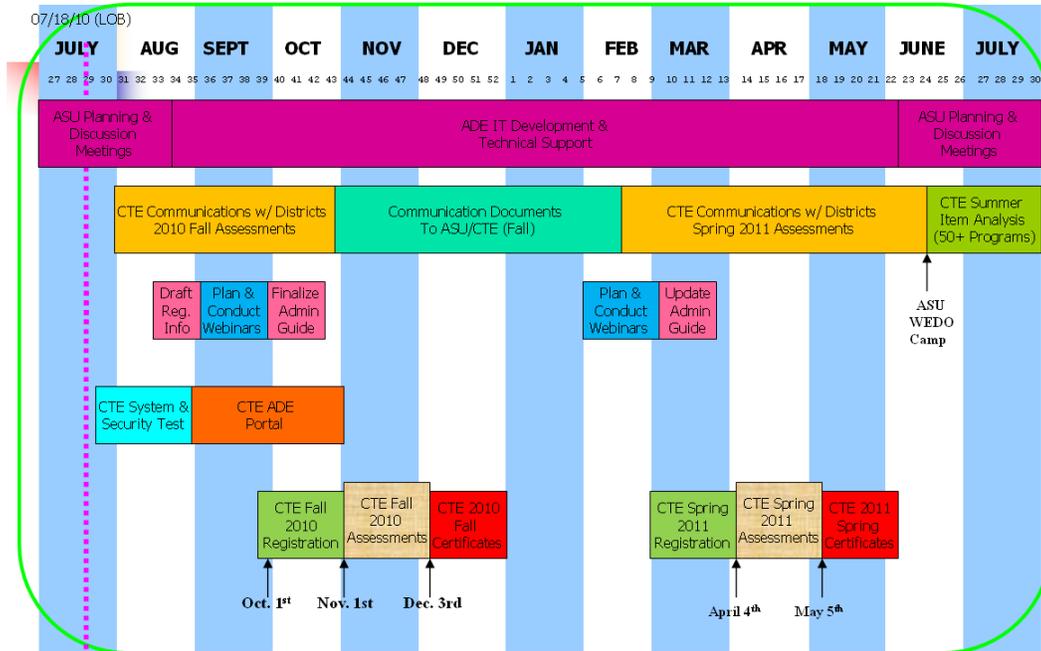
<u>Description</u>	<u>Plan</u>	<u>Actual</u>
CTE Assessment Review	Sept 10	Sept 10
Review Request with ASU	Oct 7	Oct 7
Communicate CTE Test Plans	Oct 12	Oct 12
Start Business Analysis (BA)	Oct 15	Oct 15
Start Development Assessment	Oct 19	Oct 19
Submit Order for Blade Server	Nov 5	Nov 5
Begin Design/coding	Nov 9	Nov 9
Complete Business Requirement	Nov 9	Nov 9
Signoff Business Requirement Document	Nov 14	Nov 14
Complete Project Plan Review	Nov 30	Nov 30
Complete ADE Administration Development	Dec 1	Nov 25
Plan Blade Server Install	Dec 3	Dec 3
Complete Sample Test Development	Dec 4	Dec 2
Complete Test User Interface	Dec 4	Dec 4
Complete Development of Design/Scope	Dec 4	Dec 4
Complete Schools/School Group	Dec 9	Dec 7
Complete Coordinator Development	Dec 9	Dec 9
CTE Assessment Review Mtg	Dec 10	Dec 10
IT Project Team Kickoff	Dec 10	Dec 10
Complete Import Assessments	Dec 16	Dec 16
Complete Demographics Development	Dec 16	Dec 14
CTE Assessment In-Process Review	Dec 17	Dec 17
Complete Entity Admin Development	Dec 18	Dec 17
CTE Assessment Decision Meeting	Dec 21	De 21
IT Project Team Meeting	Dec 22	Dec 22
AZ Pixels Build (initial) to IT	Dec 22	Dec 22
Complete Student Registration	Dec 31	Dec 22
Complete Unit Test (sample)	Dec 31	Dec 30
Create Developer Test Edit	Dec 31	Dec 30
AZPixels Build (sample) to IT	Dec 31	Dec 30
Feedback/Approve Project Plan	Jan 4	Jan 4
Draft Registration Information to Districts	Jan 4	Jan 8
Start Sample Test Assessment	Jan 4	Jan 6
Start QA Testing—Security	Jan 11	Jan 11
Status Review with Project Team	Jan 12	Jan 12
Finalize Assessment Project Plan	Jan 12	Jan 12
Begin ADE IT Portal	Jan 13	Jan 12
Complete QA Testing Security	Jan 15	Jan 14
Training Information to Districts Mtg	Jan 15	Jan 15
AZPixels Build (program) to IT	Jan 20	Jan 20
Initiate Footprints Request	Jan 20	Jan 20
Local Directors Meeting	Jan 21	Jan 21
Start CTE Assessment Webinars	Jan 26	Jan 26

AZPixels Build (program) to IT	Jan 27	Feb 1
Start Unit Test (registration)	Jan 27	Jan 27
Status Review with Project Team	Jan 28	Jan 28
Start CTE Assessment Manual	Feb 1	Feb 1
Complete Sample Test Assessment	Feb 1	Feb 1
CTE Online Tutorial Available	Feb 1	Feb 1
AZPixels Build (program) to IT	Feb 1	Feb 1
Start QA Testing—Registration	Feb 1	Feb 1
IT Web Application Review	Feb 2	Feb 2
Review Test Scenarios with QA	Feb 4	Feb 4
AZPixels Build (program) to IT	Feb 3	Feb 3
AZPixels Build (program) to IT	Feb 4	Feb 4
AZPixels Build (program) to IT	Feb 8	Feb 8
Prepare Migration Information	Feb 8	Feb 8
Complete Unit Test (registration)	Feb 10	Feb 10
Complete QA Test—Registration	Feb 10	Feb 10
Readiness Review—Registration	Feb 10	Feb 10
Review Test Scenarios with Team	Feb 12	Feb 12
Complete Unit Test (Diagnostic)	Feb 15	Feb 15
AZPixels Build (program) to IT	Feb 15	Feb 16
Prepare Migration Information	Feb 16	Feb 16
Assessment Registration Begins	Feb 16	Feb 16
Complete QA Test (Diagnostic)	Feb 17	Feb 17
Status Review with Project team	Feb 17	Feb 17
Readiness Review—Diagnostic	Feb 17	Feb 17
AZPixels Build (program) to IT	Feb 19	Feb 17
Start Diagnostic Testing—49 Assessments	Feb 22	Feb 25
Assessment Webinars Complete	Feb 23	Feb 23
AZPixels Build (program) to IT	Mar 1	Mar 1
Finalize CTE Assessment Manual	Mar 4	Mar 4
Resume Diagnostic Testing	Mar 4	Mar 4
Complete ADE IT Portal	Mar 5	Feb 26
Complete Diagnostic Testing	Mar 12	Mar26
Start Final QA Testing	Mar 15	Mar 15
Status Review with Project Team	Mar 17	Mar 17
Provide Database to AZPixels	Mar 29	Mar 29
AZPixels Build (program) to IT	Mar 30	Mar 30
Update New Catalog for Testing	Apr 2	Apr 5
AZPixels Build (program) to IT	Apr 5	Apr 5
Migration/Production Testing	Apr 2	Apr 6
Update CTE Assessment Manual	Apr 5	Apr 6
Complete User Acceptance Test	Apr 7	Apr 7
Complete Final Verification	Apr 7	Apr 7
Approve For Migration	Apr 7	Apr 7
Webinar—Reports/Re-registration	Apr 7	Apr 9
Finalize Transcripts/Certificates	Apr 12	Apr 12

Spring Final Registration Opens	Apr 12	Apr 12
Status Review with Program Team	Apr 14	Apr 14
Readiness Review	Apr 14	Apr 14
Begin CTE Spring Assessments	Apr 19	Apr 19
Finalize Details with Print Shop	Apr 23	Apr 23
AZPixels Build (program) to IT	Apr 26	Apr 26
Start QA Test—Transcripts	Apr 27	Apr 27
AZPixels Build (program) to IT	May 3	May 5
Status Review with Program Team	May 6	May 6
Complete QA Test—Transcripts	May 11	May 11
Start QA Test—Reporting	May 12	May 12
Complete QA Test—Reporting	May 12	May 12
CTE Spring Assessments End	May 14	May 14
CTE to Generate Certificates	May 14	May 14
Certificate Delivery to Districts	May 17	May 17
Reprint Certificates I	May 19	May 18
AZPixels Build (program) to IT	May 24	May 24
Reprint Certificates II	May 28	May 28
AZPixels Build (program) to IT	June 1	June 1
ASU/WEDO Summer Institute I and II	June 10	June 7-8 /10-11
Status Review with Project Team	June 14	June 14
AZPixels Build (program) to IT	June 17	June 15
ASU Summer Institute III and IV	June 14	June 21-22/24-25
AZPixels Build (program) to IT	June 24	June 24
Prepare Data for Performance Measures	June 25	June 25
Begin Transition Plan	June 30	June 30
Status Review with Project Team	July 7	July 7
AZPixels Build (program) to IT	July 9	
Import Data to Performance Measures	July 15	
CTE Summer Conference/Tucson	July 16	
AZPixels Build (program) to IT	July 23	
Status Review with Project Team	July 27	
Finalize Transition Plans	July 30	
AZPixels Build (program) to IT	August 6	
Source Code Delivery to ADE IT	TBD	
Lessons Learned Review	TBD	
Close Footprints Case	TBD	

# CTE ASSESSMENT PROJECT TIME LINE

Big Picture: 2010/2011



Bob Lee

8

18 July 2010

## **APPENDIX F**

### **End-of-Program Assessments**

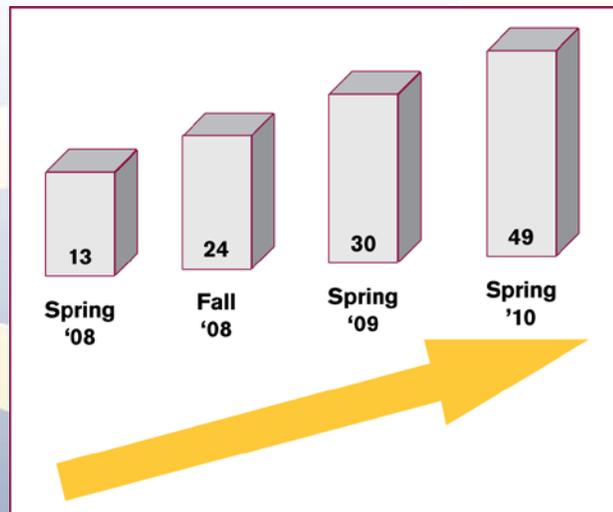
## End-of-Program Assessments

**Spring 2008**  
13 programs

**Fall 2008**  
24 programs

**Spring 2009**  
30 programs

**Spring 2010**  
49 programs



# ARIZONA ONLINE END-OF-PROGRAM TECHNICAL ASSESSMENT PROGRESS REPORT

CIP Code	CTE PROGRAMS/PROGRAM OPTIONS	2008	2009	Spring 2010	Fall 2010
01.0100.9	Agribusiness Systems <i>Option F</i>	•	•	•	•
01.0100.4	Animal Systems <i>Option C</i>	•	•	•	•
01.0100.0	Environmental Service Systems <i>Option G</i>			•	•
01.0100.2	Food Products & Processing Systems <i>Option A</i>				
01.0100.5	Natural Resources Systems <i>Option D</i>			•	•
01.0100.3	Plant Systems <i>Option B</i>	•	•	•	•
01.0100.6	Power, Structural & Technical Systems <i>Option E</i>				
10.0200.2	Electronic Journalism <i>Option A</i>				
10.0200.3	Interactive Digital Media <i>Option B</i>				
10.0200.4	Audio/Radio Technologies <i>Option C</i>				
10.0300.2	Graphic Arts <i>Option A</i>				
10.0300.3	Graphic Design <i>Option B</i>				
10.0300.4	Photo Imaging <i>Option C</i>				
12.0400.1	Cosmetology				
12.0500.0	Culinary Arts	•	•	•	•
13.1200.1	Education Professions	•	•	•	•
13.1210.1	Early Childhood Education			•	•
15.0000.1	Engineering Sciences			•	•
15.0300.1	Electronic Technologies				
15.1200.2	Computer Maintenance <i>Option A</i>			•	•
15.1200.3	Network Technologies <i>Option B</i>			•	•
15.1200.4	Software Development <i>Option C</i>			•	•
15.1200.5	Web Page Development <i>Option D</i>			•	•
15.1300.2	Architectural Drafting <i>Option A</i>	•	•	•	•
15.1300.5	Electronics Drafting <i>Option C</i>	•	•	•	•
15.1300.5	Mechanical Drafting <i>Option D</i>	•	•	•	•
41.0100.2	Bio-medical <i>Option A</i>			•	•
41.0100.3	Bio-environmental <i>Option B</i>			•	•
41.0100.4	Bio-innovations <i>Option C</i>			•	•
43.0100.1	Law, Public Safety & Security			•	•
43.0200.1	Fire Service			•	•
46.0300.2	Residential Electrician <i>Option A</i>				
46.0300.3	Industrial Electrician <i>Option B</i>				
46.0400.2	Advanced Construction Technologies <i>Option A</i>	•	•	•	•
46.0400.3	Carpentry <i>Option B</i>	•	•	•	•
46.0400.4	Cabinetmaking <i>Option C</i>	•	•	•	•
47.0100.1	Electrical Systems Installation & Maintenance Technologies				
47.0200.1	Heating, Ventilation & Air Conditioning				
47.0300.0	Heavy/Industrial Equipment Maintenance Technologies				
47.0600.2	Automotive Technologies <i>Option A</i>	•	•	•	•
47.0600.6	General Service Technician <i>Option E</i>				
47.0600.3	Automotive Collision Repair <i>Option B</i>	•	•	•	•
47.0600.4	Diesel Engine Repair <i>Option C</i>				
47.0600.5	Aircraft Mechanics <i>Option D</i>	•	•	•	•
48.0500.2	Automation/Robotics <i>Option A</i>			•	•
48.0500.3	Precision Machining <i>Option B</i>				•
48.0508.1	Welding Technologies			•	•
49.0100.0	Air Transportation				
49.0200.1	Heavy Equipment Operations				
50.0100.1	Technical Theatre <i>Option A</i>			•	•
50.0100.3	Arts Management <i>Option B</i>			•	•
51.0600.1	Dental Assisting				
51.0800.2	Pharmacy Support Services <i>Option A</i>		•	•	•
51.0800.3	Laboratory Assisting <i>Option B</i>	•	•	•	•

CIP Code	CTE PROGRAMS/PROGRAM OPTIONS	2008	2009	Spring 2010	Fall 2010
51.0800.4	Medical Imaging Support Services <i>Option C</i>				
51.0800.5	Sports Medicine & Rehabilitation Services <i>Option D</i>	•	•	•	•
51.0800.6	Medical Assisting Services <i>Option E</i>	•	•	•	•
51.0900.2	Respiratory Therapy Technician <i>Option A</i>				
51.0900.3	Emergency Medical Services <i>Option B</i>	•	•	•	•
51.0900.4	Surgical Technician <i>Option C</i>		•	•	•
51.1500.1	Mental & Social Health Services				
51.1600.1	Nursing Services	•	•	•	•
51.3500.1	Therapeutic Massage		•	•	•
52.0200.0	Business Management & Administrative Services	•	•	•	•
52.0300.0	Accounting & Related Services	•	•	•	•
52.0400.0	Business Operations Support & Assistant Services			•	•
52.0800.1	Financial Services	•	•	•	•
52.0900.1	Hospitality Management				•
52.1800.2	Professional Sales & Marketing <i>Option A</i>		•	•	•
52.1800.4	Entertainment Marketing <i>Option C</i>		•	•	•
52.1800.5	Entrepreneurship <i>Option D</i>		•	•	•
52.1800.3	Advertising & Public Relations <i>Option B</i>			•	•
52.1900.2	Fashion Design & Merchandising <i>Option A</i>	•	•	•	•
52.1900.3	Interior Design & Merchandising <i>Option B</i>	•	•	•	•

TOTALS as of 6/1/2010:

CTE PROGRAMS/PROGRAM OPTIONS	74	ASSESSMENTS	24	30	49	51*
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\* Assessment Windows for 2010-2012: Fall Window is November 1<sup>st</sup> - December 3<sup>rd</sup>. Spring Window is April 4<sup>th</sup> - May 5<sup>th</sup>.

## Process Steps

1. Research and develop a draft of program standards and measurement criteria.
2. Validate standards and measurement criteria and determine “criticality” and “frequency” ratings.
3. Obtain endorsements of standards from professional associations and agencies.
4. Present standards to the Arizona Skills Commission for their approval.
5. Develop assessment items and link to standards and measurement criteria.
6. Assemble and deliver practice and end-of-program assessments.
7. Analyze assessment items and delete, move, modify, and add items to the assessment banks

*Efforts to establish and maintain the Arizona Skill Standards Assessment System involve the ongoing review of standards and measurement criteria and the continuous building of item banks.*

## ADE Online Delivery System on State Platform Assessment Administration

- ◆ **Technical Skills Assessments – Spring 2009**
  - 30 final assessments were offered
  - 10,446 secondary students assessed
- ◆ **Technical Skills Assessments – Spring 2010**
  - 49 assessments offered
  - 15,144 secondary students assessed; 1 community college program involved
- ◆ **Certificate and Transcript Distribution – Spring 2010**
  - 12,137 certificates and transcripts delivered

## **APPENDIX G**

### **Final Assessment Participant Summary—Spring 2010**

**Spring Final 2010 Assessment Participation Summary**  
**May 14, 2010 4:00 pm**

<b>CIP</b>	<b>Program/Option</b>	<b>Student Count</b>	<b>Number Passed*<sup>1</sup></b>	<b>Percent Passed</b>	<b>Spring Mean*<sup>2</sup></b>
52.0300.0	Accounting and Related Services	161	133	83%	55%
46.0400.2	Advanced Construction Technologies Option A	578	434	75%	44%
52.1800.3	Advertising and Public Relations Option B	57	48	84%	43%
01.0100.9	Agribusiness Systems Option F	90	69	77%	45%
47.0600.5	Aircraft Mechanics Option D	22	18	82%	36%
01.0100.4	Animal Systems Option C	386	322	83%	49%
15.1300.2	Architectural Drafting Option A	453	344	76%	57%
50.0100.3	Arts Management Option B	* <sup>3</sup>	*		*%
48.0500.2	Automation/Robotics Option A	13	12	92%	44%
47.0600.3	Automotive Collision Repair Option B	88	69	78%	54%
47.0600.2	Automotive Technologies Option A	854	655	77%	37%
41.0100.3	Bio-environmental Option B	* <sup>3</sup>	*		*%
41.0100.4	Bio-innovations Option C	14	14	100%	56%
41.0100.2	Bio-medical Option A	32	31	97%	53%
52.0200.0	Business Management & Administrative Services	1,085	814	75%	54%
52.0400.0	Business Operations Support & Assistant Services	2	1	50%	36%
46.0400.4	Cabinetmaking Option C	321	238	74%	50%
46.0400.3	Carpentry Option B	103	73	71%	33%
15.1200.2	Computer Maintenance Option A	306	265	87%	53%
12.0500.0	Culinary Arts	2,595	1,977	76%	63%
13.1210.0	Early Childhood Education	1,240	1,074	87%	66%
13.1200.0	Education Professions	287	225	78%	63%
15.1300.3	Electronics Drafting Option B	* <sup>3</sup>	*		*%
51.0900.3	Emergency Medical Services Option B	1	1	100%	56%
15.0000.0	Engineering Sciences	214	198	93%	57%
52.1800.4	Entertainment Marketing Option C	105	74	70%	54%
52.1800.5	Entrepreneurship Option D	284	188	66%	49%
01.0100.0	Environmental Service Systems Option G	* <sup>3</sup>	*		*%
52.1900.2	Fashion Design and Merchandising Option A	361	324	90%	59%
52.0800.0	Financial Services	70	58	83%	62%
43.0200.0	Fire Service	212	178	84%	60%
52.1900.3	Interior Design and Merchandising Option B	57	48	84%	59%
51.0800.3	Laboratory Assisting Option B	127	93	73%	60%
43.0100.0	Law, Public Safety and Security	532	476	89%	59%

15.1300.4	Mechanical Drafting Option C	231	190	82%	51%
51.0800.6	Medical Assisting Services Option E	31	24	77%	60%
01.0100.5	Natural Resources Systems Option D	32	27	84%	43%
15.1200.3	Network Technologies Option B	181	155	86%	60%
51.1600.0	Nursing Services	859	724	84%	73%
51.0800.2	Pharmacy Support Services Option A	36	30	83%	62%
01.0100.3	Plant Systems Option B	342	258	75%	46%
52.1800.2	Professional Sales and Marketing Option A	918	711	77%	53%
15.1200.4	Software Development Option C	270	241	89%	51%
51.0800.5	Sports Medicine & Rehab Services Option D	580	476	82%	60%
51.0900.4	Surgical Technician Option C	* <sup>3</sup>	*		*%
50.0100.2	Technical Theatre Option A	113	87	77%	53%
51.3500.0	Therapeutic Massage	62	57	91%	53%
15.1200.5	Web Page Development Option D	259	232	90%	48%
48.0508.0	Welding Technologies	550	471	86%	50%
	Total:	15,114	12,137	80%	

\*<sup>1</sup> Source –Spring Final Total Results Report.

\*<sup>2</sup> Source –Spring Final 2010 Score Distribution Report

\*<sup>3</sup> No students took the assessment

## **APPENDIX H**

### **Special Populations Summary**

## Assessment Participant Information and Special Population Summary

May 14, 2010 4:00pm

CIP	Assessment	EC	HA	LE	SP	NO	Student Count
52.0300.0	Accounting and Related Services	30	1	2	0	128	161
46.0400.2	Advanced Construction Technologies Option A	134	75	10	0	359	578
52.1800.3	Advertising and Public Relations Option B	13	3	0	0	41	57
01.0100.9	Agribusiness Systems Option F	24	8	0	0	58	90
47.0600.5	Aircraft Mechanics Option D	0	3	0	0	19	22
01.0100.4	Animal Systems Option C	61	54	5	0	266	386
15.1300.2	Architectural Drafting Option A	91	24	9	0	329	453
50.0100.3	Arts Management Option B						*
48.0500.2	Automation/Robotics Option A	0	0	0	0	13	13
47.0600.3	Automotive Collision Repair Option B	20	10	1	0	57	88
47.0600.2	Automotive Technologies Option A	122	132	24	1	575	854
41.0100.3	Bio-environmental Option B						*
41.0100.4	Bio-innovations Option C	0	0	1	0	13	14
41.0100.2	Bio-medical Option A	1	0	0	0	31	32
52.0200.0	Business Management and Administrative Services	207	46	59	1	772	1,085
52.0400.0	Business Operations Support and Assistant Services	0	1	0	0	1	2
46.0400.4	Cabinetmaking Option C	46	44	8	0	223	321
46.0400.3	Carpentry Option B	28	17	16	0	42	103
15.1200.2	Computer Maintenance Option A	33	23	12	1	237	306
12.0500.0	Culinary Arts	485	266	44	3	1797	2,595
13.1210.0	Early Childhood Education	197	122	79	3	839	1,240
13.1200.0	Education Professions	40	18	11	0	218	287
15.1300.3	Electronics Drafting Option B						*
51.0900.3	Emergency Medical Services Option B	0	0	0	0	1	1
15.0000.0	Engineering Sciences	33	13	1	0	167	214
52.1800.4	Entertainment Marketing Option C	10	3	0	0	92	105
52.1800.5	Entrepreneurship Option D	52	16	7	2	207	284
01.0100.0	Environmental Service Systems Option G						*
52.1900.2	Fashion Design and Merchandising Option A	54	22	9	0	276	361

## Assessment Participant Information and Special Population Summary

May 14, 2010 4:00pm

52.0800.0	Financial Services	2	6	1	0	61	70
43.0200.0	Fire Service	7	20	1	0	184	212
52.1900.3	Interior Design and Merchandising Option B	8	8	0	0	41	57
51.0800.3	Laboratory Assisting Option B	19	4	0	0	104	127
43.0100.0	Law, Public Safety and Security	62	37	10	0	423	532
15.1300.4	Mechanical Drafting Option C	41	10	2	1	177	231
51.0800.6	Medical Assisting Services Option E	2	1	0	0	28	31
01.0100.5	Natural Resources Systems Option D	2	1	0	1	28	32
15.1200.3	Network Technologies Option B	30	12	1	0	138	181
51.1600.0	Nursing Services	161	20	13	2	663	859
51.0800.2	Pharmacy Support Services Option A	0	1	0	0	35	36
01.0100.3	Plant Systems Option B	23	31	5	1	282	342
52.1800.2	Professional Sales and Marketing Option A	154	19	20	0	725	918
15.1200.4	Software Development Option C	36	17	5	0	212	270
51.0800.5	Sports Medicine & Rehabilitation Services Option D	78	17	12	0	473	580
51.0900.4	Surgical Technician Option C						*
50.0100.2	Technical Theatre Option A	10	4	0	0	99	113
51.3500.0	Therapeutic Massage	0	2	0	0	60	62
15.1200.5	Web Page Development Option D	49	18	19	0	173	259
48.0508.0	Welding Technologies	140	88	34	0	288	550
	*No students took the assessment						
EC	Economically Disadvantaged Individuals	2,505					
HA	Individuals with Disabilities	1,217					
LE	Individuals with Limited English Proficiency	421					
SP	Single Parents	16					
	<b>Subtotal:</b>	<b>4,159</b>					
NO	No Special Population	10,955					
	<b>Total:</b>	<b>15,114</b>					
	Source-Total Results Report						

## Special Population Students Passing Assessment

May 14, 2010 4:00pm

CIP	Assessment	EC	HA	LE	SP	NO	Number Passed
52.0300.0	Accounting and Related Services	27	1	0	0	105	133
46.0400.2	Advanced Construction Technologies Option A	101	38	4	0	291	434
52.1800.3	Advertising and Public Relations Option B	11	3	0	0	34	48
01.0100.9	Agribusiness Systems Option F	19	3	0	0	47	69
47.0600.5	Aircraft Mechanics Option D	0	3	0	0	15	18
01.0100.4	Animal Systems Option C	50	28	2	0	242	322
15.1300.2	Architectural Drafting Option A	69	14	5	0	256	344
50.0100.3	Arts Management Option B						*
48.0500.2	Automation/Robotics Option A	0	0	0	0	12	12
47.0600.3	Automotive Collision Repair Option B	11	5	1	0	52	69
47.0600.2	Automotive Technologies Option A	82	86	12	1	474	655
41.0100.3	Bio-environmental Option B						*
41.0100.4	Bio-innovations Option C	0	0	1	0	13	14
41.0100.2	Bio-medical Option A	1	0	0	0	30	31
52.0200.0	Business Management and Administrative Services	161	21	35	0	597	814
52.0400.0	Business Operations Support and Assistant Services	0	0	0	0	1	1
46.0400.4	Cabinetmaking Option C	36	23	5	0	174	238
46.0400.3	Carpentry Option B	22	6	14	0	31	73
15.1200.2	Computer Maintenance Option A	27	16	9	1	212	265
12.0500.0	Culinary Arts	367	119	17	3	1471	1,977
13.1210.0	Early Childhood Education	169	71	42	3	789	1,074
13.1200.0	Education Professions	32	7	6	0	180	225
15.1300.3	Electronics Drafting Option B						*
51.0900.3	Emergency Medical Services Option B	0	0	0	0	1	1
15.0000.0	Engineering Sciences	28	9	1	0	160	198
52.1800.4	Entertainment Marketing Option C	6	2	0	0	66	74
52.1800.5	Entrepreneurship Option D	32	7	4	2	143	188
01.0100.0	Environmental Service Systems Option G						*
52.1900.2	Fashion Design and Merchandising Option A	38	8	6	0	272	324
52.0800.0	Financial Services	1	4	1	0	52	58

## Special Population Students Passing Assessment

May 14, 2010 4:00pm

43.0200.0	Fire Service	5	12	0	0	161	178
52.1900.3	Interior Design and Merchandising Option B	5	5	0	0	38	48
51.0800.3	Laboratory Assisting Option B	12	2	0	0	79	93
43.0100.0	Law, Public Safety and Security	56	21	6	0	393	476
15.1300.4	Mechanical Drafting Option C	30	6	1	1	152	190
51.0800.6	Medical Assisting Services Option E	1	1	0	0	22	24
01.0100.5	Natural Resources Systems Option D	11	1	0	1	14	27
15.1200.3	Network Technologies Option B	23	6	0	0	126	155
51.1600.0	Nursing Services	103	15	10	2	594	724
51.0800.2	Pharmacy Support Services Option A	0	0	0	0	30	30
01.0100.3	Plant Systems Option B	15	17	3	1	222	258
52.1800.2	Professional Sales and Marketing Option A	115	11	13	0	572	711
15.1200.4	Software Development Option C	30	14	4	0	193	241
51.0800.5	Sports Medicine and Rehabilitation Services Option D	60	8	9	0	399	476
51.0900.4	Surgical Technician Option C						*
50.0100.2	Technical Theatre Option A	7	2	0	0	78	87
51.3500.0	Therapeutic Massage	0	2	0	0	55	57
15.1200.5	Web Page Development Option D	41	12	15	0	164	232
48.0508.0	Welding Technologies	119	64	25	0	263	471
	*No students took the assessment						
EC	Economically Disadvantaged Individuals	1,923					
HA	Individuals with Disabilities	673					
LE	Individuals with Limited English Proficiency	251					
SP	Single Parents	15					
	<b>Subtotal:</b>	<b>2,862</b>					
NO	No Special Population	9,275					
	<b>Total:</b>	<b>12,137</b>					
	Source-Total Results Report						

## **APPENDIX I**

### **Top Scores in Assessments by Program**

### Spring 2010 Top Scores in Assessments by Program

Program Assessment	Points Correct	Points Possible	JTED	District	School of Attendance
ACCOUNTING AND RELATED SERVICES	90	109	West-Mec	PEORIA UNIFIED	LIBERTY HIGH SCHOOL
ACCOUNTING AND RELATED SERVICES	89	109	West-Mec	GLENDALE UNION	GREENWAY HIGH SCHOOL
ADVANCED CONSTRUCTION TECHNOLOGIES OPTION A	99	121	CAVIT	CASA GRANDE UNION HS	CASA GRANDE UNION HIGH SCHOOL
ADVANCED CONSTRUCTION TECHNOLOGIES OPTION A	99	121	NAVIT	SHOW LOW UNIFIED	NAVIT SHOW LOW
ADVANCED CONSTRUCTION TECHNOLOGIES OPTION A	96	121	EVIT		EVIT MAIN CAMPUS
ADVERTISING AND PUBLIC RELATIONS OPTION B	46	73	CTD	BENSON UNIFIED	BENSON UNIFIED HIGH SCHOOL
ADVERTISING AND PUBLIC RELATIONS OPTION B	46	73	West-Mec	PEORIA UNIFIED	CENTENNIAL HIGH SCHOOL
ADVERTISING AND PUBLIC RELATIONS OPTION B	44	73	CTD	BENSON UNIFIED	BENSON UNIFIED HIGH SCHOOL
AGRIBUSINESS SYSTEMS OPTION F	82	120	West-Mec	BUCKEYE UNION HS	BUCKEYE UNION HIGH SCHOOL
AGRIBUSINESS SYSTEMS OPTION F	77	120	West-Mec	BUCKEYE UNION HS	BUCKEYE UNION HIGH SCHOOL
AGRIBUSINESS SYSTEMS OPTION F	77	120	MIJTED	CHINO VALLEY UNIFIED	CHINO VALLEY HIGH SCHOOL
AIRCRAFT MECHANICS OPTION D	25	50	Pima County	TUCSON UNIFIED	CATALINA HIGH SCHOOL
AIRCRAFT MECHANICS OPTION D	24	50	Pima County	TUCSON UNIFIED	CATALINA HIGH SCHOOL
AIRCRAFT MECHANICS OPTION D	24	50	Pima County	TUCSON UNIFIED	CATALINA HIGH SCHOOL
ANIMAL SYSTEMS OPTION C	82	103	EVIT	GILBERT UNIFIED	EVIT HIGHLAND HIGH SCHOOL
ANIMAL SYSTEMS OPTION C	82	103	EVIT	GILBERT UNIFIED	EVIT HIGHLAND HIGH SCHOOL
ANIMAL SYSTEMS OPTION C	81	103	VACTE	MINGUS UNION	MINGUS UNION HIGH SCHOOL
ARCHITECTURAL DRAFTING OPTION A	102	118	NAVIT	BLUE RIDGE UNIFIED	NAVIT BLUE RIDGE
ARCHITECTURAL DRAFTING OPTION A	101	118	WAVED	LAKE HAVASU UNIFIED	LAKE HAVASU HIGH SCHOOL
ARCHITECTURAL DRAFTING OPTION A	101	118	NAVIT	BLUE RIDGE UNIFIED	NAVIT BLUE RIDGE
AUTOMATION/ROBOTICS OPTION A	38	63	Pima County	SAHUARITA UNIFIED	SAHUARITA HIGH SCHOOL
AUTOMATION/ROBOTICS OPTION A	35	63	Pima County	SAHUARITA UNIFIED	SAHUARITA HIGH SCHOOL
AUTOMOTIVE COLLISION REPAIR OPTION B	97	118	EVIT		EVIT MAIN CAMPUS
AUTOMOTIVE COLLISION REPAIR OPTION B	95	118	EVIT		EVIT MAIN CAMPUS
AUTOMOTIVE COLLISION REPAIR OPTION B	95	118	EVIT		EVIT MAIN CAMPUS

### Spring 2010 Top Scores in Assessments by Program

AUTOMOTIVE TECHNOLOGIES OPTION A	91	124	EVIT		EVIT MAIN CAMPUS
AUTOMOTIVE TECHNOLOGIES OPTION A	91	124	Pima County	FLOWING WELLS UNIFIED	FLOWING WELLS HIGH SCHOOL
AUTOMOTIVE TECHNOLOGIES OPTION A	87	124	WAVED	LAKE HAVASU UNIFIED	LAKE HAVASU HIGH SCHOOL
BIO-INNOVATIONS OPTION C	70	90	EVIT	MESA UNIFIED	EVIT RED MOUNTAIN HIGH SCHOOL
BIO-INNOVATIONS OPTION C	69	90	EVIT	MESA UNIFIED	EVIT MESA HIGH SCHOOL
BIO-MEDICAL OPTION A	70	90	EVIT	CHANDLER UNIFIED	EVIT HAMILTON
BIO-MEDICAL OPTION A	69	90	Pima County	TUCSON UNIFIED	PUEBLO HIGH SCHOOL
BUSINESS MANAGEMENT AND ADMINISTRATIVES SERVICES	85	98	EVIT	TEMPE UNION	EVIT MOUNTAIN POINTE HIGH SCHOOL
BUSINESS MANAGEMENT AND ADMINISTRATIVES SERVICES	85	98	EVIT	TEMPE UNION	EVIT MOUNTAIN POINTE HIGH SCHOOL
BUSINESS MANAGEMENT AND ADMINISTRATIVES SERVICES	85	98	GIFT	SAFFORD UNIFIED	SAFFORD HIGH SCHOOL
BUSINESS MANAGEMENT AND ADMINISTRATIVES SERVICES	84	98	CAVIT	COOLIDGE UNIFIED	COOLIDGE HIGH SCHOOL
BUSINESS MANAGEMENT AND ADMINISTRATIVES SERVICES	84	98	WAVED	KINGMAN UNIFIED	KINGMAN HIGH SCHOOL
BUSINESS OPERATIONS SUPPORT AND ASSISTANT SERVICES	49	101	NAVIT	BLUE RIDGE UNIFIED	NAVIT BLUE RIDGE
BUSINESS OPERATIONS SUPPORT AND ASSISTANT SERVICES	25	101	NAVIT	BLUE RIDGE UNIFIED	NAVIT BLUE RIDGE
CABINETMAKING OPTION C	94	109	MIJTED	PRESCOTT UNIFIED	PRESCOTT HIGH SCHOOL
CABINETMAKING OPTION C	94	109	MIJTED	PRESCOTT UNIFIED	PRESCOTT HIGH SCHOOL
CABINETMAKING OPTION C	94	109	MIJTED	PRESCOTT UNIFIED	PRESCOTT HIGH SCHOOL
CABINETMAKING OPTION C	89	109	MIJTED	PRESCOTT UNIFIED	PRESCOTT HIGH SCHOOL
CARPENTRY OPTION B	42	74	No JTED	MANY FARMS	MANY FARMS HIGH SCHOOL
CARPENTRY OPTION B	42	74	No JTED	MANY FARMS	MANY FARMS HIGH SCHOOL
CARPENTRY OPTION B	41	74	No JTED	MANY FARMS	MANY FARMS HIGH SCHOOL
CARPENTRY OPTION B	41	74	No JTED	MANY FARMS	MANY FARMS HIGH SCHOOL
COMPUTER MAINTENANCE OPTION A	79	95	WAVED	LAKE HAVASU UNIFIED	LAKE HAVASU HIGH SCHOOL
COMPUTER MAINTENANCE OPTION A	74	95	No JTED	MESA UNIFIED	RED MOUNTAIN HIGH SCHOOL
CULINARY ARTS	110	116	EVIT		EVIT MAIN CAMPUS
CULINARY ARTS	110	116	EVIT		EVIT MAIN CAMPUS
CULINARY ARTS	109	116	No JTED	NOGALES UNIFIED	NOGALES HIGH SCHOOL
CULINARY ARTS	109	116	Pima County		PIMA COUNTY JTED CENTRAL CAMPUS
EARLY CHILDHOOD EDUCATION	90	98	EVIT	CHANDLER UNIFIED	EVIT BASHA

### Spring 2010 Top Scores in Assessments by Program

EARLY CHILDHOOD EDUCATION	89	98	EVIT	CHANDLER UNIFIED	EVIT BASHA
EARLY CHILDHOOD EDUCATION	89	98	WAVED	LAKE HAVASU UNIFIED	LAKE HAVASU HIGH SCHOOL
EDUCATION PROFESSIONS	78	86	EVIT	FOUNTAIN HILLS UNIFIED	EVIT FOUNTAIN HILLS VOCATION CENTER
EDUCATION PROFESSIONS	77	86	CVIT	SUPERIOR UNIFIED	SUPERIOR HIGH SCHOOL
EMERGENCY MEDICAL PARAMEDICS OPTION B	45	79	Pima County	TUCSON UNIFIED	CATALINA HIGH SCHOOL
ENGINEERING SCIENCES	56	68	Pima County	TUCSON UNIFIED	TUCSON MAGNET HIGH SCHOOL
ENGINEERING SCIENCES	55	68	EVIT	MESA UNIFIED	EVIT RED MOUNTAIN HIGH SCHOOL
ENGINEERING SCIENCES	55	68	West-Mec	AGUA FRIA UNION	VERRADO HIGH SCHOOL
ENTERTAINMENT MARKETING OPTION C	84	117	EVIT	SCOTTSDALE UNIFIED	EVIT DESERT MOUNTAIN HIGH SCHOOL
ENTERTAINMENT MARKETING OPTION C	84	117	EVIT	SCOTTSDALE UNIFIED	EVIT DESERT MOUNTAIN HIGH SCHOOL
ENTERTAINMENT MARKETING OPTION C	84	117	West-Mec	PEORIA UNIFIED	LIBERTY HIGH SCHOOL
ENTERTAINMENT MARKETING OPTION C	84	117	West-Mec	DEER VALLEY UNIFIED	SANDRA DAY O'CONNOR HIGH SCHOOL
ENTERTAINMENT MARKETING OPTION C	84	117	West-Mec	DEER VALLEY UNIFIED	SANDRA DAY O'CONNOR HIGH SCHOOL
ENTERTAINMENT MARKETING OPTION C	82	117	West-Mec	PEORIA UNIFIED	IRONWOOD HIGH SCHOOL
ENTERTAINMENT MARKETING OPTION C	82	117	West-Mec	DEER VALLEY UNIFIED	SANDRA DAY O'CONNOR HIGH SCHOOL
ENTREPRENEURSHIP OPTION D	85	103	CTD	ST DAVID UNIFIED	ST DAVID HIGH SCHOOL
ENTREPRENEURSHIP OPTION D	80	103	West-Mec	DEER VALLEY UNIFIED	DEER VALLEY HIGH SCHOOL
FASHION DESIGN AND MERCHANDISING OPTION A	99	102	NAVIT	BLUE RIDGE UNIFIED	NAVIT BLUE RIDGE
FASHION DESIGN AND MERCHANDISING OPTION A	93	102	EVIT	CHANDLER UNIFIED	EVIT CHANDLER
FASHION DESIGN AND MERCHANDISING OPTION A	93	102	Pima County	TUCSON UNIFIED	RINCON HIGH SCHOOL
FINANCIAL SERVICES	83	92	No JTED	PEORIA UNIFIED	CACTUS SHADOWS HIGH SCHOOL/PSH
FINANCIAL SERVICES	81	92	No JTED	PHOENIX UNION HS	METRO TECH VOC INST OF PHX
FIRE SERVICE	64	76	Pima County		PIMA COUNTY JTED CENTRAL CAMPUS
FIRE SERVICE	63	76	EVIT		EVIT MAIN CAMPUS
FIRE SERVICE	63	76	CVIT	GLOBE UNION	GLOBE HIGH SCHOOL
INTERIOR DESIGN AND MERCHANDISING OPTION B	100	120	EVIT	TEMPE UNION	EVIT CORONA DEL SOL HIGH SCHOOL
INTERIOR DESIGN AND MERCHANDISING OPTION B	99	120	Pima County	VAIL UNIFIED	EMPIRE HIGH SCHOOL

### Spring 2010 Top Scores in Assessments by Program

LABORATORY ASSISTING OPTION B	84	102	West-Mec	DYSART UNIFIED	WILLOW CANYON HIGH SCHOOL
LABORATORY ASSISTING OPTION B	82	102	Pima County	MARANA UNIFIED	MOUNTAIN VIEW HIGH SCHOOL - MARANA
LAW, PUBLIC SAFETY AND SECURITY	77	92	West-Mec	PEORIA UNIFIED	CACTUS HIGH SCHOOL
LAW, PUBLIC SAFETY AND SECURITY	75	92	West-Mec	AGUA FRIA UNION	AGUA FRIA UNION HIGH SCHOOL
LAW, PUBLIC SAFETY AND SECURITY	75	92	Pima County	MARANA UNIFIED	MARANA HIGH SCHOOL
MECHANICAL DRAFTING OPTION D	90	118	EVIT	SCOTTSDALE UNIFIED	EVIT CHAPARRAL HIGH SCHOOL
MECHANICAL DRAFTING OPTION D	89	118	EVIT	SCOTTSDALE UNIFIED	EVIT CHAPARRAL HIGH SCHOOL
MECHANICAL DRAFTING OPTION D	89	118	No JTED	PHOENIX UNION HS	METRO TECH VOC INST OF PHX
MEDICAL ASSISTING SERVICES OPTION E	59	75	CAVIT		CENTRAL ARIZONA VALLEY INSTITUTE OF TECHNOLOGY
MEDICAL ASSISTING SERVICES OPTION E	56	75	CAVIT		CENTRAL ARIZONA VALLEY INSTITUTE OF TECHNOLOGY
NATURAL RESOURCES SYSTEMS OPTION D	62	100	Pima County	CATALINA FOOTHILLS UNIFIED	CATALINA FOOTHILLS HIGH SCHOOL
NATURAL RESOURCES SYSTEMS OPTION D	59	100	CTD	SAN SIMON UNIFIED	SAN SIMON HIGH SCHOOL
NETWORK TECHNOLOGIES OPTION B	66	73	West-Mec	GLENDALE UNION	GREENWAY HIGH SCHOOL
NETWORK TECHNOLOGIES OPTION B	66	73	Pima County	MARANA UNIFIED	MOUNTAIN VIEW HIGH SCHOOL - MARANA
NETWORK TECHNOLOGIES OPTION B	65	73	West-Mec	GLENDALE UNION	GREENWAY HIGH SCHOOL
NURSING SERVICES	105	112	West-Mec	PEORIA UNIFIED	CENTENNIAL HIGH SCHOOL
NURSING SERVICES	105	112	Pima County		PIMA COUNTY JTED CENTRAL CAMPUS
NURSING SERVICES	105	112	Pima County		PIMA COUNTY JTED CENTRAL CAMPUS
NURSING SERVICES	104	112	Pima County		PIMA COUNTY JTED CENTRAL CAMPUS
PHARMACY SUPPORT SERVICES OPTION A	61	70	EVIT		EVIT MAIN CAMPUS
PHARMACY SUPPORT SERVICES OPTION A	53	70	EVIT		EVIT MAIN CAMPUS
PLANT SYSTEMS OPTION B	86	115	GIFT	SAFFORD UNIFIED	SAFFORD HIGH SCHOOL
PLANT SYSTEMS OPTION B	82	115	West-Mec	AGUA FRIA UNION	MILLENNIUM HIGH SCHOOL

### Spring 2010 Top Scores in Assessments by Program

PROFESSIONAL SALES AND MARKETING OPTION A	96	120	West-Mec	GLENDALE UNION	THUNDERBIRD HIGH SCHOOL
PROFESSIONAL SALES AND MARKETING OPTION A	95	120	Pima County	AMPHITHEATER UNIFIED	CANYON DEL ORO HIGH SCHOOL
SOFTWARE DEVELOPMENT OPTION C	47	52	West-Mec	PEORIA UNIFIED	IRONWOOD HIGH SCHOOL
SOFTWARE DEVELOPMENT OPTION C	47	52	West-Mec	PEORIA UNIFIED	IRONWOOD HIGH SCHOOL
SOFTWARE DEVELOPMENT OPTION C	47	52	Pima County	TUCSON UNIFIED	UNIVERSITY HIGH SCHOOL
SOFTWARE DEVELOPMENT OPTION C	45	52	West-Mec	PEORIA UNIFIED	IRONWOOD HIGH SCHOOL
SOFTWARE DEVELOPMENT OPTION C	45	52	West-Mec	PEORIA UNIFIED	IRONWOOD HIGH SCHOOL
SPORTS MEDICINE AND REHABILITATION SERVICES OPTION D	83	91	Pima County	TUCSON UNIFIED	SABINO HIGH SCHOOL
SPORTS MEDICINE AND REHABILITATION SERVICES OPTION D	80	91	West-Mec	PEORIA UNIFIED	RAYMOND S KELLIS HIGH SCHOOL
TECHNICAL THEATRE OPTION A	47	53	Pima County	CATALINA FOOTHILLS UNIFIED	CATALINA FOOTHILLS HIGH SCHOOL
TECHNICAL THEATRE OPTION A	46	53	No JTED	SIERRA VISTA UNIFIED	BUENA HIGH SCHOOL
THERAPEUTIC MASSAGE	64	85	EVIT		EVIT MAIN CAMPUS
THERAPEUTIC MASSAGE	62	85	EVIT		EVIT MAIN CAMPUS
WEB PAGE DEVELOPMENT OPTION D	54	60	No JTED	MESA UNIFIED	WESTWOOD HIGH SCHOOL
WEB PAGE DEVELOPMENT OPTION D	48	60	West-Mec	DEER VALLEY UNIFIED	BOULDER CREEK HIGH SCHOOL
WELDING TECHNOLOGIES	68	80	NATIVE	SANDERS UNIFIED	VALLEY HIGH SCHOOL
WELDING TECHNOLOGIES	67	80	CAVIAT	FLAGSTAFF UNIFIED	FLAGSTAFF HIGH SCHOOL

## **APPENDIX J**

### **Certificate and Transcript**

# ARIZONA SKILL STANDARDS COMMISSION

**TOM HORNE, Co-Chair**  
SUPERINTENDENT OF PUBLIC INSTRUCTION

**CAROLYN WARNER, Co-Chair**  
PRESIDENT, CORPORATE/EDUCATION CONSULTING, INC.

**DON ADAMS**  
DIRECTOR, HUMAN RESOURCES  
EARTH

**ADDA ALEXANDER**  
REGISTERED NURSE

**BRANDON AMES**  
CEO  
A&I INFORMATION TECHNOLOGIES

**DEBORAH BATEMAN**  
EXECUTIVE VP  
SPECIALTY BANKING & MARKETING  
NATIONAL BANK OF ARIZONA

**BETSEY BAYLESS**  
CEO  
MAGNOLIA INTEGRATED HEALTH SYSTEM

**ART BROOKS**  
PRESIDENT & CEO  
AZ EDUCATORS ASSOCIATION

**JIM CAMPBELL**  
PRESIDENT  
QWEST AZ

**SIBAN CARLSON**  
EXECUTIVE DIRECTOR  
AZ BUSINESS & EDUCATION COMMISSION

**EUGENE CLARK**  
DEAN  
PHOENIX SCHOOLS OF LAW

**BRUCE COOMER**  
EXECUTIVE DIRECTOR  
AZ ASSOCIATION FOR  
ECONOMIC DEVELOPMENT

**MARK DOBBINS**  
SENIOR VP  
SUMCO PROGRESS CORP.

**KENNY EDWARDS**  
MANAGER, LEARNING &  
ORGANIZATIONAL DEVELOPMENT  
S&P BANK GROUP

**SCOTT ELLESON**  
GENERAL MANAGER,  
AZ OPERATIONS  
TURNER CONSTRUCTION COMPANY

**JEFF FREEMAN**  
DIRECTOR,  
HUMAN PARTNERSHIPS  
HONEYWELL

**REBEKAH FRIEND**  
EXECUTIVE DIRECTOR,  
SECRETARY/TREASURER  
ARIZONA AFL-CIO

**ERNEST GARFIELD**  
INTEGRATED BANK DESIGNER, INC.

**RUFUS GLASPER**  
CHAIRMAN  
MAGNOLIA COMMUNITY COLLEGE

**MARYANN GUERRA**  
PRESIDENT  
CENTRAL BIOLOGICS

**GLENN HAMER**  
PRESIDENT & CEO  
AZ CHAMBER OF COMMERCE & INDUSTRY

**WILLIAM C. HARRIS**  
PRESIDENT & CEO  
SOURCE FOUNDATION ARIZONA

**ADRIENNE HOWELL**  
COMMENTS & COMMENTS AFFAIRS  
SOLSHIRE GAS CORPORATION

**LINDA HUNT**  
PRESIDENT  
ST. JOHNS HOSPITAL  
& MEDICAL CENTER

**DEBBIE JOHNSON**  
PRESIDENT & CEO  
AZ HOTEL & LODGING ASSOCIATION

**MAXINE M. JONES**  
PRESIDENT  
AIMCO PROGRESS, INC.  
SECRETARY  
AZ TOOLING &  
MACHINING ASSOCIATION

**JIM KLINKER**  
CHIEF ADMINISTRATIVE OFFICER  
AZ FARM BUREAU FEDERATION

**PAUL KOEHLER**  
DIRECTOR, POINT CENTER  
WALMART

**T.J. MARTIN**  
COMMANDER  
PHOENIX POLICE DEPARTMENT

**BOB MAYO**  
MANAGING PARTNER  
BOYS, DORSET RIDGE

**CATHY MCKEE OLSEN**  
SENIOR VP (RET.)  
GENERAL DYNAMICS CA 210000

**KARLA PHILLIPS**  
EDUCATION POLICY ADVISOR  
OFFICE OF THE GOVERNOR

**DOUG PRUITT**  
PRESIDENT & CEO  
SUNCO CONSTRUCTION

**PAT QUINN**  
PRESIDENT (RETIRED)  
QUEST ARIZONA

**KNOX RAMSEY**  
PRESIDENT  
YALIST AUTO DIAGNOSTIC ASSOCIATION

**FAT ROURKE**  
MARKET PRESIDENT  
BENESS TRUST

**RAY RIBBIN**  
OWNER  
JP MANUFACTURING, LLC

**DAVID SALISBURY**  
PRESIDENT  
REGULON COMMERCIAL MARKS

**OMAR SAYED**  
PRESIDENT & CEO  
EUCORO CORP.

**JOSEPH SHELLEY**  
COMMANDER  
Mesa Police Department

**DONALD G. SHROPSHIRE**  
PRESIDENT EMERITUS  
TUCSON MEDICAL CENTER

**MARTIN L. SHULTZ**  
VP, GOVERNMENT AFFAIRS  
RINCO/WEST CAPITAL CORP.

**LEANN SWANSON**  
VP, EDUCATIONAL SERVICES  
AZ HOTELS &  
RESTAURANT ASSOCIATION

**MORRISON W. WARREN**  
SENIOR VP  
CHASE BANK

**MARYANNE WEISS**  
PRESIDENT  
GUSTAFS LTD.

**JAMES ZAHARIS**  
VP FOR EDUCATION  
GRANT PROGRAM DEVELOPER INC.

May 17, 2010

*Congratulations!*

You have passed the Arizona Skill Standards Commission's Spring 2010 secondary end-of-program assessment based on industry skill standards in your selected career field.

We encourage you to continue your education in your desired career pathway. It is our intent that the enclosed certificate and transcript will enable you to provide an employer with specific information about the industry skills you possessed upon completion of your program.

Should you have a need for an additional transcript in the next four years, you may contact Career and Technical Education at the Arizona Department of Education.

Best wishes for your future success.



Tom Horne, Co-chair  
Arizona Skill Standards Commission  
Superintendent of Public Instruction  
Arizona Department of Education



Carolyn Warner, Co-chair  
Arizona Skill Standards Commission



ARIZONA DEPARTMENT OF EDUCATION  
CAREER AND TECHNICAL EDUCATION  
1535 W. JEFFERSON, BIN 42, PHOENIX, AZ 85007  
(602) 542-5282



WORKFORCE EDUCATION & DEVELOPMENT OFFICE  
411 NORTH CENTRAL AVENUE, SUITE 300  
PHOENIX, ARIZONA 85004  
(602) 496-1452

# Certificate of Skill Standards Attainment

Arizona Skill Standards Commission

certifies that

**Joe Student**  
School

has successfully passed the

**Program Name**

Spring 2010 Secondary End-of-program Assessment

Arizona Department of Education Career and Technical Education in partnership with Arizona State University Workforce Education and Development Office



Tom Horne, Co-Chair  
Arizona Skill Standards Commission  
Superintendent of Public Instruction  
Arizona Department of Education



Carolyn Warner, Co-Chair  
Arizona Skill Standards Commission

**Transcript of Arizona Skill Standards**  
**Spring 2010**  
**Arizona Skill Standards Commission**  
Co-Chairs: The Honorable Tom Horne and Carolyn Warner

## **Joe Student**

**ALPINE UNIFIED HIGH SCHOOL**  
**ACCOUNTING AND RELATED SERVICES**  
**Skill Standards Attainment**

**DEMONSTRATE BUSINESS AND FINANCIAL MANAGEMENT PRACTICES NEEDED FOR ENTREPRENEURS**

Review a budget based on an accounting enterprise's business plan  
Interpret financial information for decision making and planning  
Compare foreign currencies and determine how business affects exchange rates  
Describe the impact of quality business communications on the success of an accounting organization  
Review insurance needs for a business and its relationship to all aspects of the business

**DEMONSTRATE THE STEPS OF THE ACCOUNTING CYCLE**

Define terminology related to the accounting cycle  
Demonstrate the fundamental accounting equation  
Classify items as assets, liabilities, or owner's equity  
Determine how owner's equity is affected by revenue, expense, and drawing accounts  
Practice the double-entry system of accounting  
Analyze the effect that business transactions have on the basic accounting equation using source documents  
Develop the process of journalizing business transactions  
Explain the relationship of the journal to the ledger  
Prepare financial statements  
Explain the purposes of the closing process  
Prepare a post-closing trial balance

**DETERMINE PAYROLL**

Prepare payroll records using manual and computerized systems  
Calculate earnings for various methods of payment  
Compute deductions to determine net pay  
Calculate employer's payroll taxes

**GENERATE PROCEDURES FOR CASH CONTROL**

Define petty cash  
Complete check stubs or register and checks manually using general ledger accounting software  
Enter appropriate data on a deposit slip  
Reconcile a bank statement

**DETERMINE PROCEDURES FOR ACCOUNTS RECEIVABLE AND ACCOUNTS PAYABLE**

Establish and maintain the accounts receivable subsidiary ledger  
Process sales orders and invoices  
Maintain vendor files  
Process invoices for payment  
Process accounts payable checks  
Explain the relationship of subsidiary ledgers

**EVALUATE ASSETS, LIABILITIES, AND OWNER'S EQUITY**

Define terminology related to assets and liabilities  
Explain the purposes of notes receivable  
Maintain inventory records  
Apply inventory costing procedures, such as FIFO, LIFO and weighted average  
Compute the cost basis of assets  
Calculate depreciations

## **APPENDIX K**

### **Assessment Reports**

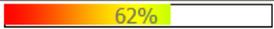
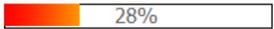
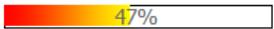
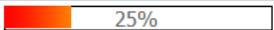
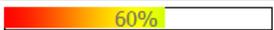
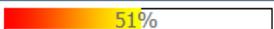
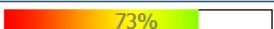
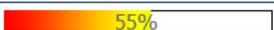
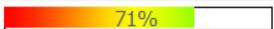
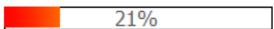
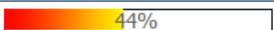
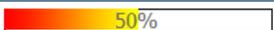
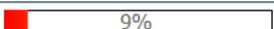
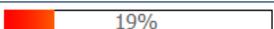
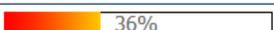
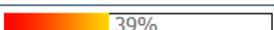
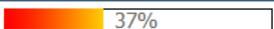
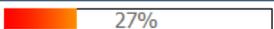
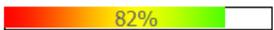
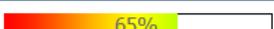
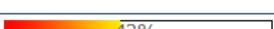
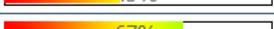
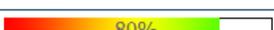
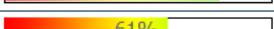
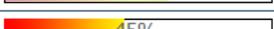
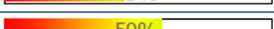
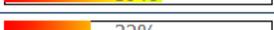
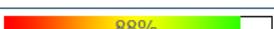
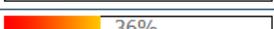
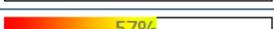
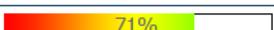
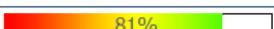
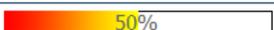
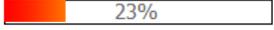
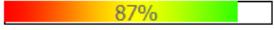
# ADE CTE Assessment System

Home | Sample Test | Guide

## Standards And Measurement Criteria Results

Assessment: ACCOUNTING AND RELATED SERVICES  
 Students In Set: 161  
[Filters Used](#)

Standard/Measurement Criterion	Percentage Correct
<b>DEMONSTRATE BUSINESS AND FINANCIAL MANAGEMENT PRACTICES NEEDED FOR ENTREPRENEURS</b>	
Review a budget based on an accounting enterprise's business plan	47%
Review an income statement for an accounting enterprise	28%
Review a balance sheet for an accounting enterprise	37%
Interpret financial information for decision making and planning	34%
Compare foreign currencies and determine how business affects exchange rates	50%
Describe the impact of quality business communications on the success of an accounting organization	38%
Manage customer relations	52%
Review insurance needs for a business and its relationship to all aspects of the business	61%
<b>DEMONSTRATE THE STEPS OF THE ACCOUNTING CYCLE</b>	
Explain the purpose of the accounting cycle	55%
Define terminology related to the accounting cycle	51%
Demonstrate the fundamental accounting equation	64%
Classify items as assets, liabilities, or owner's equity	61%
Determine how owner's equity is affected by revenue, expense, and drawing accounts	62%
Practice the double-entry system of accounting	95%
Analyze the effect that business transactions have on the basic accounting equation using source documents	49%
Develop the process of journalizing business transactions	78%
Explain the relationship of the journal to the ledger	59%
Post transactions from the journal to the ledger	71%
Prepare the trial balance including determining necessary adjustments	47%
Prepare financial statements	56%
Explain the purposes of the closing process	50%
Prepare a post-closing trial balance	37%
<b>DETERMINE PAYROLL</b>	
Prepare payroll records using manual and computerized systems	67%
Calculate earnings for various methods of payment	77%
Compute deductions to determine net pay	57%
Calculate employer's payroll taxes	61%
Prepare federal, state, and local payroll reports	47%
<b>GENERATE PROCEDURES FOR CASH CONTROL</b>	
Define petty cash	93%
Complete check stubs or register and checks manually using general ledger accounting software	54%
Enter appropriate data on a deposit slip	67%
Reconcile a bank statement	54%
Establish procedures for managing and reconciling petty cash manually and electronically	20%
<b>DETERMINE PROCEDURES FOR ACCOUNTS RECEIVABLE AND ACCOUNTS PAYABLE</b>	

Establish and maintain the accounts receivable subsidiary ledger	 62%
Process sales orders and invoices	 28%
Process customer payments	 47%
Analyze accounts receivable using an aging schedule to determine doubtful accounts	 25%
Establish and maintain the accounts payable subsidiary ledger	 60%
Maintain vendor files	 52%
Process invoices for payment	 51%
Process accounts payable checks	 73%
Explain the relationship of subsidiary ledgers	 55%
<b>EVALUATE ASSETS, LIABILITIES, AND OWNER'S EQUITY</b>	
Define terminology related to assets and liabilities	 45%
Explain the purposes of notes receivable	 71%
Maintain inventory records	 21%
Apply inventory costing procedures, such as FIFO, LIFO and weighted average	 44%
Compute the cost basis of assets	 50%
Calculate depreciations	 9%
Identify procedures to protect assets from loss, waste, theft, forgery and embezzlement	 19%
Determine current and long-term liabilities and assets	 77%
Apply the revenue realization and matching principles to an income statement for service and merchandising businesses	 36%
Determine cost of goods sold and gross profit for merchandising and manufacturing businesses	 39%
<b>APPRAISE FORMS OF BUSINESS OWNERSHIP</b>	
Ascertain the source and the importance of following the Generally Accepted Accounting Principles (GAAP)	 37%
Differentiate between taxation at the personal and business level	 27%
Explain the purpose of the capital and drawing accounts for a sole proprietorship and partnership	 82%
Apply appropriate accounting techniques to account for investments and withdrawals by owners	 62%
Explain the purpose of the following accounts: common stock, preferred stock, paid-in capital, retained earnings, and dividends for a corporation	 65%
Identify the three basic types of business activities- operating, investing, and financing	 43%
Identify not-for-profit and governmental organizations accounting requirements	 67%
<b>ASSESS THE FINANCIAL PERFORMANCE OF A BUSINESS</b>	
Analyze the income statement and balance sheet of a business	 80%
Analyze current and long-term assets including their impact on the financial statements	 61%
Analyze current and long-term liabilities including their impact on the financial statements	 45%
Analyze the statement of cash flow and the effect on healthy performance	 59%
Calculate merchandise inventory turnover ratios	 32%
<b>USE ACCOUNTING TECHNOLOGY IN MANAGING FINANCIAL INFORMATION</b>	
Using spreadsheet software, organize, calculate and complete an accounting financial statement	 88%
Make projections using "what if" statements	 36%
Use spreadsheet and/or accounting software to prepare charts and graphs useful in analyzing the financial condition of a business	 57%
<b>EXAMINE ETHICAL STANDARDS IN ACCOUNTING</b>	
Differentiate between ethical and legal issues	 71%
Describe social responsibility in accounting	 81%
Explain the importance of high ethical standards in the preparation of financial statements	 77%
<b>EXPLORE ECONOMIC PRINCIPLES OF MANAGERIAL ACCOUNTING AND RELATED SERVICES PROFESSIONS</b>	
Define the five management functions: planning, organizing, directing, staffing, and controlling	 50%
Define cost concepts and cost behavior	 65%
Explain the role of accounting as utilized in support of the five management functions and related decision making	 64%
Define the differences among service, merchandising and manufacturing businesses	 77%
<b>EXPLORE ACCOUNTING AND RELATED SERVICES SYSTEMS THEORY AND PRACTICE</b>	
Demonstrate basic research techniques to organize accounting records and information	 23%
Explain how work plans and budget information are used to allocate people and resources effectively	 87%
Investigate merchandise inventory accounting principles that relate to budgetary decisions	 58%

**APPENDIX L**

**Assessment Calendar – July 1, 2009 – June 30, 2010**

## ASSESSMENT CALENDAR—JULY 1, 2009 THROUGH JUNE 30, 2010

<p><b>July</b></p> <table border="1"> <thead> <tr> <th>S</th> <th>M</th> <th>T</th> <th>W</th> <th>T</th> <th>F</th> <th>S</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> <td>10</td> <td>11</td> </tr> <tr> <td>12</td> <td>13</td> <td>14</td> <td>15</td> <td>16</td> <td>17</td> <td>18</td> </tr> <tr> <td>19</td> <td>20</td> <td>21</td> <td>22</td> <td>23</td> <td>24</td> <td>25</td> </tr> <tr> <td>26</td> <td>27</td> <td>28</td> <td>29</td> <td>30</td> <td>31</td> <td></td> </tr> </tbody> </table>	S	M	T	W	T	F	S				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		<p><b>July 9<sup>th</sup> Standards Validation Meeting—ASU/UCENT</b> Advertising &amp; Public Relations / Early Childhood Education</p> <p><b>July 10<sup>th</sup> Standards Validation Meeting—ASU/UCENT</b> Business Operations Support &amp; Assistant Services</p> <p><b>July 17<sup>th</sup> Item Development Workshops—TUCSON (Westin)</b> Bio-medical / Bio-environmental / Bio-innovations / Fire Science / Law, Public Safety, &amp; Security; / Welding Technologies / Early Childhood Education</p> <p><b>July 18<sup>th</sup> Item Development Workshops—TUCSON (Westin)</b> Computer Maintenance / Network Technologies / Software Development / Web Page Development / Business Operations / Advertising &amp; Public Relations</p> <p><b>July 18<sup>th</sup>-22<sup>nd</sup> 2009 ACTE Summer Conference—TUCSON</b></p> <p><b>July 19<sup>th</sup> Joint Meeting of the Commission and Stakeholders</b></p>							
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<b>March</b> <table border="1"> <thead> <tr> <th>S</th><th>M</th><th>T</th><th>W</th><th>T</th><th>F</th><th>S</th> </tr> </thead> <tbody> <tr> <td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td> </tr> <tr> <td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td> </tr> <tr> <td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td> </tr> <tr> <td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td> </tr> <tr> <td>28</td><td>29</td><td>30</td><td>31</td><td></td><td></td><td></td> </tr> </tbody> </table>	S	M	T	W	T	F	S		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				<p><b><u>March 4<sup>th</sup> - March 26<sup>th</sup> PRACTICE/DIAGNOSTIC TESTING PERIOD</u></b></p> <p><b><u>March 10<sup>th</sup> Standards Validation—ASU/UCENT</u></b>  Hospitality Management</p> <p><b><u>March 15-16 STATE SUPERVISOR/WEDO TRAINING FOR JUNE INSTITUTES—ASU/UCENT</u></b></p> <p><b><u>March 25<sup>th</sup> Stakeholders Meeting—EVIT</u></b></p> <p><b><u>March 26<sup>th</sup> Local Directors Meeting—EVIT</u></b></p>
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<b>April</b> S M T W T F S  4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	<u><b>April 1<sup>st</sup> Item Development—ASU/UCENT</b></u> Precision Machining  <u><b>April 2<sup>nd</sup> Standards Validation—ASU/UCENT</b></u> Hospitality Management (second meeting)  <u><b>April 7<sup>th</sup> -- April 8<sup>th</sup> --April 9<sup>th</sup> --Assessment Webinars</b></u>  <u><b>April 16<sup>th</sup> or 19<sup>th</sup> Webinar with Stakeholders</b></u>  <u><b>April 19<sup>th</sup> - May 14<sup>th</sup> – FINAL PROGRAM TESTING PERIOD</b></u>
--	---

<b>May</b> S M T W T F S  2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<u><b>May 24<sup>th</sup> Training for Facilitators of June Institutes—ASU/UCENT</b></u>
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<b>June</b> S M T W T F S  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	<u><b>June 7-8 TEACHER INSTITUTE (Item Analysis &amp; Item Development)—ASU</b></u>  <u><b>June 10-11 TEACHER INSTITUTE (Item Analysis &amp; Item Development)—ASU</b></u>  <u><b>June 21-22 TEACHER INSTITUTE (Item Analysis &amp; Item Development)—ASU</b></u>  <u><b>June 24-25 TEACHER INSTITUTE (Item Analysis &amp; Item Development)—ASU</b></u>  <u><b>June 16—Stakeholders Meeting (Item Analysis &amp; Item Development)</b></u>
--	---

## **APPENDIX M**

### **Industry Standards Validation Committees and Meeting Dates**

## **Standards Validation Meetings**

### ***July 9<sup>th</sup> Advertising & Public Relations Committee***

---

David Bolger, Corporate//Education Consulting, Inc.  
Erin Chaboya, Cactus High School  
Colin Columna, Arizona Opera  
Abbie Fink, HMA Public Relations  
James Howe, Benson High School  
Julie Ott, The Fashion Design Institute of Design & Merchandising  
Nicholas Papagalos, Papagalos Strategic Communications  
Cathy Planchard, Mindspace  
Troy Pottgen, Riestler Advertising & Marketing  
Jim Sharpe, Rose & Allyn Public Relations

### ***July 9<sup>th</sup> Early Childhood Education Committee***

---

Diana Abel, Early Childhood/Human Development, Rio Salado College  
Amy Corriveau, ADE/Early Childhood Education  
Terry Doolan, ADE/Early Childhood Education  
Mary Dillon, Ready To Learn/ASSET Eight  
Guadalupe Franco, Murphy School District Head Start  
Kim Tan, Maricopa County Head Start  
Ana Trejo, Paradise Valley Community College  
Cheryl Williams, Chandler High School

### ***July 10<sup>th</sup> Business Operations Support & Assistant Services Committee***

---

Jodie Anderson, Tgen/International Association of Administrative Professionals  
Beverly Cochrain, Salome High School  
Marina Higdon, Bank of America  
Cynthia Leedom, Banner Desert Medical Center  
Yvonne Miles, International Association of Administrative Professionals  
Antoinette Raynes, Business Administration  
Nancy Riley, Waddell & Reed  
David Rudnick, Sahuarita High School  
Nancy Rung, International Association of Administrative Professionals  
Dick Weiss, Gustare LTD  
Maryanne Weiss, Gustare LTD

### ***September 15<sup>th</sup> Early Childhood Education Committee***

---

Amy Corriveau, ADE/Early Childhood Education  
Terry Doolan, ADE/Early Childhood Education  
Mary Dillon, Ready To Learn/ASSET Eight  
Alicia Smith, First Things First  
Ana Trejo, Paradise Valley Community College  
Cheryl Williams, Chandler High School

### ***September 25<sup>th</sup> Fire Science Committee***

---

Mike Berger, Central Arizona Valley Institute of Technology  
Don Fisher, Fire Science coordinator, Northland Pioneer College/NAVIT  
Steve Kinkade, Assistant Chief for Training, Luke Fire Emergency Services  
Kelly (KC) McCoy, Division Chief, Training, Northwest Fire District, Tucson  
Phil Mele, Arizona State Fire Marshal  
Mark Nichols, Peoria Fire Department, Training Chief  
Don Richie, Dean of CTE, Northland Pioneer College/NAVIT  
Matt Weber, NAVIT  
Paul Wobosel, State Fire Training Director, Fire-Marshall's Office

### ***October 9<sup>th</sup> Automation & Robotics Committee***

---

Jim Brice, DeVry University  
Yinong Chen, ASU  
Tom Crump, Unique Machine & Tool  
Stephen Heffner, Pennington Systems  
Bill Perrino, Honeywell

### ***November 13<sup>th</sup> Multimedia Technology Committee***

---

Jaime Boyd, Univision KTVW 33  
Heidi Foglesong, The Market Box  
Jeff Karnowski, KPNX-TV  
Matt Self, 12 News

### ***December 14<sup>th</sup> Fire Service Committee***

---

Mike Berger, Central Arizona Valley Institute of Technology  
Kelly (KC) McCoy, Division Chief, Training, Tucson Northwest Fire District  
Phil Mele, Arizona State Fire Marshal  
Paul Wobosel, Arizona State Fire Training Director

### ***February 17<sup>th</sup> Precision Manufacturing Committee***

---

Rey Chu, Director, Manufacturing Technologies  
Rick Royer, Industrial Engineering Consultant; Optum Engineering  
Ray Rubin, JPS Manufacturing

### ***March 10<sup>th</sup> Hospitality Management Committee***

---

Jay Anderkin, Hilton Suites Phoenix  
Andrea Cardona, Casa Grande High School District  
John Cauvin, Windmill Inns of America  
Rolando Gastelum, Holiday Inn & Suites Phoenix Airport  
Trish McCreary, Scottsdale Unified School District  
Anne Niemiec, Marriott Courtyard & Residence Inn  
Christine Tierney, Four Seasons Resort  
Armando Trujillo, Pima Community College  
Larry Williams, Scottsdale Community College

***April 2<sup>nd</sup> Hospitality Management Committee***

---

Jay Anderkin, Hilton Suites Phoenix

Andrea Cardona, Casa Grande High School District

John Cauvin, Windmill Inns of America

Rolando Gastelum, Holiday Inn & Suites Phoenix Airport

Trish McCreary, Scottsdale Unified School District

Anne Niemiec, Marriott Courtyard & Residence Inn

Armando Trujillo, Pima Community College

Larry Williams, Scottsdale Community College

## **APPENDIX N**

### **Item Analysis and Management System**

## Item Analysis

### What makes a good assessment?

- *Reliability* - the consistency of test scores over time
  - *Validity* - whether or not the test measures what it is supposed to measure
- \*A test possesses content validity when content experts verify that the test measures what it is supposed to measure.

Statistical Review of Items

### What does item analysis tell us?

Item Difficulty

Item Discrimination

Distractor Pattern

## Item Difficulty

Item difficulty is determined by the percentage of students who answer the item correctly ( $p$  value).

- When none of the students chooses the correct answer, the  $p$  value is 0.
- When all of the students choose the correct response, the  $p$  value is 1.0.

## Item Discrimination

A good item discriminates between those who know the content and those who don't know the content.

\*An item discrimination value of .3 and above indicates that the item accurately discriminates between those who know and those who don't know the content.



Standards - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://cteaz.com/admin/catalog/standards/browse.php?program\_id=22

Most Visited Getting Started Latest Headlines

Standards

CTEAZ Dashboard **Catalog** Users Logout

Up One Level Scenarios Add

**ACCOUNTING AND RELATED SERVICES**

Standards:

| <input type="checkbox"/> | Index    | Standard             | C/F   | Measurement Criteria |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------|----------------------|-------|----------------------|
| <input type="checkbox"/> | 1.1.x;x  | DEMONSTRATE          | 0 / 0 | 9                    |
| <input type="checkbox"/> | 1.2.x;x  | DEMONSTRATE THE      | 0 / 0 | 14                   |
| <input type="checkbox"/> | 1.3.x;x  | DETERMINE PAYROLL    | 0 / 0 | 5                    |
| <input type="checkbox"/> | 1.4.x;x  | GENERATE PROCEDURES  | 0 / 0 | 5                    |
| <input type="checkbox"/> | 1.5.x;x  | DETERMINE            | 0 / 0 | 9                    |
| <input type="checkbox"/> | 1.6.x;x  | EVALUATE ASSETS.     | 0 / 0 | 10                   |
| <input type="checkbox"/> | 1.7.x;x  | APPRAISE FORMS OF    | 0 / 0 | 7                    |
| <input type="checkbox"/> | 1.8.x;x  | ASSESS THE FINANCIAL | 0 / 0 | 6                    |
| <input type="checkbox"/> | 1.9.x;x  | USE ACCOUNTING       | 0 / 0 | 3                    |
| <input type="checkbox"/> | 1.10.x;x | EXAMINE ETHICAL      | 0 / 0 | 3                    |
| <input type="checkbox"/> | 1.11.x;x | EXPLORE ECONOMIC     | 0 / 0 | 4                    |
| <input type="checkbox"/> | 1.12.x;x | EXPLORE ACCOUNTING   | 0 / 0 | 4                    |

Move | Copy | Copy In Place

Info

- Catalog Manager
- Catalog: Current Catalog
- Index: 1.x.x;x

Catalog Navigation

- Current Catalog
- ACCOUNTING AND RELATED SERVICES

Program Locking

- You have no programs checked out
- Checkout ACCOUNTING AND RELATED SERVICES

Search

- Advanced Search
- 
- 

Done

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Measurement Criteria - Mozilla Firefox

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http://cteaz.com/admin/catalog/measurement\_criteria/browse.php?stan

Most Visited Getting Started Latest Headlines

Measurement Criteria

CTEAZ Dashboard **Catalog** Users Logout

Up One Level + Add

**DEMONSTRATE BUSINESS AND FINANCIAL MANAGEMENT PRACTICES**

Measurement Criteria:

| <input type="checkbox"/> | Index   | Measurement Criteria                     | C/F   | Items |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------|--|-------|-------|
| <input type="checkbox"/> | 1.1.1.x | Review a budget based on an              | 1 / 1 | 3     |
| <input type="checkbox"/> | 1.1.2.x | Review an income statement for an        | 0 / 0 | 3     |
| <input type="checkbox"/> | 1.1.3.x | Review a balance sheet for an            | 0 / 0 | 3     |
| <input type="checkbox"/> | 1.1.4.x | Interoret financial information for      | 0 / 0 | 3     |
| <input type="checkbox"/> | 1.1.5.x | Monitor and adjuist a business operation | 1 / 1 | 1     |
| <input type="checkbox"/> | 1.1.6.x | Compare foreign currencies and           | 0 / 0 | 3     |
| <input type="checkbox"/> | 1.1.7.x | Desrribe the innpart of quality business | 0 / 0 | 2     |
| <input type="checkbox"/> | 1.1.8.x | Manage customer relations                | 0 / 0 | 1     |
| <input type="checkbox"/> | 1.1.9.x | Review insurance needs for a business    | 0 / 0 | 3     |

Move | Copy | Copy In Place

Info

- Catalog Manager
- Catalog: *Current Catalog*
- Index: 1.1.x;x

Catalog Navigation

- Current Catalog
- ACCOUNTING AND RELATED SERVICES
- DEMONSTRATE BUSINESS AND FINANCIAL MANAGEMENT PRACTICES NEEDED FOR ENTREPRENEURS

Program Locking

- You have no programs checked out
- Checkout ACCOUNTING AND RELATED SERVICES

Search

- Advanced Search
- 
- Search

Done

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Item - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://cteaz.com/admin/catalog/items/browse.php?measurement\_criteri

Most Visited Getting Started Latest Headlines

Item

CTEAZ Dashboard **Catalog** Users Logout

Up One Level Add New Item

**Review a budget based on an accounting enterprise&...**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Index	Stem	Status	Type	Use On Test
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.1.1;1	Your company's	Retired	Multiple Choice	no
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.1.1;2	Which of the	Active	Multiple Choice	yes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.1.1;3	What is the	Active	Multiple Choice	no
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.1.1;4	Company XYZ	New	Multiple Choice	no

Move | Copy | Copy In Place

**Info**

- Catalog Manager
- Catalog: *Current Catalog*
- Index: 1.1.1;x

**Catalog Navigation**

- Current Catalog
- ACCOUNTING AND RELATED SERVICES
- DEMONSTRATE BUSINESS AND FINANCIAL MANAGEMENT PRACTICES NEEDED FOR ENTREPRENEURS
- Review a budget based on an accounting enterprise's business plan

**Program Locking**

- You have no programs checked out
- Checkout ACCOUNTING AND RELATED SERVICES

**Search**

- Advanced Search
- 
-

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Done

Item - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://ctez.com/admin/catalog/items/form.php?measurement\_criteria\_

Most Visited Getting Started Latest Headlines

Item

CTEAZ Dashboard Catalog Users Logout

Up One Level Back to Browse

### Item Analysis for 1.1.1;2

Exam	Blue Bar Value	Green Bar Value
Spring 09	0.0035	0.3679
Spring 10 Diagnostic	0.0943	0.6
Spring 10 Final	0.0377	0.472

Item Status: Edited

Item Type: Multiple Choice

Stem: 116/500 Characters  
Which of the following is examined to determine whether a company's budget supports the ability to pay current debt?

Stem File:

Notes: 0/500 Characters  
Auto-Notes On

Which of the following is examined to determine whether a company's budget supports the ability to pay current debt?

Done

## **APPENDIX O**

### **Item Development / Item Analysis Committees and Meeting Dates**

## Item Development / Item Analysis Meetings

### ***July 17<sup>th</sup> Bioscience Committee***

---

Lynne Cote, Mountain View High School  
Kevin Kehl, Palo Verde High School  
Andrew Lettes, Pueblo High School  
Charles Collingwood, Rincon High School  
Debbie Leonetti, Tucson Unified School District  
Maria Ochoa, Sierra Linda High School District  
Xan Simonson, Mesa Biotechnology Academy

### ***July 17<sup>th</sup> Law, Public Safety & Security Committee***

---

Nori Cannell, Tempe Union High School District  
Mario Gastelum, Cholla High Magnet School  
Brian Kennedy, CAAVIT  
Jimmy Navarro, Rio Rico High School  
Kathy Rau, Pima County JTED

### ***July 17<sup>th</sup> Welding Technologies Committee***

---

Ken Bice, Pima Community College  
Dale Larsen, Holbrook Unified School District  
Tad Strickland, Cholla High Magnet School  
Ray Wiggins, Tucson Unified School District

### ***July 17<sup>th</sup> Early Childhood Education Committee***

---

Melanie Alexander, Basha High School  
Jennifer Atteberry-Pierpont, Canyon Del Oro High School  
Emmy Berry, Vail School District  
DeAnne Boyce, Peoria High School  
Julie Chan-Wong, Centennial High School  
Dawn Cheatham, Youngker High School  
Diane Coone, Phoenix Union High School District  
Debbie Friar, Yuma Union High School District  
Julie Fuhrmann, Peoria Unified School District  
Heather Glaeser, McClintock High School  
Mary Gaston, Corona del Sol High School  
Mary Ellen Hardin, Pueblo Magnet High School  
Brenda Hinton-Harvey, Safford Unified School District  
Billie Huff, Safford Unified School District  
Brenda Jackson, Colorado River Union High School  
Sue Lange, Red Mountain High School  
Robin Ocheltree, Mesquite High School  
Marguerite Percell, Phoenix Unified High School District  
Patricia Svoboda, Peoria Unified School District  
Sandy Uterhardt, Douglas High School  
Cheryl Williams, Chandler High School

### ***July 18<sup>th</sup> Computer Maintenance Committee***

---

Bob Buckley, Pueblo Magnet High School  
Bud Evans, Payson High School,  
John Sachs, Mesquite High School

### ***July 18<sup>th</sup> Network Technologies Committee***

---

Mark Calhoun, Sabino High School  
Brian Rhatigan, Rincon High School  
Andy Wood, Snowflake High School

### ***July 18<sup>th</sup> Software Development Committee***

---

Sam Alexander, Chandler Unified School District  
Renee Ciezki, Ironwood High School  
James Madden, Tucson Unified School District  
Scott Schall, Tolleson Union High School District

### ***July 18<sup>th</sup> Web Page Development Committee***

---

Eric Fogle, Blue Ridge High School  
Helen Glispie, Sandra Day O'Connor High School  
Lynda Guetter, Barry Goldwater High School  
Robert Lugo, Nogales High School  
Lois Postil, Amphitheater School District  
Larry Rice, Vail High School  
Jesse South, Santa Rita High School

### ***July 18<sup>th</sup> Business Operations Support & Assistant Services Committee***

---

Diane Barnett, Tucson High Magnet School  
Tom Mihalchick, Campo Verde High School  
Brad Palmer, Catalina Magnet High School  
David Rudnick, Sahuarita High School

### ***July 18<sup>th</sup> Advertising & Public Relations Committee***

---

Erin Chaboya, Cactus High School  
Michelle Coots, Boulder Creek High School  
Renee Woodruff, Mountain Ridge High School

### ***August 9<sup>th</sup> Laboratory Assisting Committee***

---

Lisa Hutchison, Peoria Unified School District  
Paul Johnson, West-MEC  
Tanya Meyer, Adjunct Instructor  
Rosemarie Prater, Mountain View High School  
Linda Saavedra, Pima Community College  
Julie Stiak, Phoenix College

### ***September 10<sup>th</sup> Technical Theatre Committee Members***

---

Ric Alpers, Paradise Valley Unified School District  
Chelsea Farrar, Amphitheater School District  
Jeremy Ferguson, Sedona-Oak Creek Unified School District  
John Owens, Central Arizona College  
Jenell Riordan, Gilbert Unified School District

### ***September 10<sup>th</sup> Arts Management Committee Members***

---

Terry Bramwell, Sedona-Oak Creek Unified School District  
Janet Blum, Scottsdale Unified School District  
Teniqua Broughton, Free Arts of Arizona  
Lynn Monson, Arizona Dance Education Organization  
Gerry Petersen, Phoenix Union High School District  
Jill Ranucci, Catalina Foothills School District  
Larry Whitsell, Higley Unified School District

### ***September 12<sup>th</sup> Computer Maintenance Committee***

---

Bob Buckley, Pueblo Magnet High School  
John Sachs, Mesquite High School

### ***September 12<sup>th</sup> Network Technologies Committee***

---

Bud Evans, Payson High School  
Andy Wood, Snowflake High School

### ***September 12<sup>th</sup> Software Development Committee***

---

Renee Ciezki, Ironwood High School  
James Madden, Tucson Unified School District  
Scott Schall, Tolleson Union High School District

### ***September 12<sup>th</sup> Web Page Development Committee***

---

Helen Glispie, Sandra Day O'Connor High School  
Lynda Guetter, Barry Goldwater High School  
Judi Shelkin, La Joya High School  
Brad Westfall, AZPixels

### ***September 16<sup>th</sup> Sports Medicine Committee***

---

Fernando Alvidrez, Peoria High School  
Lindsey Harn Schroeder, Cactus High School  
Suzanne Howell, Raymond J Kellis High School  
Julie Johnson, Valley Vista High School  
Stuart Minck, Casa Grande Union High School  
Josh Moore, Peoria High School  
Melissa Portela, Willow Canyon High School

### ***September 16<sup>th</sup> Culinary Arts Committee***

---

Melissa Austin, Basha High School  
Lorna Barker, Tempe High School  
Yvonne Bernino, Flowing Wells High School  
Orlando Chaney, Hamilton High School  
Nancy Cole, Mountain View High School  
Sheranne Dampier, Kofa High School  
Wayne Duncan, Page High School  
Sean Frederick, Mountain View High School  
Bruce Gillaspie, Santa Rita High School  
Jean Gregory, St. David Unified School District  
Nancy Ingram, Independence High School  
Laurel Krinke, Mountain View High School  
Debbie Langenbach-Snyder, Raymond S Kellis High School

Geri Piper, Valley Vista High School  
Sheri Richmond, Corona del Sol High School  
Larry Schmale, Nogales High School  
Patti Schmalzel, Canyon del Oro High School  
Angela Stutz, Perry High School  
Bob Szabo, Santa Cruz Valley High School

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***September 17<sup>th</sup> Construction Technologies Committee***

Richard Alvarez, Payson High School  
Larry Beets, Santa Cruz Valley Union High School  
Doug Bogart, Metro Tech High School  
Keith Boyd, Ganado High School  
David Cole, Mohave High School  
Michael Kulwicki, Apache Junction Unified School District  
Robert Nash, Monument Valley High School  
Arthur Stendel, Monument Valley High School

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***September 17<sup>th</sup> Cabinetmaking Committee***

Tom Bockman, Prescott High School  
Ken Jacox, Mesa High School  
Bill McClure, Glendale Unified School District  
Mark Roberts, Mesa Unified School District

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***September 17<sup>th</sup> Architectural Drafting Committee***

Robert Hollifield, Ganado High School,  
Joseph Steele, Buckeye Union High School  
Scott Thomas, Thomas Design Associates

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***September 17<sup>th</sup> Mechanical Drafting Committee***

Sam Gardner, Duncan High School  
Dee Lauritzen, Eastern Arizona College  
Chris Perry, Chaparral High School  
Brandon Tso, Chinle High School

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***September 18<sup>th</sup> Fashion Design & Merchandising Committee***

Kathy Hanson, Paradise Valley High School  
Nevada Harward, Centennial High School  
Heather Keck, Paradise Valley High School  
Margaret Lamb, Marcos de Niza High School  
Casonti McClure, Amphi High School  
Gloria Nelson-Green, Skyview High School  
Mary Perry, Rincon High School  
Belen Reyes-Carrera, Nogales High School  
Sarah San Jule, Ironwood Ridge High School  
Brenda Thompson, Blue Ridge High School  
Kathy Wallace, Ironwood High School  
Joanie Webb, Chandler High School

### ***September 18<sup>th</sup> Interior Design & Merchandising Committee***

---

Lauren Fetkenhier, Sandra Day O'Connor High School  
Donna Krogman, Mountain View High School  
Stephanie Thomson, Mesquite High School

### ***September 19<sup>th</sup> Education Professions Committee***

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Rita Contrata, Ironwood High School  
Gypsy Denzine, Northern Arizona University  
Lisa Doll, Queen Creek Unified School District  
Jennifer Horen, Fountain Hills High School  
Mary Morris, Douglas High School  
Patty Powers, Arizona Western College  
Jeannette Shaffer, ATLATA Project, Maricopa Community Colleges  
Marjorie Schiller, Central Arizona College  
Nancy Schwab, Liberty High School

### ***September 19<sup>th</sup> Bioscience Committee***

---

Teresa Clark, Hamilton High School  
Lynne Cote, Mountain View High School  
Cheryl Dunham, Arcadia High School  
Amanda Grimes, Mesa High Biotech Academy  
Patti Kupferer, Red Mountain High School  
Donna Savill, Douglas High School  
Xan Simonson, Mesa Biotech Academy  
Margaret Wilch, Tucson High Magnet School

### ***September 23<sup>rd</sup> Nursing Services Committee***

---

Joan Dawson, Catalina Magnet High School  
Beth Francis, Pima County JTED  
Becky Grieco, Centennial High School  
Sara Little, Catalina Magnet High School  
Michelle Merolla, Page High School  
Sharon Rayman, St. Joseph's Hospital and Medical Center

### ***September 23<sup>rd</sup> Business Management & Administrative Services Committee***

---

Becky Barris, Winslow High School  
Laura Gallego, Tucson High School  
Chris Liebelt-Garcia, Metro Tech High School  
Amy Gin, Tucson High School  
Kathleen Kopyy, Tucson High Magnet School

### ***September 23<sup>rd</sup> Accounting & Related Services Committee***

---

Bennie Carlos, Yuma School District (retired)  
Michelle Conner, Estrella Foothills High School  
Shelly Cunningham, Winslow High School  
JoDee Pennock, Liberty High School  
Martha Rada, Metro Tech High School  
Jared Van Arsdale, CPA

### ***September 23<sup>rd</sup> Financial Services Committee***

---

Stacy Green, Willow Canyon High School  
Barbara Renner, Metro Tech High School

### ***September 26<sup>th</sup> Engineering Sciences Committee***

---

Leman Booher, Ganado High School  
Mark Calhoun, Sabino High School  
Vanessa Eaton, Peoria Unified School District  
Kevin Elinski, Wickenburg High School  
James Humphreys, Catalina Foothills High School  
Brad Huston, Grand Canyon Unified School District  
Marea Jenness, Tucson High Magnet School  
Larry Rice, Vail High School  
Stacy Tollefson, University of Arizona,  
Brison Torbert, Liberty High School  
Laura Zimmer, Moon Valley High School

### ***September 30<sup>th</sup> Automotive Technology Committee***

---

Randy Baker, EVIT  
John Henry, Metro Tech High School  
Mike McAfee, Arizona Automobile Dealers Association  
Jerrad McMurrich, Flowing Wells High School  
David Molina, Smartsolutions U.S.A.  
Frank Quinn, Peoria Unified School District  
Art Seemann, Coolidge High School

### ***September 30<sup>th</sup> Automotive Collision Committee***

---

Armando Escalante, Sunnyside High School  
David Melian, Metro Tech High School

### ***September 30<sup>th</sup> Professional Sales Committee***

---

Paulette Bell, Gilbert High School  
Vincent Del Vecchio, Chapparal High School  
Linda Kroll, Casa Grande High School District  
John Lebsack, Coolidge High School  
Jim Norby, Ironwood Ridge High School  
Debra Soto, Mountain View High School

### ***September 30<sup>th</sup> Entertainment Marketing Committee***

---

Steve Mulhearn, Gilbert High School  
Joe Parone, Payson High School  
Juliann Trump, Desert Mountain High School  
Sheila Vito-Randall, Douglas High School

### ***September 30<sup>th</sup> Entrepreneurship Committee***

---

Tom Ayers, Sabino High School  
Michelle Coots, Boulder Creek High School  
Louann Costa, Cholla High School  
Jayme Fitzpatrick, Deer Valley High School  
Mona Rutherford, Palo Verde High School  
Cheryl Shea, Pinnacle High School

### ***October 3<sup>rd</sup> Early childhood Education Committee***

---

Melanie Alexander, Basha High School  
Jennifer Atteberry-Pierpont, Canyon Del Oro High School  
Emmy Berry, Vail High School  
DeAnne Boyce, Peoria High School  
Julie Chan-Wong, Centennial High School  
Dawn Cheatham, Youngker High School  
Diane Coone, Phoenix Union School District  
Debra Friar, Yuma High School District  
Heather Glaeser, McClintock High School  
Mary Ellen Hardin, Pueblo Magnet High School  
Marie Hendry, Lake Havasu High School  
Sue Lange, Red Mountain High School  
Cheryl Williams, Chandler High School

### ***October 3<sup>rd</sup> Advertising & Public Relations Committee***

---

Marc Acuna, Flowing Wells High School  
Michelle Coots, Boulder Creek High School  
Vincent Del Vecchio, Chapparal High School  
Steve Johnson, Maryvale High School  
Linda Kroll, Vista Grande High School  
Stacy Masciangelo, Desert Ridge High School  
Juliann Trump, Desert Mountain High School

### ***October 3<sup>rd</sup> Business Operations Support & Assistive Services Committee***

---

Tom Mihalchick, Campo Verde High School  
David Rudnick, Sahuarita High School

### ***October 10<sup>th</sup> Law, Public Safety, and Security Committee***

---

Gerald Allen, Phoenix Union High School  
Nori Cannell, Tempe Union High School District  
Don Jennings, Queen Creek High School  
Jimmy Navarro, Rio Rico High School

### ***October 10<sup>th</sup> Welding Technologies Committee***

---

Dale Larsen, Holbrook Unified School District  
Tad Strickland, Cholla High Magnet School

### ***December 11<sup>th</sup> Automation & Robotics Committee***

---

Rick Ford, Mesquite High School  
Stephen Heffner, Pennington Systems  
Jay Kahl, Maricopa County Community Colleges  
Enrique Santa Cruz, Sahuarita High School  
Brison Torbert, Liberty High School

### ***January 25<sup>th</sup> Fire Service Committee Members***

---

Terry Baugher, East Valley Institute of Technology  
Maria Bicknell, Pueblo Magnet High School  
Al Gameros, Glover High School  
Rick Shearer, EVIT  
Jeff Smith, Pueblo Magnet High School

### ***April 1<sup>st</sup> Precision Machining Committee***

---

Larry Geczy, Maricopa Skill Center  
Ray Wiggins, Tucson High School  
Rick Royer, Optum Engineering  
Brison Torbert, Liberty High School

### ***June 7<sup>th</sup> & 8<sup>th</sup> Accounting & Related Services Committee***

---

Michelle Conner, Estrella Foothills High School  
Laura Gallego, Tucson High Magnet  
Amy Gin, Tucson High School  
Kay Olson, Camelback High School  
Eleanore Rankin, Rio Rico High School  
Aaron Roeschley, Rio Rico High School

### ***June 7<sup>th</sup> & 8<sup>th</sup> Business Management & Administrative Services Committee***

---

Shauna Demers, Mountain Pointe High School  
Leah Hodges, Buckeye Union High School  
Carol Huerta, Career & Tech Dept, Tucson Unified School District  
Tracy Kelly, Coolidge High School  
Kathleen Kopyy, Tucson High Magnet  
Marcia Mendoza, Nogales High School  
Cecilia Moreno, Trevor Browne High School  
Susan Nafziger, Holbrook High School  
Gloria Vasquez, Rio Rico High School  
Amanda Yocum, Basha High School

### ***June 7<sup>th</sup> & 8<sup>th</sup> Business Operations Support & Assistive Services Committee***

---

Sheilah Buscaglia, Highland High School  
David Rudnick, Sahuarita High School  
Judi Shelkin, La Joya High School  
Sandi Sherman, Metro Tech High School

### ***June 7<sup>th</sup> & 8<sup>th</sup> Culinary Arts Committee***

---

Melissa Austin, Basha High School  
Lorna Barker, Tempe High School  
Yvonne Bernino, Flowing Wells High School  
Jennifer Brooks, Moon Valley High School  
Chris Contreras, Millennium High School  
Lisa DeCota, Estrella Foothills High School  
Diana Diaz, Copper Canyon High School  
Wayne Duncan, Page High School  
Mike Gaul, Kingman High School  
Jean Gregory, St. David High School

Alicia Griffin, La Joya High School  
Christina (Tina) Hahn, Central High School  
Patti Pastor, Flagstaff High School  
Angela Stutz, Perry High School

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***June 7<sup>th</sup> & 8<sup>th</sup> Fashion Design & Merchandising Committee***

Nevada Harward, Centennial High School  
Kristen Johnson, EVIT  
Melinda Peterman, Mesa High School  
Belen Reyes-Carrera, Nogales High School

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***June 7<sup>th</sup> & 8<sup>th</sup> Interior Design & Merchandising Committee***

Tara Barthelmess, Empire High School  
Margaret Lamb, Marcos de Niza High School  
Sue Lange, Red Mountain High School

---

***June 7<sup>th</sup> & 8<sup>th</sup> Fire Service Committee***

Terry Baugher, EVIT  
Mike Berger, CAVIT  
Steve Darby, Camp Verde High School  
Al Gamos, Globe High School  
Freddie Gamos, Globe High School  
Corey Pine, Globe High School  
Nick Renon, Globe High School  
Gary Robinson, Globe High School  
Richard Ross, Douglas High School  
Bill Solomon, Northland Pioneer Community College

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***June 7<sup>th</sup> & 8<sup>th</sup> Law, Public Safety & Security Committee***

Lisa Adams, Corona del Sol High School  
Gerald (Gerry) Allen, Franklin High School  
Natasha Alston, Mountain Pointe High School  
Brian Kennedy, CAVIT  
Kim McElwain, McClintock High School  
Kathy Rau, Pima County JTED

---

***June 7<sup>th</sup> & 8<sup>th</sup> Sports Medicine & Rehabilitative Committee***

Fernando Alvidres, Peoria High School  
Mike Boesem Tucson High Magnet  
JD Burgess, Millenium High School  
Chad Doyle, Ironwood High School  
Donna Farrell, Coolidge High School  
Jennifer Harpest, Kingman High School  
Josh Moore, Peoria High School  
Melissa Portela, Canyon High School  
Caitlyn Syphers-Laney, Queen Creek High School  
Jacob Tafoya, San Tan Foothills High School

### ***June 7<sup>th</sup> & 8<sup>th</sup> Technical Theatre Committee***

---

Carrie Duerk, Buena High School  
Cory Losenicky, Greenway High School  
Michael Peterman, Mesquite High School  
Jenell Riordan, Desert Ridge High School  
Norm Testa, Catalina Foothills High School

### ***June 10<sup>th</sup> & 11<sup>th</sup> Advanced Construction Technologies Committee***

---

Richard Alvarez, Payson High School  
Roger Condra, Sauharita High School  
Christopher Cool, Agua Fria High School

### ***June 10<sup>th</sup> & 11<sup>th</sup> Architectural Drafting Committee***

---

Wayne Maerk, Barry Goldwater High School  
Robert Nash, Monument Valley High School  
Joseph Steele, Buckeye Union High School

### ***June 10<sup>th</sup> & 11<sup>th</sup> Mechanical Drafting Committee***

---

Dee Lauritzen, Eastern Arizona College  
Raj Singh, Metro Tech High School

### ***June 10<sup>th</sup> & 11<sup>th</sup> Automation & Robotics Committee***

---

Tom Crump, Unique Machine and Tool  
Cesar Gutierrez, Palo Verde Magnet High School  
Ivan Tomkins, Kester Education Services

### ***June 10<sup>th</sup> & 11<sup>th</sup> Cabinetmaking Committee***

---

Tom Bockman, Prescott High School  
Alma Hunt, Cochise College  
Calvin Kupser, Kingman High School

### ***June 10 & 11 Laboratory Assisting Committee***

---

Tanya Meyer, Pima Community College  
Rosemarie Prater, Mountain View High School  
Julie Stiak, Phoenix College

### ***June 10<sup>th</sup> & 11<sup>th</sup> Nursing Services Committee***

---

Cynthia Chillock, Mesa Community College  
Joan Dawson, Catalina Magnet High School  
Becky Grieco, Centennial High School  
Rhonda Sykes, Thunderbird High School

### ***June 21<sup>st</sup> & 22<sup>nd</sup> Advertising & Public Relations Committee***

---

Vincent Del Vecchio, Chapparal High School  
Jayme Fitzpatrick, Deer Valley High School  
Jim Howe, Benson High School

### ***June 21<sup>st</sup> & 22<sup>nd</sup> Automotive Collision Committee***

---

Jeremy Clemons, Buena High School  
Armando Escalante, Sunnyside High School  
David Melian, Metro Tech High School  
James Slezak, Metro Tech High School

### ***June 21<sup>st</sup> & 22<sup>nd</sup> Automotive Technologies Committee***

---

Randy Baker, EVIT  
Larry Huff, Carona del Sol High School  
Timothy Lewis, Arizona Western College  
Mike McAfee, Arizona Automotive Dealers Association  
Randy Phillips, EVIT  
Frank Quinn, Peoria High School  
Felix Ramirez, Cactus High School  
Joe Rauscher, Mesa Community College  
Stephen Skroch, Horizon High School  
Tracy Tudor, Campo Verde High School  
Bill Yandell, Rincon High School

### ***June 21<sup>st</sup> & 22<sup>nd</sup> Early Childhood Education Committee***

---

Jennifer Atteberry-Pierpont, Canyon del Oro High School  
DeAnne Boyce, Peoria High School  
Lisa Bradford, EVIT  
Jessica Brubaker, Boulder Creek High School  
Krista Carr, Marcos de Niza High School  
Renee Chambers, Ironwood High Schools  
Dawn Cheatham, Youngker High School  
Mary Gaston, Carona del sol High School  
Martha Lee, Sandra Day O'Connor High School  
Michele Leyendecker, Mohave High School  
Kristina Martinez, Copper Canyon High School  
Lauren Moraga, Mountain View High School  
Collie Smith-Schroeder, Washington High School

### ***June 21<sup>st</sup> & 22<sup>nd</sup> Education Professions Committee***

---

Tammy Clow-Kennedy, Mesa Community College  
Kathy Haggard, Florence High School  
Jennifer Horen, Fountain High School  
Mary Morris, Douglas High School  
Patty Powers, Arizona Western College  
Ingrid Schon, Payson High School  
Jeannette Shaffer, ATLATA Project  
Brian Snow, San Tan Foothills High School  
Julie Stockwell, Greenway High School

### ***June 21<sup>st</sup> & 22<sup>nd</sup> Engineering Sciences Committee***

---

Leman Booher, Ganado High School  
Stephen Burris, Independence High School  
Bruce Vivers, North Canyon High School

***June 21<sup>st</sup> & 22<sup>nd</sup> Entertainment Marketing Committee***

---

Joe Parone, Payson High School  
Juliann Trump, Desert Mountain High School

***June 21<sup>st</sup> & 22<sup>nd</sup> Entrepreneurship Committee***

---

Tom Ayers, Sabino High School  
Robert Brubaker, St. David High School  
Sheila Vito-Randall Chase, Douglas High School  
Michelle Coots, Boulder Creek High School  
Debby Kidwell, Barry Goldwater High School  
Cheryl Shea, Pinnacle High School  
Michael Vialpando, La Joya High School  
Renee Woodruff, Mountain Ridge High School

***June 21<sup>st</sup> & 22<sup>nd</sup> Professional Sales & Marketing Committee***

---

Paulette Bell, Gilbert High School  
Maria Ciolfi-Abrams, Alhambra High School  
John Hay, Peoria High School  
Steve Johnson, Maryale High School  
Terri Marshall, Pima Partnership  
Ashley Roth, Hamilton High School  
Mona Rutherford, Palo Verde High School  
Tabitha Sloan, Valley Vista High School

***June 21<sup>st</sup> & 22<sup>nd</sup> Web Page Development Committee***

---

Stephen Andrews, Cyber High School  
Shawna Bernard, Mountain Ridge High School  
Helen Glispie, Sandra Day O'Connor High School  
Lynda Guetter, Barry Goldwater High School  
Seth Nilson, Flowing Wells High School  
Jeni Patton, Cochise College  
Jack Pruitt, Empire High School  
Jesse South, Santa Rita High School

***June 24<sup>th</sup> & 25<sup>th</sup> Agribusiness Systems Committee***

---

Darcy Cook, Dobson High School  
Ray Gless, Red Mountain High School  
Curtis Willems, Highland High School

***June 24<sup>th</sup> & 25<sup>th</sup> Animal Systems Committee***

---

Dennis Bushong, Gilbert High School  
Kat Kubista, Basha High School  
Reta Yanik, Westwood High School

***June 24<sup>th</sup> & 25<sup>th</sup> Plant Systems Committee***

---

Ginnie Strait, Hamilton High School  
April White, Paradise Valley High School

***June 24 & 25 Bioscience Committee***

---

Lynne Coté, Mountain View High School  
Patti Kupferer, Red Mountain High School

***June 24<sup>th</sup> & 25<sup>th</sup> Software Development Committee***

---

Jim Madden, University High School  
Johanna Rivera, Westview High School  
Scott Schall, Tolleson Union High School  
Jarod Smith, Glendale Union High School

***June 24<sup>th</sup> & 25<sup>th</sup> Welding Technologies Committee***

---

Hank Charleston, Red Mesa High School  
Dale Larsen, Holbrook High School  
Ron Pixley, Kofa High School  
Jonathan Yazzie, Tuba City High School

## FACILITATION TEAM

### ADE/CTE

***Jan Brite***

Education Program Director  
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***Paulett Ellis***

Professional Development Specialist  
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***Stephanie Hahn***

Early Childhood/Education Professions  
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***Ruth Kerr***

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***Shea Padilla***

Business and Marketing Education  
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***Tracy Rexroat***

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***Lynn Tuttle***

Performing Arts Education  
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***Jason Wojcik***

Industrial Trades Education  
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***Jimmy Wojcik***

Agricultural Education, Welding Technologies, and  
Community Services  
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### ASU/WEDO

***Maggie Mangini***

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***Judy Balogh***

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***Lynne Bodman Storms***

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***Melanie Ohm***

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***Charles Losh***

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***Joanne Bauman***

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***Patricia Loughrin***

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***Bob Keim***

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***Shawna Fletcher***

Special Projects  
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### TECHNICAL ASSISTANCE

***Yvonne Duncan***

Administrative Assistant  
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***David Cornelius***

ASU/Walter Cronkite School of Journalism and Mass  
Communication, Consultant  
david.cornelius@asu.edu

**APPENDIX P**

**CTE Teacher Institutes**

# **UPDATED ANNOUNCEMENT!!**

## **CTE TEACHER INSTITUTES – SUMMER 2010**

### **Assessment and Communities of Practice**

**Redesigned for two days only! No residence hall requirement!**

**Monday-Tuesday, June 7-8**  
**Thursday-Friday, June 10-11**  
**Monday-Tuesday, June 21-22**  
**Thursday-Friday, June 24-25**

**Arizona State University Downtown Phoenix Campus**

Arizona Department of Education in partnership with Arizona State University

ADE's Career & Technical Education Unit and ASU's Workforce Education & Development Office will co-host **four 2-day teacher institutes** in June to continue the process of building high-quality assessments for CTE programs. If you are interested in participating, please review the information below and complete and **return the attached nomination form by April 28. Refer to the dates, times, and program choices attached. A maximum of 7 teachers for each program will be accepted.**

#### **Institute Objectives and Participant Commitments**

- To analyze new assessment items and continue the process of building item banks
- To collaborate in building statewide "communities of practice" around curriculum, instruction, and assessment
- To participate in a group presentation at the ACTE<sub>AZ</sub> 2010 Summer Conference in Tucson, July 18-21 (Individuals are responsible for all conference costs.)

**Professional Development Certificate:** Participants will earn 16 hours of professional development credit from the Arizona Department of Education in cooperation with Arizona State University upon completion of the 2-day session.

#### **Professional Services Contract for ALL Participants**

- \$300 – inclusive of mileage reimbursement and meals on your own. Suggestions for restaurants in the downtown Phoenix area (most within walking distance) will be provided.
- \$450 – inclusive of mileage reimbursement, overnight accommodations, and meals on your own. (You are responsible for making your own hotel reservation and payment. A list of downtown Phoenix hotels will be provided with your confirmation).

**Each institute begins on Day 1 at 8:00 am and concludes on Day 2 at 4:00 pm.**

**Snack breaks each day will be provided by the institute sponsors.**

**See separate attachments for featured programs by 2-day session and Nomination Form.**

**Following the April 28<sup>th</sup> deadline, all nominations will be reviewed and teachers will be notified by e-mail as to whether or not they have been selected for participation.**

**SEE PROGRAM LIST BY 2-DAY SESSION and NOMINATION FORM ATTACHED.**

## NOMINATION FORM

**Use this form to nominate a CTE teacher or yourself for participation in the CTE Teacher Institutes.**

**Check one program, complete the nomination form, and submit by April 28:**

**E-mail: [wedo@asu.edu](mailto:wedo@asu.edu)**

**FAX: 602-496-1452**

<p><b><u>June 7-8, Mon/Tues, 8 am – 4 pm:</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Accounting and Related Services</li> <li><input type="checkbox"/> Business Management &amp; Administrative Services</li> <li><input type="checkbox"/> Business Operations Support &amp; Assist Services</li> <li><input type="checkbox"/> Culinary Arts</li> <li><input type="checkbox"/> Fashion Design &amp; Merchandising</li> <li><input type="checkbox"/> Interior Design &amp; Merchandising</li> <li><input type="checkbox"/> Fire Service</li> <li><input type="checkbox"/> Law, Public Safety &amp; Security</li> <li><input type="checkbox"/> Sports Medicine and Rehabilitation Services</li> <li><input type="checkbox"/> Technical Theatre</li> <li><input type="checkbox"/> Financial Services</li> </ul>	<p><b><u>June 10-11, Thurs/Fri, 8 am – 4 pm:</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Advanced Construction Technologies</li> <li><input type="checkbox"/> Architectural Drafting</li> <li><input type="checkbox"/> Automation &amp; Robotics</li> <li><input type="checkbox"/> Cabinetmaking</li> <li><input type="checkbox"/> Carpentry</li> <li><input type="checkbox"/> Laboratory Assisting</li> <li><input type="checkbox"/> Mechanical Drafting</li> <li><input type="checkbox"/> Medical Assisting</li> <li><input type="checkbox"/> Nursing Services</li> <li><input type="checkbox"/> Therapeutic Massage</li> </ul>
<p><b><u>June 21-22, Mon/Tues, 8 am – 4 pm:</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Advertising &amp; Public Relations</li> <li><input type="checkbox"/> Automotive Collision</li> <li><input type="checkbox"/> Automotive Technologies</li> <li><input type="checkbox"/> Early Childhood Education</li> <li><input type="checkbox"/> Education Professions</li> <li><input type="checkbox"/> Engineering Sciences</li> <li><input type="checkbox"/> Entertainment Marketing</li> <li><input type="checkbox"/> Entrepreneurship</li> <li><input type="checkbox"/> Professional Sales &amp; Marketing</li> <li><input type="checkbox"/> Web Page Development</li> </ul>	<p><b><u>June 24-25, Thurs/Fri, 8 am – 4 pm:</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Animal Systems</li> <li><input type="checkbox"/> Agribusiness Systems</li> <li><input type="checkbox"/> Bioscience</li> <li><input type="checkbox"/> Computer Maintenance</li> <li><input type="checkbox"/> Natural Resources Systems</li> <li><input type="checkbox"/> Network Technologies</li> <li><input type="checkbox"/> Plant Systems</li> <li><input type="checkbox"/> Software Development</li> <li><input type="checkbox"/> Welding Technologies</li> </ul>

Teacher _____	
District _____	School _____
Phone _____	E-mail _____
Summer Phone _____	Summer E-mail _____
Years of experience teaching CTE program _____	
Years of related industry experience (if applicable) _____	
<input type="checkbox"/> This teacher has participated in the item development/analysis process.	
<input type="checkbox"/> This teacher is new to the item development/analysis process.	

Photocopy this form for multiple nominations. Call 602-496-1451 if you have any questions.

**DEADLINE FOR NOMINATIONS: April 28, 2010**



# RESPONSE FORM

## CTE TEACHER INSTITUTES – SUMMER 2010

Arizona State University Downtown Phoenix Campus

Arizona Department of Education in partnership with Arizona State University

Please complete this form and return it to ASU/Workforce Education and Development Office by FAX (602-496-1452) or email [wedo@asu.edu](mailto:wedo@asu.edu) by **Tuesday, May 18**, to confirm your participation\*.

### Accounting and Related Services June 7-8, 2010 ■ 8:00 am – 4:00 pm

Name	_____
Summer Address	_____
City, Zip Code	_____
Phone	_____ E-mail _____
Summer Phone	_____ Summer E-mail _____

**A Professional Services Contract will be sent to the e-mail addresses listed above. Please check one of the following options:**

I will need a Professional Services Contract for \$300 (no overnight accommodations necessary).

I will need a Professional Services Contract for \$450 (includes overnight accommodations).

**Parking will be provided at no cost to participants. Please check one of the following options:**

I will need parking.

I have alternate transportation and will not need parking.

### Statement of Professionalism

#### CTE Teacher Institutes – Summer 2010: Assessment and Communities-of-Practice

- I understand that the work involved in establishing The Arizona Skills Assessment System is confidential and that the items and item banks are to be kept secure at all times.
- I acknowledge my responsibility to follow the procedures set forth by the Arizona Department of Education/Career and Technical Education Unit and the Arizona State University/Workforce Education and Development Office regarding the development of items and including the surrender of all materials associated with item development.
- I further understand that if I am found acting indiscreetly with confidential material, I will be dismissed from further involvement with the assessments. I understand this action to be necessary in order to maintain the integrity of The Arizona Skills Assessment System.
- I agree to engage with colleagues in developing an ongoing community-of-practice that exemplifies the highest standards of professionalism.

\_\_\_\_\_  
Signature of Participant

\_\_\_\_\_  
Date

\* A participant package detailing the agenda, specific location, parking instructions, and a list of local hotels will be emailed to you upon receipt of your response form.

# CTE Teacher Institutes—Summer 2010

## Assessment and Communities of Practice

Monday-Tuesday, June 7-8 Thursday-Friday, June 10-11 Monday-Tuesday, June 21-22 Thursday-Friday, June 24-25

Arizona Department of Education in partnership with Arizona State University

### Institute Objectives

1. To analyze new assessment items and continue the process of building item banks
2. To collaborate in building statewide “communities of practice” around curriculum, instruction, and assessment
3. To participate in a group presentation at the Summer Conference

### Daily Schedule

Check-in and continental breakfast at 7:30 a.m.  
Lunch on your own from Noon to 1:00 p.m.  
Beverage and snack available at 2:00 p.m.  
Adjournment at 4:00.

## Day One

- 8:00 Welcome – The Challenge at Hand
- The System—Status Report
  - Item Development and Analysis
  - Communities of Practice

10:00 – Noon      WORK SESSION #1

1:00 – 4:00      WORK SESSION #2

## Day Two

- 8:00 Extending Our Work  
Engaging Our Colleagues

9:00 – Noon      WORK SESSION #3

1:00 – 3:30      WORK SESSION #4

- 3:30 Wrap-up and Reflection / Professional Development Certificate

**June 7-8 (74 participants)**

<b>Accounting &amp; Related Services (6)</b>	Lynne Storms	Michelle Conner	Estrella Foothills HS
	Paulett Ellis	Laura Gallego	Tucson High Magnet
		Amy Gin	Tucson HS
		Kay Olson	Camelback HS
		Eleanore Rankin	Rio Rico HS
		Aaron Roeschley	Rio Rico HS
<b>BMAS (10)</b>	Shea Padilla (6/7)	Shauna Demers	Mountain Pointe HS
	Jan Brite (6/8)	Leah Hodges	Buckeye Union HS
	Pat Loughrin	Carol Huerta	Career & Tech Dept
		Tracy Kelly	Coolidge HS
		Kathleen Koppy	Tucson High Magnet
		Marcia Mendoza	Nogales HS
		Cecilia Moreno	Trevor Browne HS
		Susan Nafziger	Holbrook HS
		Gloria Vasquez	Rio Rico HS
		Amanda Yocum	Basha HS
<b>Business Operations (4)</b>	Shea Padilla (6/7)	Sheilah Buscaglia	Highland HS
	Jan Brite (6/8)	David Rudnick	Sahuarita HS
	Pat Loughrin	Judi Shelkin	La Joya HS
		Sandi Sherman	Metro Tech HS
<b>Culinary Arts (14)</b>	Joanne Bauman	Melissa Austin	Basha HS
	Charles Losh	Lorna Barker	Tempe HS
		Yvonne Bernino	Flowing Wells HS
		Jennifer Brooks	Moon Valley HS
		Chris Contreras	Millennium HS
		Lisa DeCota	Estrella Foothills HS
		Diana Diaz	Copper Canyon HS
		Wayne Duncan	Page HS
		Mike Gaul	Kingman HS
		Jean Gregory	St. David HS
		Alicia Griffin	La Joya HS
		Christina (Tina) Hahn	Central HS
		Patti Pastor	Flagstaff HS
		Angela Stutz	Perry HS
<b>Fashion Design/Merch (5)</b>	Ruth Kerr	Evonne Bowling	Mesa Comm College
	Maggie Mangini	Nevada Harward	Centennial HS
		Kristen Johnson	EVIT
		Melinda Peterman	Mesa HS
		Belen Reyes-Carrera	Nogales HS
<b>Fire Service (11)</b>	Tracy Rexroat	Terry Baugher	EVIT
	Judy Balogh	Mike Berger	CAVIT
		Steve Darby	Camp Verde HS
		Al Gameros	Miami/Globe Schools
		Freddie Gameros	Miami/Globe Schools
		Corey Pine	Miami/Globe Schools
		Nick Renon	Miami/Globe Schools
		Gary Robinson	Miami/Globe Schools
		Richard Ross	Douglas HS
		Rick Shearer	EVIT
		Bill Solomon	Northland Pioneer College
<b>Interior Design/Merch (3)</b>	Ruth Kerr	Tara Barthelmess	Empire HS
	Maggie Mangini	Margaret Lamb	Marcos de Niza HS
		(Janice) Sue Lange	Red Mountain HS

<b>Law, Pub Safety &amp; Security (6)</b>	Jimmy Wojcik	Lisa Adams	Corona del Sol HS
	Melanie Ohm	Gerald (Gerry) Allen	Franklin HS
		Natasha Alston	Mountain Pointe HS
		Brian Kennedy	CAVIT
		Kim McElwain	McClintock HS
		Kathy Rau	Pima County JTED
<b>Sports Medicine &amp; Rehab Serv (10)</b>	Shawna Fletcher	Fernando Alvidres	Peoria HS
	Bob Keim	Mike Boese	Tucson High Magnet
		JD Burgess	Millenium HS
		Chad Doyle	Ironwood HS
		Donna Farrell	Coolidge HS
		Jennifer Harpest	Kingman HS
		Josh Moore	Peoria HS
		Melissa Portela	Canyon HS
		Caitlyn Syphers-Laney	Queen Creek HS
		Jacob Tafoya	San Tan Foothills HS
<b>Technical Theatre (5)</b>	Lynn Tuttle	Carrie Duerk	Buena HS
		Cory Losenicky	Greenway HS
		Michael Peterman	Mesquite HS
		Jenell Riordan	Desert Ridge HS
		Norm Testa	Catalina Foothills HS

**June 10-11 (21 participants)**

<b>Advanced Construction Tech (3)</b>	Jason Wojcik	Richard Alvarez	Payson HS
	Charles Losh	Roger Condra	Sauharita HS
		Christopher Cool	Agua Fria HS
<b>Architectural Drafting (3)</b>	Pat Loughrin	Wayne Maerk	Barry Goldwater HS
	Ruth Kerr (6/10)	Robert Nash	Monument Valley HS
		Joseph Steele	Buckeye Union HS
<b>Automation &amp; Robotics (3)</b>	Shawna Fletcher	Tom Crump	Unique Machine and Tool
	Maggie Mangini	Cesar Gutierrez	Palo Verde Magnet HS
		Ivan Tomkins	Kester Ed Services
<b>Cabinetmaking (3)</b>	Judy Balogh	Tom Bockman	Prescott HS
		Alma Hunt	Cochise College
		Calvin Kupser	Kingman HS
<b>Laboratory Assisting (3)</b>	Shawna Fletcher	Tanya Meyer	Pima Comm College
	Melanie Ohm	Rosemarie Prater	Mountain View HS
		Julie Stiak	Phoenix College
<b>Mechanical Drafting (2)</b>	Maggie Mangini	Dee Lauritzen	Eastern Arizona College
		Raj Singh	Metro Tech HS
<b>Nursing Services (4)</b>	Joanne Bauman	Cynthia Chillcock	Mesa Comm College
		Joan Dawson	Catalina Magnet HS
		Becky Grieco	Centennial HS
		Rhonda Sykes	Thunderbird HS

June 21-22 (69 participants)

<b>Advertising &amp; Public Relations (3)</b>	Shea Padilla	Vincent Del Vecchio	Chaparral HS
	Jan Brite	Jayne Fitzpatrick	Deer Valley HS
		Jim Howe	Benson HS
<b>Automotive Collision (4)</b>	Charles Losh	Jeremy Clemons	Buena HS
		Armando Escalante	Sunnyside HS
		David Melian	Metro Tech HS
		James Slezak	Metro Tech HS
<b>Automotive Technologies (11)</b>	Jason Wojcik	Randy Baker	EVIT
	Lynne Storms	Larry Huff	Carona del Sol HS
		Timothy Lewis	AZ Western College
		Mike McAfee	AZ Auto Dealers Assoc
		Randy Phillips	EVIT
		Frank Quinn	Peoria HS
		Felix Ramirez	Cactus HS
		Joe Rauscher	Mesa Comm College
		Stephen Skroch	Horizon HS
		Tracy Tudor	Campo Verde HS
		Bill Yandell	Rincon HS
<b>Early Childhood Education (13)</b>	Pat Loughrin	Jennifer Atteberry-Pierpont	Canyon del Oro HS
	Paulett Ellis	DeAnne Boyce	Peoria HS
		Lisa Bradford	EVIT
		Jessica Brubaker	Boulder Creek HS
		Krista Carr	Marcos de Niza HS
		Renee Chambers	Ironwood HS
		Dawn Cheatham	Youngker HS
		Mary Gaston	Carona del Sol HS
		Martha Lee	Sandra Day O'Connor HS
		Michele Leyendecker	Mohave HS
		Kristina Martinez	Copper Canyon HS
		Lauren Moraga	Mountain View HS
		Collie Smith-Schroeder	Washington HS
<b>Education Professions (9)</b>	Stephanie Hahn	Tammy Clow-Kennedy	Mesa Comm College
		Kathy Haggard	Florence HS
		Jennifer Horen	Fountain Hills HS
		Mary Morris	Douglas HS
		Patty Powers	AZ Western College
		Ingrid Schon	Payson HS
		Jeannette Shaffer	ATLATA Project
		Brian Snow	San Tan Foothills HS
		Julie Stockwell	Greenway HS
<b>Engineering Sciences (3)</b>	Tracy Rexroat	Leman Booher	Ganado HS
	Maggie Mangini	Stephen Burris	Independence HS
		Bruce Vivers	North Canyon HS
<b>Entertainment Marketing (2)</b>	Shea Padilla	Joe Parone	Payson HS
		Juliann Trump	Desert Mountain HS
<b>Entrepreneurship (8)</b>	Melanie Ohm	Tom Ayers	Sabino HS
		Robert Brubaker	St David HS
		Sheila Vito-Randall Chase	Douglas HS
		Michelle Coots	Boulder Creek HS
		Debby Kidwell	Barry Goldwater HS
		Cheryl Shea	Pinnacle HS
		Michael Vialpando	La Joya HS
		Renee Woodruff	Mountain Ridge HS

<b>Professional Sales &amp; Marketing (8)</b>	Judy Balogh	Paulette Bell	Gilbert HS
		Maria Ciolfi-Abrams	Alhambra HS
		John Hay	Peoria HS
		Steve Johnson	Maryvale HS
		Terri Marshall	Pima Partnership
		Ashley Roth	Hamilton HS
		Mona Rutherford	Palo Verde HS
		Tabitha Sloan	Valley Vista HS
<b>Web Page Development (8)</b>	Dave Cornelius	Stephen Andrews	Cyber HS
	Bob Keim	Shawna Bernard	Mountain Ridge HS
		Helen Glispie	Sandra Day O'Connor HS
		Lynda Guetter	Barry Goldwater HS
		Seth Nilson	Flowing Wells HS
		Jeni Patton	Cochise College
		Jack Pruitt	Empire HS
		Jesse South	Santa Rita HS

**June 24-25 (18 participants)**

<b>Agribusiness Systems (3)</b>	Maggie Mangini	Darcy Cook	Dobson HS
<b>Room 317</b>	Jimmy Wojcik	Ray Gless	Red Mountain HS
		Curtis Willems	Highland HS
<b>Animal Systems (3)</b>	Maggie Mangini	Dennis Bushong	Gilbert HS
<b>Room 317</b>	Jimmy Wojcik	Amy Dillard	Highland HS
	Melanie Ohm	Kat Kubista	Basha HS
		Reta Yanik	Westwood HS
<b>Plant Systems (2)</b>	Maggie Mangini	Ginnie Strait	Hamilton HS
<b>Room 317</b>	Jimmy Wojcik	April White	Paradise Valley HS
	Pat Loughrin		
<b>Software Development (4)</b>	Tracy Rexroat	Jim Madden	University HS
<b>Room 361</b>	Bob Keim	Johanna Rivera	Westview HS
	Dave Cornelius(6/24)	Scott Schall	Tolleson Union HS
		Jarod Smith	Glendale
<b>Welding Technologies (4)</b>	Judy Balogh	Hank Charleston	Red Mesa HS
<b>Room 451A</b>	Charles Losh (6/24)	Dale Larsen	Holbrook HS
		Ron Pixley	Kofa HS
		Jonathan Yazzie	Tuba City HS
<b>Bioscience (2)</b>	Joanne Bauman	Lynne Coté	Mountain View HS

## **APPENDIX Q**

### **Postsecondary 3-year Plan for Assessment**

## Arizona Community Colleges

### 3 Year Plan for Assessment of Community College Programs Funded Under Carl Perkins

March 17, 2010

#### Year One:

1. Determine if a National/State licensure or State approved assessment exists and if data is available.
2. Develop appropriate assessment instrument for program using criteria as identified under Carl D. Perkins and Arizona State Plan and as approved by the U.S. Dept. of Education. The assessment instruments will include:
  - Currently recognized assessments that are in compliance with standards established by the Higher Learning Commission for program assessment and learning outcomes which include portfolios and multiple choice pre/post tests. It is understood that these recognized assessment tools can be used as long as they produce assessments that would address specific industry standards validated by industry.
  - Skills Mastery Check Sheets were eliminated as end of program assessments by the U.S. Dept. of Education at the end of the last Perkins law. As a result, it is understood these instruments will not be used for end of program assessment.
  - All student completers in programs supported by Perkins dollars are required to complete an end of program assessment, again based on industry validated technical standards.
3. Show alignment with program learning outcomes and insure that they address industry validated standards.
4. Determine appropriate timeline for assessment, aligning with when students are at the end of their programs. Data needs to be available and should be collected and submitted when student completers are available. This includes any pilot program skills assessments.
5. Identify process for use of assessment results. Potential options may include but are not limited to: 1.) the scores for students being immediately available, 2.) Instructional staff have access to all student scores and can determine where students are not retaining content, and 3.) the institution is able to look at the total picture for an area and see where the weaknesses and strengths are in the program content learned, and

4.) Post secondary institutions may consider other alternative strategies appropriate to their colleges and will lead to program improvement.

**Year Two:**

1. Pilot assessment plan, and report data produced by the pilot when student completers are available. Data reporting is required by the Feds.
2. Make adjustments as needed.

**Year Three:**

1. Implement assessment plan.
2. Compile data for the year it was assessed. If a pilot program data is reported in the second year, data from the approved assessment tool will be reported in year three.
3. Identify other institutions to begin dialogue for collection of comparative data. ADOE considers this a great opportunity for dialogue with the secondary as well as post secondary institutions.

## **APPENDIX R**

### **2010-2011 CTE Assessment Overview and Project Timeline**

# 2010 CTE ASSESSMENT OVERVIEW

- CTE Assessment Challenges & Opportunities
  - CTE 2010-2011 Two(2) Assessment Test Windows:
    - Fall 2010 (Nov. 1<sup>st</sup> to Dec. 3<sup>rd</sup>)
    - Spring 2011 (April 4<sup>th</sup> to May 5<sup>th</sup>).
  - New Assessment Catalogs Available (50+).
  - CTE Assessment Application Development & Support Being Transitioned to ADE IT.
  - Stepped Up Relationship with ASU WEDO to Provide Additional/Continued Support.

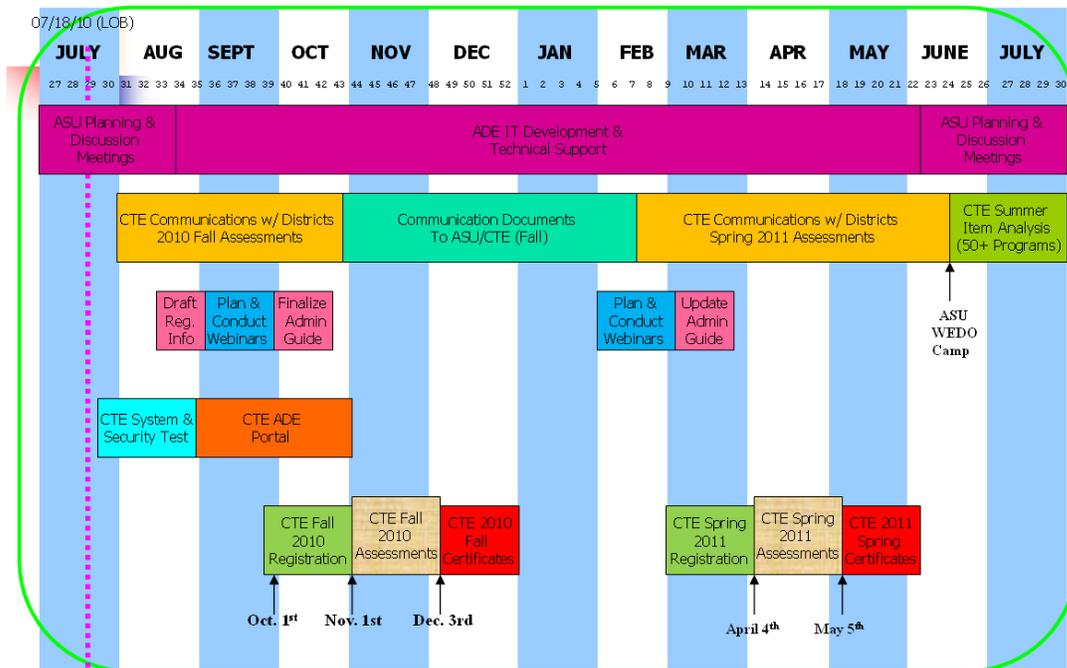
Bob Lee

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18 July 2010

## CTE ASSESSMENT PROJECT TIME LINE

Big Picture: 2010/2011



Bob Lee

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18 July 2010

