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ABSTRACT

This report details the development of a student outcomes assessment of general education by faculty members at Coconino Community College (CCC) (Arizona). This assessment project consisted of three major components: (1) The General Education Assessment Pilot Project (Faculty members dedicated a semester to measuring student achievement of course outcomes and explored cost-effective and meaningful methods for reporting and documenting student academic achievement--the primary focus was to look for commonality in course-level assessment of student outcomes); (2) Writing Student Outcomes for the General Education Core Curriculum, wherein a group of faculty and administrators worked carefully to link student outcomes to the college mission, purpose statement, and general education values and criteria; and (3) The Teaching and Learning Conference, for which a two-day conference was organized to provide professional development opportunities to faculty and staff. The conference included work sessions focused on assessment techniques and writing outcomes, as well as other training opportunities for improving teaching and learning. Information about these three components of the assessment project, as well as a compilation of the results of four semesters of general education assessment (fall 1999 to spring 2001), are reported in chronological order in this report. (Includes 11 addendum exhibits.) (KP)

COCONINO COMMUNITY COLLEGE

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A Faculty Report on: ASSESSMENT OF GENERAL EDUCATION 2000-2001

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A Faculty Report on:

**ASSESSMENT OF
GENERAL EDUCATION
AT
COCONINO COMMUNITY COLLEGE**

2000-2001

Submitted by Barbara Eickmeyer

Assessment Project Leader

May 2, 2001

PURPOSE AND OVERVIEW OF THE PROJECT

In the spring semester of 2000, the Vice President for Academic Affairs approved the continuation of the General Education Assessment proposal made by full-time faculty member, Barbara Eickmeyer. The Self Study steering committee had endorsed the proposal in December, 1999, and identified it as a "high priority" for the institution. Financial support was allocated from the budget for the Principal Committee for Institutional Effectiveness (PIE). Goals for the proposal included:

The General Education Assessment Pilot Project. Full-time and associate faculty would dedicate one more semester to measuring student achievement of course outcomes and exploring cost-effective and meaningful methods for reporting and documenting student academic achievement at Coconino Community College (CCC). The primary focus of this final semester was to look for commonality in course-level assessment of student outcomes. The study would focus on assessment tools as well as reporting student achievement of outcomes.

Writing Student Outcomes for the General Education Core Curriculum. The assessment project leader (Eickmeyer) would facilitate completion of the student outcomes for General Education completers. The process would be complete by end of fall semester and a curriculum revision would take place in the spring 2001 semester.

Raising Awareness of Assessment of Student Academic Achievement and Professional Development / Training of Faculty. It had become evident throughout the 1999-2000 phase of this project that a strong need existed for faculty training in assessment. An innovative and collaborative effort between the assessment project leader and Jim Rhodes, Director for the Training and Development Center, resulted in a proposal for CCC's first (annual) *Teaching and Learning Conference*. The conference would serve as a conduit for assessment training workshops for faculty and staff, as well as a platform for implementation of the Title III Grant theme to "train the trainer." The conference would be held in August, 2000.

A final meeting was convened with the Vice President for Academic Affairs and the three faculty coordinators for the General Education assessment project in May, 2000. His recommendations for priority in the 2000-2001 academic year included: finalizing the General Education Student Outcomes, determining appropriate measurement tools, and writing outcomes for programs other than General Education.

These activities are reported in chronological order and reflect the results from assessment efforts and activities in the *Teaching and Learning Conference*, the assessment pilot project, the writing of the General Education Student Outcomes and a compilation of four semesters in assessment (fall 1999 to spring 2001).

WHAT WE DID SUMMER 2000

Pilot project continued. A small group of associate faculty completed outcomes assessment reporting on their general education courses. These results can be found in the Addendum.

Writing General Education Student Outcomes. During the spring 2000 semester, a group of 15 faculty and 3 administrators had worked carefully to link student outcomes to the college mission, purpose statement, and general education values and criteria. At the final College Instructional Team (faculty) meeting in April, 2000, the faculty selected representatives to continue this important process during the summer. Seven full-time faculty met in early August to continue the refining process on the General Education Student Outcomes. The results were disseminated to faculty at the beginning of the fall semester.

Teaching and Learning Conference. A collaborative effort among the college President, the Public Relations Office, the Coordinator of Professional Development (Title III Grant), and the Assessment Project Leader resulted in the college's first annual *Teaching and Learning Conference*. This was a two-day conference prior to the start of the semester, dedicated to providing professional development opportunities to faculty and staff. There were about twenty work sessions on assessment techniques and writing outcomes, as well as other training opportunities for improving teaching and learning. Participants deemed the conference a success and expressed their appreciation and satisfaction in a post-conference survey. Immediately following the *Teaching and Learning Conference*, the Coordinator of Professional Development and the Assessment Project Leader suggested that some of the work sessions from the conference could be repeated during the academic year as a method for providing training opportunities for faculty and staff. The planning committee decided to host a second conference in August 2001.

WHAT WE DID - FALL 2000

Pilot project continued for final semester. This time the primary focus was on assessment measures. Nine associate and six full-time faculty participated in the project. Once again, the project leader and two assistants received a combined total of 13 hours release time, while associate faculty were compensated with a stipend at the end of the semester. Other full-time faculty who participated in the project did not receive additional compensation nor release time; however, they reported positive satisfaction from participating in the project. Since the data collection of student outcomes was in place and reporting was going smoothly, this final semester was dedicated to identify and evaluate the instruments used by faculty in assessing student achievement of outcomes. At the first meeting of the pilot group, the project leaders presented a new assessment form and explained how it would be used in the study (see Tool Survey form in Addendum). The associate faculty who were participating for a second or third time commented that the process seemed more streamlined and easier to do. The participants met three times during the semester and exchanged measuring tool ideas.

An unanticipated result of the pilot project was that as the instructors from various disciplines discussed how they were assessing student outcomes, new ideas for using common tools were brought to the table. For example, an economics instructor collaborated with a geography instructor in an outcomes-linked activity. Students in the geography class received critical information about cost accounting in order to create their capstone project (a pre-feasibility study) for the semester. Students in the economics class also received information about writing a pre-feasibility study using the skills they acquired in their class. The instructors collaborated in setting up computer software, web links, lecture exchanges, and similar class activities so that students would benefit from both arenas. In one afternoon of discussing assessment tools, eleven faculty reported that they were "energized and inspired to continue assessing outcomes because the benefits to students were so great."

General Education Student Outcomes. The results of the summer work session on General Education Student Outcomes were distributed to all faculty for input in early September. Twelve full-time faculty, two associate faculty, one staff member, and a division chair participated in two work sessions held in November. This group identified five outcomes areas: communication skills, thinking skills, diversity and global perspective, aesthetic perspective, and ethical and civil values. Within each area, statements of expected student outcomes were written to reflect the college's General Education Core Curriculum.

The General Education student outcomes were finalized by the group during the fall 2000 semester and approved by the CIT in February 2001 (see Addendum).

WHAT WE DID SPRING 2001

Tool Survey results. Paul Holbrook compiled the data gathered from the Tool Survey in the fall 2000 semester of the General Education pilot project. This initial report provided valuable information about how instructor perceptions of assessment measures play a role in outcomes assessment. For example, there were inconsistencies in the reporting of test types. Instructors recorded the use of a "test" and were not specific about the type of test used. This made it difficult to determine the effectiveness of an instrument as compared to another. Many recommendations for future reporting of assessment measures came as a result of the Tool Survey. Results of the Tool Survey are included in the Addendum.

Focus on General Education program review. Upon completion of the General Education student outcomes, the most immediate need was to review the curriculum and course outlines within the general education core curriculum. In anticipation of this process, faculty were asked to set aside a day for curriculum review after spring break. Fourteen full-time, three temporary full-time, four associate faculty, the curriculum coordinator, the advising coordinator and the Dean for the Page campus participated in the six-hour work session that was held on March 23, 2001. Participants reviewed each general education course in their discipline area and identified course outcomes and/or content that supported the General Education Student Outcomes. A complete report of the work session is included in the Addendum.

General Education Student Outcomes and Course matrix. The Assessment Project Leader created a matrix of courses and corresponding General Education Student Outcomes. This chart contains a listing of the General Education Student Outcomes and all the courses in the general education core curriculum and their corresponding outcomes and/or content (see Addendum).

Explored standardized measures for assessing student achievement. As the college faculty finalized the General Education Student Outcomes, it was necessary to investigate commercial tools that might work for standardized assessment purposes. The Project Leader compiled a list of standardized assessment instruments available on the market that could be considered for use by the college. This review also contained basic information regarding cost, impact, and usefulness of the selected instruments under review (see Addendum).

Useful data and experience. The experience gained from the Pilot Project and process of writing the General Education Student Outcomes was vital to other disciplines as area coordinators began to approach the assessment of degrees and certificates.

SUMMARY

This report represents a combined total of more than 1400 hours of dedicated work by college faculty and personnel. The successful completion of the original proposal (fall 1999) for assessment of student academic achievement in General Education could not have been possible without the direct support of the college leaders. The college President and Vice President provided the most critical ingredient in supporting this effort through motivational directives for faculty participation in the process. They demonstrated their commitment to this process by allocating release time and financial resources from hard money budgets. The Dean for the Page Campus provided substantial support from his experience in assessment and supported the effort with regular input. This effort was equally dependent on the generous collaboration and contribution of many full-time and associate faculty who were committed to the idea and worked tirelessly to participate in the process. At times it was difficult to approach them with yet another "thing to do," and yet many were always willing to help out. Paul Holbrook's expertise in using databases and reporting methods was a key component of the project. Above all, this project would not have been steered in the right direction without the extraordinary guidance of Barbara Cress, who demonstrated her measureless commitment to students and the improvement of learning by sharing her knowledge of effective and ethical assessment practices.

CONSIDERATIONS FOR THE FUTURE

Commitment to permanent leadership of student outcomes assessment. In its Addendum to the Handbook of Accreditation, Second Edition, the North Central Association of Colleges and Schools Commission on Institutions of Higher Education (NCA) recommends that an assessment program is making progress in implementation when it "is provided with a Coordinator/Director who reports directly to the CAO" (p. 11, Level Two). Further, an assessment program in the "Maturing Stages of Continuous Improvement" (p. 11, Level Three) demonstrates that "all the structural characteristics described in Level Two are continued, sustained, and where appropriate, enhanced." In anticipation of the NCA visit to Coconino Community College in April, 2002, it is critical that a specific leadership position be established for the coordination of assessment of student academic achievement. It is not

sufficient to delegate the responsibility for assessment to the departmental level of the college. Unless an individual director is responsible for coordinating, collecting, and disseminating assessment of student outcomes data, it is likely that NCA will scrutinize the college's assessment plan with pessimism. This project was the direct result of a three-semester period and was a temporary solution to a permanent need. It was necessary to grant faculty release time in order to conduct the project appropriately, and the results prove the effectiveness of that effort.

Let the public know. Foremost on the list is the implementation of the General Education Student Outcomes into the "woodwork" of the college publications and academic practices. Although this process began during the spring 2001 semester, it is necessary to publicize to students and the college community what to expect from our General Education program.

Find tools. The most important step in the process will be to implement a standardized method for assessing student outcomes. We are committed to adopting the instrument(s) that will best measure the student outcomes identified in our degrees, certificates, and General Education program. This may or may not include a commercial tool. The college faculty will need to explore and evaluate these tools and make a recommendation to college leaders for budgetary commitments. We recommend a pilot for standardized measurement tools in the 2001-2002 academic year, with consideration for multiple measures and capstone courses.

Make a way. It will be necessary to implement a standardized method for assessing students at their entry and exit to the college. It is possible this could be done using commercial instruments that have been used successfully at other colleges of similar demographics and size. Careful consideration needs to be given to the college-wide impact of such a program. The "One-Stop Shop" idea fits in nicely with an entry/exit assessment program, and the data can be used to improve services across programs and curriculum.

Make it pay. The benefits of assessment done right are innumerable. However, the consequences of a fragmented or rushed plan are definite and counterproductive. It is of utmost importance that the college continue to dedicate time and resources to the process of implementing a reasonable and effective student outcomes assessment plan.

Faculty involvement and leadership have driven assessment of student outcomes. We should be proud of the grass-roots efforts that have taken place. At the same time, we should acknowledge the danger of losing the momentum that faculty created. Much has been accomplished, much remains to be done.

**Participants on the
Assessment of General Education**

Pilot Project 1999-2000

Full-time Faculty

Barbara Cress
Barbara Eickmeyer
Paul Holbrook
Marty Lara
Michelle Metcalf**
Vennie White

Associate Faculty

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Michael Casey
Frank Chavez
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Letty David
Stephen Franklin
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Kate Harkins
Dan Lara
Tricia Ornela
Judy Plescia
NormaLee Roudabush
Jean Rukkila
Judy Stiers

Administrative Staff

Dan Fishco
Greg Kerr
Stephen Hill

Writing Outcomes for Gen Ed

Full-time Faculty

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Jerry Baker*
Bryan Bates
Candice Corrigan
Barbara Cress
Mike Devoley**
Barbara Eickmeyer
Ruth Foster
Kate Kozak
Paul Holbrook
Maxie Inigo
Jennifer Jamison**
Marty Lara
Alan Petersen
Jeff Rhode
Jim Rhodes
David Rudakewich
Kirstin Squint**
Vennie White
Kathy Wigal

Associate Faculty

Chris Black
Lenny Born
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Kate Harkins
Ana Novak-Goodman
Art Wilson

Administrative or Support Staff

Dan Fishco
Lloyd Hammonds
Stephen Hill
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Suzan Simmons
Pete Yanka

*Division Chair

** Temporary full-time faculty

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2000-2001

ADDENDUM EXHIBITS

**Submitted by Barbara Eickmeyer
Assessment Project Leader
May 2, 2001**

ADDENDUM EXHIBITS

General Education Pilot Project

- A. Results for Fall 1999, Spring, Summer and Fall 2000
- B. Outcomes reporting form
- C. Tool Survey form
- D. Notes from Pilot Project meeting (11/2/2000)
- E. Results from Tool Survey for Fall 2000

Teaching and Learning Conference

- F. Brochure and Presentation Schedule

General Education Student Outcomes

- G. General Education Student Outcomes as approved by College Faculty, February, 2001
- H. March 23, 2001 work session report
- H-1 Curriculum checklist, General Education Student Outcomes
- I. Matrix of General Education Core Curriculum and Student Outcomes
- J. Assessment Tools for Consideration
- K. Assessment of General Education Report 1999-2000

General Education Pilot Project

A. Results for Fall 1999 Spring, Summer and Fall 2000

Fall 1999 General Education Pilot Project Results

Course / Outcome	Number of students currently enrolled	Number of students assessed	Period of assessment by semester week	Students who met the requirements	Percentage of students meeting the minimum measurement
BIO 100					
Appraise the relationship between humans and their environment	22	22	7	19	86%
Participate in laboratory work, utilizing scientific methods and equipment	23	23	2, 9	17	74%
Solve problems in and explain processes involved in genetics	20	20	12	17	85%
CIS 120					
Describe computer hardware, software and information processing and application to business	20	20	3, 4, 7	14	72%
Describe current and future uses of computers	21	21	3	14	67%
Effectively operate a microcomputer system and various peripheral devices	21	20	2	20	100%
Correctly use computer-related vocabulary	19	19	5	14	74%
Describe the limitations of computer systems and their applications in various environments	19	19	6	18	95%
Discuss the impact of telecommunications and networks to the way computers are used	20	20	5	16	80%
Identify issues related to security, ethics, and privacy when using a computer	19	19	8	16	84%
Produce computer-generated projects through the use of word-processing, spreadsheet, database, presentation, e-mail, and web browsing software	19	19	9	19	100%
ECN 204					
Define economic vocabulary	15	15	4, 8, 15	13	87%
Explain and summarize how federal reserve system works	15	15	15	15	100%
Complete increasingly difficult writing assignments	15	15	4, 8, 15	15	100%
ECN 205 fast track					
Define economic vocabulary	22	22	3	20	91%
Examine and explain the structure of the American economic system	22	22	3	11	50%
Analyze and explain the demand cycle and consumer choice and interpret graphical representation	22	22	3	18	82%
Summarize market influences and theories	22	22	3	18	82%
HUM 241					
Develop skills in analyzing and synthesizing information		13	1, 7, 15	0	0%
Encourage awareness of faulty reasoning		9	1, 7, 15	9	100%
Foster flexible and creative thinking		8	1, 7, 15	8	100%

Fall 1999 General Education Pilot Project Results

Course / Outcome	Number of students currently enrolled	Number of students assessed	Period of assessment by semester week	Students who met the requirements	Percentage of students meeting the minimum measurement
MAT 151					
Graph equations and functions using various methods including technology	24	19	16	15	79%
Solve linear, quadratic, rational, absolute value, polynomial, and radical equations	24	19	16	15	79%
Simplify expressions involving complex numbers	24	19	16	15	79%
PHI 101					
recognition of major ancient Greek philosophers and their ideas	41	41	5	41	100%
a basic understanding of principles of argument, an ability to summarize philosophical argument, and formulate their own argument	41	31	12	25	81%
SOC 101					
Concepts, Theories, and research methods in Sociology	30	30	1	5	17%
Definitions and classifications of individuals and groups	30	19	3	15	79%
Concepts and theories of stratification	23	19	7	14	74%
Social institutions	23	19	10	18	95%
SPA 101 fast track					
interpret written Spanish that contains learned vocabulary	15	14	3	13	93%
	12	12	5	12	100%
derive meaning from written material where context and/or extralinguistic background knowledge are supportive	15	14	3	11	79%
	12	12	5	12	100%
initiate and respond verbally to simple statements, ask and answer questions, and participate in simple conversations	13	12	4	12	100%
	12	12	7	11	92%
demonstrate comprehension of words and phrases from simple spoken questions, statements, high frequency commands, and courtesy formulae	12	12	7	11	92%
Totals	707	689		556	81%
Notes: ENG 102 data non quantitative					

Spring 2000 General Education Pilot Project Results

Course / Outcome	Assessment Method	Number of students assessed	Period of assessment by semester week	Students who met the requirements	Percentage of students meeting the minimum measurement
ACC 101					
Prepare and explain the Balance Sheet, Income Statement, and Statement of Retained Earnings	Observation	19	4	17	89%
	Problems	19	4	17	89%
	Instructor test	19	4	16	84%
Explain the Accounting Equation and the interaction of its elements	Observation	19	7	18	95%
	Problems	19	7	15	79%
	Instructor test	19	7	12	63%
Calculate and apply the necessary tools and techniques for ratio analysis related to statement analysis	Observation	19	10	17	89%
	Problems	19	10	14	74%
	Instructor test	19	10	12	63%
ANT 110					
What is Archaeology	Instructor test	16	3	11	69%
	Instructor test	17	7	17	100%
Develop techniques for analysis of cultural remains	Instructor test	14		12	86%
	Instructor test	7		7	100%
	Instructor test	6		6	100%
	Instructor test	15		15	100%
Understand cultural theory as it applies to interpreting prehistoric cultural	Instructor test	13		10	77%
ECN 205					
Define economic vocabulary	Instructor test	25		24	96%
Summarize market influences and theories	Instructor test	18		16	89%
	Instructor test	22		22	100%
ENG 102					
Synthesize ideas from readings with their own ideas and research	Essay	13	5	12	92%
	Essay	13	13	12	92%
Follow the writing process	Essay	13	3	13	100%
	Essay	12	9	10	83%
Research and document sources; integrate source material skillfully	Essay	13	15	9	69%
GEO 131 Sec 1 & 2					
Identify, analyze and evaluate the theories and interpretations concerning physical geography and the forces at	Instructor test	45	5	33	73%
	Instructor test	47	10	39	83%
	Instructor test	47	16	34	72%
Successfully complete laboratory exercise concerning physical geography through the application of the theories and concepts of physical geography and	Problems	47	5	42	89%
	Matrix	47	12	44	94%
	Simulation	47	14	45	96%
Apply the theories and concepts of physical geography to local and global issues	Group activity	47	3	45	96%
	Essay	47	13	42	89%
	Debate	47	15	42	89%
HUM 241					
Develop skills in analyzing and synthesizing information	Essay	9	8-10	8	89%
		10	15	9	90%
Interpretation, and evaluation of evidence	Essay	9	8-10	8	89%
		10	15	8	80%
Successful completion of the writing component	Essay	14	8-10	14	100%
		14	15	14	100%

Spring 2000 General Education Pilot Project Results

Course / Outcome	Assessment Method	Number of students assessed	Period of assessment by semester week	Students who met the requirements	Percentage of students meeting the minimum measurement
HUM 242					
Emphasize the gathering, interpretation, and evaluation of evidence		11	3	9	82%
		17	8	13	76%
		17	14	14	82%
Develop skills in analyzing and synthesizing information		11	3	6	55%
		17	8	12	71%
		17	14	10	59%
Successful completion of the writing component		17	14	12	71%
MAT 121 / 151					
Demonstrate graphing linear equations	Problems	31	11	18	58%
Solve systems of equations graphically & quantitatively & check solutions	Problems	31	11	16	52%
	Problems	35	16	26	74%
Simplify / solve rational, and radical expression & equations	Problems	35	16	21	60%
Develop an understanding of logarithmic operations	Problems	35	16	23	66%
PSY 101 SEC 3 & 4					
Concepts, theories, and research methods	Instructor test	51	4	29	57%
	oral presentations	19	8	18	95%
	Essay	50	13	47	94%
Emotions, motivation, memory and learning	Quiz	51	11	43	84%
	oral presentations	17	11	16	94%
	Instructor test	51	12	39	76%
Abnormal personalities and therapies	Quiz	50	15	39	78%
	oral presentations	15	15	14	93%
	Instructor test	49	16	30	61%
SPA 102					
Interpret written Spanish from texts that are linguistically non-complex	Pre/Post test	20	1	12	60%
	Instructor test	19	5	15	79%
	Instructor test	16	16	16	100%
Initiate and respond verbally to uncomplicated, basic communicative tasks and social situations	Pre/Post test	20	1	14	70%
	Oral examination	20	3	19	95%
	Pre/Post test	16	15	16	100%
Demonstrate comprehension of sentence-length statements or questions in a limited number of content	Pre/Post test	20	1	19	95%
	Instructor test	17	10	14	82%
	Oral examination	16	15	14	88%
SPA 201					
Interpret simple connected text	Verbal response	7	8-10	7	100%
	Verbal response	7	8-10	6	86%
	Verbal response	7	16	7	100%
	Verbal response	7	16	7	100%
Demonstrate increased comprehension of conversational discourse on a number of topics	Instructor test	7	16	7	100%
Initiate, sustain and close a general conversation utilizing learned grammatical strategies	Instructor test	7	9	6	86%
	Instructor test	7	16	7	100%
	Instructor test	7	8-10	6	86%
Totals		1722		1408	82%
ERIC					

Spring 2000 General Education Pilot Project Results

Buddy system promoted accessing common outcomes across curriculum.				
Outcomes for some courses need to be rewritten. What the process for doing this?				
Instructors began evaluating the tools they used for effectiveness.				
Content of the evaluation instrument was being assessed for validity.				
Group exercises were beneficial to students, but harder to track and record individual results.				
Form is not specific enough about who is assessed the enrolled student or the student who takes the assessment.				

The average score of different methods are detailed in the following table:

Problems	71%			
Quiz	81%			
Pre/Post test	81%			
Instructor test	84%			
Debate	89%			
Essay	90%			
Observation	91%			
Oral examination	91%			
Matrix	94%			
oral presentations	94%			
Group activity	96%			
Simulation	96%			
Verbal response	96%			

The average score of assessment by week are detailed in the following table. It should be noted that the material assessed would be progressively more difficult as the semester progresses.

Period	Percent of students who achieved minimum			
11	72%			
1	75%			
14	77%			
10	78%			
4	80%			
8	81%			
3	83%			
16	83%			
5	83%			
7	84%			
9	85%			
12	85%			
15	87%			
13	92%			

**Summer 2000
General Education Pilot Project Results**

Course / Outcome	Assessment Method	Number of students assessed	Period of assessment by semester week	Students who met the requirements	Percentage of students meeting the minimum measurement
ACC 101					
Prepare and explain the Balance Sheet, Income Statement, and Statement of Retained Earnings	Instructor Developed test	29	1	27	93%
Explain the components of the annual report and its significance to the stockholder	Observation	31	2	26	84%
Describe the methods of depreciation, identify the methods applicable to given situations	Oral Examination	28	4	24	86%
MAT 151					
Define functions and relations	Standardized tests	8	4	4	50%
	Group activity non-graded	8	10	8	100%
	Standardized tests	8	10	4	50%
Solve various systems of equations with several methods including matrices and determinants	Standardized tests	8	8	7	88%
	Standardized tests	8	10	7	88%
	Standardized tests	8	10	7	88%
Solve linear, quadratic, rational absolute value, polynomial, and radical equations	Oral Examination	8	5	8	100%
	Standardized tests	8	6	3	38%
	Standardized tests	8	10	4	50%
PSY 105					
Identify major ethical issues	Essay assignment	13	3	9	69%
	Essay assignment	11	7	9	82%
	Essay assignment	11	10	11	100%
Critically evaluate their own views and those of representative thinkers.	Essay assignment	13	3	7	54%
	Essay assignment	11	7	5	45%
	Essay assignment	11	10	8	73%
SPA 201					
Interpret simple connected text	Instructor Developed test	4	4	1	25%
		4	5	3	75%
		4	5	4	100%
		4	5	3	75%
Demonstrate increased comprehension of conversational discourse on a number of topics	Instructor Developed test	4	2	3	75%
		4	5	3	75%
Grammar	Instructor Developed test	4	3	2	50%
		4	5	1	25%
		4	4	0	0%
		4	5	1	25%
Totals		258		191	74%
Comments					
Low number of faculty participants					

Fall 2000 General Education Pilot Project Results

Course / Outcome	Assessment Method	Number of students assessed	Period of assessment by semester week	Students who met the requirements	Percentage of students meeting the minimum measurement
ACC 101 (not in Gen Ed core)					
Prepare and explain the Balance Sheet, Income Statement, and Statement of Retained Earnings	Group activity non-graded	15	8	14	93%
	Observation	15	8	11	73%
	Pre/Post Test	15	9	8	53%
ANT 110					
Techniques for analysis of cultural remains	Classroom Research	6	7	6	100%
Develop techniques for analysis of cultural remains	Group activity non-graded	6	8	6	100%
	Essay	6	8	6	100%
	Simulation	6	8	6	
The necessity for understanding cultural theory as it applies to	Classroom Research	6	10	6	100%
	Oral examination	6	10	6	100%
Become acquainted with the historical development of archaeology, its methods and theory	Group activity non-graded	6	10	6	100%
	Problems	6	10	6	100%
ENG 102					
Read critically with attention to major literary approaches, such as but not limited to, reader-response, psychological/sociological, historical/biographical, cultural/gender, and formalist	Other - Oral	11	7	11	100%
Explain and practice the principles of academic integrity throughout the research, writing, and revision	Journal	9	5	9	100%
	Pre/Post Test	9	16	7	78%
Follow the writing process: idea generating, organizing, drafting, revising, editing, proofreading	Peer Reviews	10	4	9	90%
	Peer Reviews	11	8	11	100%
	Peer Reviews	9	12	7	78%
GEO 131 Sec 1 & 2					
Identify, analyze and evaluate the theories and interpretations concerning physical geography and	Instructor test	36	5	24	67%
	Instructor test	38	10	21	55%
	Instructor test	38	16	25	66%
Successfully complete laboratory exercise concerning physical geography through the application of the theories and concepts of physical	Problems	38	7	27	71%
	Matrix	38	9	35	92%
	Simulation	38	14	35	92%
Apply the theories and concepts of physical geography to local and global issues	Group activity	38	2	33	87%
	Essay	38	13	33	87%
	Debate	38	15	36	95%
CIS 120					
Effectively operate a microcomputer		78		78	100%
Produce computer-generated		78		78	100%

Fall 2000 General Education Pilot Project Results

Course / Outcome	Assessment Method	Number of students assessed	Period of assessment by semester week	Students who met the requirements	% of students meeting the minimum measurement
HUM 242					
Prepare and explain the Balance Sheet, Income Statement, and Statement of Retained Earnings	Group activity	15	8	13	87%
	Observation	15	8	12	80%
	Pre/Post Test	15	9	8	53%
MAT 121					
Demonstrate graphing linear equations	Instructor test	16	8	8	50%
Solve systems of equations graphically & quantitatively & check solutions	Group activity	17	10	17	100%
	Instructor test	22	11	15	68%
	Instructor test	22	16	19	86%
Perform basic operations on polynomials	Pre/Post Test	15	7	15	100%
	Instructor test	22	8	19	86%
	Instructor test	22	16	18	82%
Understand and use methods for factoring polynomials	Pre/Post Test	15	7	15	100%
	Instructor test	22	8	17	77%
Develop an understanding of logarithmic operations	Instructor test	22	16	15	68%
PHI 101					
Students will demonstrate knowledge of the broad history of philosophy and major divisions of the subject	Instructor test	23	4	23	100%
	Instructor test	23	9	22	96%
	Journal	23	16	18	78%
Students will demonstrate recognition of major ancient Greek philosophers and the ideas associated with them.	Instructor test	23	4	23	100%
	Journal	23	14	18	78%
Students will demonstrate a basic understanding of principles of argument, an ability to summarize	Essay	23	7	22	96%
	Essay	24	14	23	96%
	Oral examination	24	16	22	92%
ENG 101					
demonstrates sound logical development, careful interpretation and evaluation of sources, and appropriate documentation	Group activity non-graded	17	2	17	100%
	Journal	17	7	16	94%
	Observation	17	12	17	100%
Revise writing for unity, coherence, sentence variety and clarity	Essay	17	7	17	100%
	Essay	17	10	16	94%
	Essay	17	14	17	100%
Read peers' writing critically, accept critical judgments of others, and make appropriate changes in own	Peer conferencing	17	7	17	100%
	Instructor conferencing	17	13	17	100%
	Self evaluation	17	16	16	94%
SPA 201					
Interpret written Spanish from texts that are linguistically non-complex	Verbal response	13	11	10	77%
	Verbal response	12	16	12	100%
	Verbal response	12	16	7	58%
demonstrate increased comprehension of conversational discourse on a number of topics	Instructor test	13	12	6	46%
	Instructor test	12	14	5	42%
	Instructor test	12	16	12	100%
	Instructor test	12	16	4	33%
initiate, sustain and close a general conversation utilizing learned grammatical strategies	Oral examination	12	16	4	33%
	Instructor test	13	12	12	92%
	Instructor test	12	16	4	33%
Totals		1350		1148	85%

Fall 2000 General Education Pilot Project Results

Comments					
Outcomes were confused with course content items on the outlines					
General observations for future investigation					
The average score of different methods are detailed in the following table:					
Assessment Method					
Classroom Research	100%				
Instructor conferencing	100%				
Other - Oral	100%				
Peer conferencing	100%				
(blank)	100%				
Group activity non-graded	98%				
Essay	96%				
Debate	95%				
Self evaluation	94%				
Matrix	92%				
Simulation	92%				
Group activity	91%				
Peer Reviews	89%				
Journal	88%				
Problems	86%				
Observation	84%				
Verbal response	78%				
Pre/Post Test	77%				
Oral examination	75%				
Instructor test	71%				
Period	Percent of students who achieved minimum requirements				
Period of assessment by semester week					
(blank)	100%				
16	72%				
15	95%				
14	82%				
13	93%				
12	79%				
11	73%				
10	93%				
9	74%				
8	85%				
7	96%				
5	83%				
4	97%				
2	93%				

General Education Pilot Project
B. Outcomes Reporting Form

Student Outcome Assessment Report Form (pilot project)

Course

* = meets minimum

Date

0 = does not meet minimum

		Outcome			Outcome			Outcome		
WEEK NUMBER										
Student	Assessment method									
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										

TOTAL # ASSESSED
 TOTAL # MET MINIMUM
 TOTAL % MET MINIMUM

Outcome #

Outcome description

	method(s) used:
	method(s) used:
	method(s) used:

Assessment method codes

- | | |
|---------------------------------|-----------------------------|
| CR --Classroom Research | OE --Oral Examination |
| ES --Essay / Writing assignment | PE --Peer reviews |
| EE --External Examiner | PA --Performance Appraisals |
| GA --Group activity non-graded | PP --Pre/Post test |
| IT --Instructor Developed Test | PR --Problems |
| JO --Journal | SI --Simulation |
| OB --Observation | ST --Standardized Test |
| OT --Other (please explain) | |

General Education Pilot Project

C. Tool Survey Form

**General Education Pilot Project – Fall 2000
Tool Survey**

Name _____ Course _____ Semester/year _____

Assessment Method Codes (A.M.C.)		
CR – Classroom research	ES – Essay/Writing Assignment	EE – External Examiner
GA – Group activity, non-graded	IT – Instructor Developed Test	JO – Journal
OB – Observation	OE – Oral Examination	PE – Peer reviews
PA – Performance Appraisals	PP – Pre/Post test	PR – Problems
SI – Simulation	ST – Standardized test	OT – Other

COURSE OUTCOME MEASURED: _____

METHOD USED FOR MEASURING THIS OUTCOME: _____

ASSESSMENT METHOD CODE (see above chart): _____

Demand on your time: very little about right a lot

Do you suggest others use this method for measuring similar outcomes? yes no

How effective was this method? not at all somewhat effective

In your opinion why was this method **EFFECTIVE** in measuring the student's achievements?

In your opinion why was this method **NOT EFFECTIVE** in measuring the student's achievements?

General Education Pilot Project

D. Notes from Pilot Project meeting
November 2, 2000

Frank Chavez (MAT 121) did a Chapter test (2-3). He distributed the test in different colors, students didn't seem to mind this.

Advantages: The class is 2 ½ hours so there were no test-taking problems. The success ratio was the same

Disadvantages: Should be a chapter-to-chapter test. It was too much material to cover in one exam.

Immediate effect: Will change to chapter tests in the future.

Letty David (ENG 102) brought several examples of assessment.

- 1) To demonstrate understanding of poetic devices, Letty placed a transparency copy of a painting on the overhead projector. Students then brainstormed inspirations. The next class their assignment was to bring back a poem. Followed up this activity immediately with the lecture on poetic design.
- 2) Two poems and short story activity. She integrated Jean Rukkila's idea of using art supplies to have the students make a "drawing" to show the themes. All but two students participated, and those two later demonstrated their ability in writing.

Stephen Franklin (GEO 131) uses an in-class worksheet that is set up like a grid to give students an idea of how things fit together in the "whole picture." This helps students to conceptualize the independent ideas/topics presented. This could work in other classes, such as Psychology, History, etc. It also helps combine 3 chapters of information.

To apply the information, the students were asked to put together a "proposal" as if they were going to solve a problem for a customer.

Multiple choice/essay quizzes are also given (total of 4 quizzes). These tools were developed last spring and seem to be working well.

Stephen has also taught with the Smartboard, and these seem to be going well.

Gerald Bacon (ANT 110) To demonstrate ability in critical thinking, Gerald's archeology class is asked to evaluate an "assemblage" after a field trip to the Elden Dig. At the next class, Gerald places a collection of items into an area of the classroom, set up to look like a dig. From that the students are asked to produce "field notes" just as if they were describing a real dig. This helped students demonstrate their ability and knowledge of the material. Other classes could use this activity and write narratives.

Marty Lara (HUM 242) shared a method for assessing outcomes that he had "never evaluated in this way before." Students present an oral report and they are assessed via observation. Students were offered a choice as to what interested them about certain topics, therefore making the experience more pleasant.

Michael Casey (ACC 101)

- 1) Informed students ahead of time, which turned out to be a little of a disadvantage because they were so worried about performing well on the assessment that they forfeited their preparation for the next subject.
- 2) Used multiple methods to assess the same outcome at about the same time in the semester (group activity, teacher observation of students on task, and a written exam)
- 3) Has used this method now for three semester and gets better at it each time.

General Education Pilot Project

E. Results from Tool Survey Fall 2000

Assessment of General Education Pilot Project Tool Survey Results for Fall 2001

<i>Outcome Category</i>	<i>Effectiveness</i>	<i>Process Time</i>	<i>Method Description</i>	<i>Course Number</i>	<i>Comments</i>
Aesthetic Awareness					
	Effective	Appropriate	Oral -discussion	ANT 110	Utilizing the terms in lecture/seminar. Hands-on objectives. Used film and readings.
Communicate concepts					
	Effective	Appropriate	Group activity - Computer project module	CIS 120	Students have questions, can be answered as they run into problems
	Effective	Appropriate	Oral - evaluation	PHI 101	Oral presentations, critical evaluations
	Effective	Appropriate	Test - criterion reference	ECN 204	Highly recommend. Students enjoyed assignment which was to synthesis an academic journal article and related how they would benefit from that information. Students said it was difficult to read some of the math formulas.
	Effective	Appropriate	Written - focus paper	ECN 204	Video contained much of the terminology learned that would have been otherwise Greek to the students and they knew enough to engage in a discussion about how they felt regarding the proposed debate. Video from CSPAN tax debate
	Effective	Very little	Group activity	ENG 102	Communication skills
	Effective	Very little	Group activity	ENG 102	Communications skills, Brainstorm
	Effective	Very little	Presentation	ENG 102	Evaluation. Done during presentations, audience learned also.
	Effective	Very little	Presentation	ENG 102	Communications skills
	Effective	Very little	Test - criterion reference	ECN 204	Recommended. Students were able to convey their interpretation about concept by drawing conclusions about what they see around them.
Cultural awareness					
	Effective	A lot	Test - criterion reference	PHI 101	Students demonstrate their objective knowledge of ancient philosophy. Spend a lot of time on ancient topics
	Effective	A lot	Test - criterion reference	PHI 101	2nd test shows the students continued progress. Critically thinking about philosophers
	Effective	Very little	Test - criterion reference	PHI 101	Challenge for many students.
	Somewhat	Appropriate	Written - Journal	PHI 101	Writing on a weekly basics, students can explore their responses to the reading
Problem solving					
	Effective	Appropriate	Group activity	MAT 121	Worked in groups, prepared to present the solutions.

Assessment of General Education Pilot Project Tool Survey Results for Fall 2001

<i>Outcome Category</i>	<i>Effectiveness</i>	<i>Process Time</i>	<i>Method Description</i>	<i>Course Number</i>	<i>Comments</i>
	Effective	Appropriate	Group activity - Computer project module	CIS 120	Can answer questions while they run into problems as a group.
	Effective	Appropriate	In-class activity	GEO 131	Lab solving apply concepts and theories in precise and measurable objectives
	Effective	Appropriate	Oral - discussion	ANT 110	Utilizing the terms in lecture/seminar. Hands-on objectives. Used film and readings.
	Effective	Appropriate	Research	GEO 131	Apply lecture concepts in group activity. GIS exercise
	Effective	Appropriate	research - Field trip	ANT 110	Develop questions, evidence presented or not.
	Effective	Appropriate	research - Field trip	ANT 110	Develop questions of their own. Challenge an old paradigm.
	Effective	Appropriate	Test - criterion reference	GEO 131	A base level consistent tool, to asses student comprehension of material three times during the length of the semester
	Effective	Appropriate	Test - criterion reference	MAT 121	Problem solving good for math students. Test mimicked material.
	Effective	Appropriate	Test - criterion reference	MAT 121	Problem solving questions very good for math students.
	Effective	Very little	observation	ECN 205	Excellent activity for students to gain applicable knowledge about concepts. Had groups develop demand schedules from personal traits and then graph the data points as a market and determine what price they would pay.
	Not at all	Appropriate	Group activity	MAT 121	Material builds upon itself. Problem solving
	Not at all	Appropriate	Test - criterion reference	MAT 121	The material builds and problem solving questions are good for math students.

Quantitative evaluation

Effective	Appropriate	Debate	GEO 131	Awareness about student material was increased. Ability to communicate, analyze and synthesize information.
Effective	Appropriate	Oral - discussion	GEO 131	Related theories and concepts of the world's climate. Used climatic control matrix worksheet
Effective	Appropriate	Written proposal and presentation	GEO 131	Written assignments allowed students to demonstrate their ability to recognize socio-environmental
Effective	Very little	Research - Field trips	GEO 131	Students able to see, investigate and describe classroom concepts as in the real world.

Writing composition

Assessment of General Education Pilot Project Tool Survey Results for Fall 2001

<i>Outcome Category</i>	<i>Effective-ness</i>	<i>Process Time</i>	<i>Method Description</i>	<i>Course Number</i>	<i>Comments</i>
	Effective	A lot	Test - criterion reference	ENG 101	Recommended but time intensive. Provided plenty of information about the student's capability. Peer and instructor conferencing should fall on different days A more reasonable word count needed. Used in-class activity to generate ideas and organization process.
	Effective	A lot	Test - criterion reference	ENG 101	Recommended but time intensive. Provided plenty of information about the student's capability. Peer and instructor conferencing should fall on different days A more reasonable word count needed. Used in-class activity to generate ideas and organization process.
	Effective	A lot	Test - criterion reference	ENG 101	Recommended but time intensive. Provided plenty of information about the student's capability. Peer and instructor conferencing should fall on different days A more reasonable word count needed. Used in-class activity to generate ideas and organization process.
	Effective	A lot	Written - activity	PHI 101	Concepts of human nature as a response to a film. A thesis statement, well-developed argument.
	Effective	Appropriate	Peer review	ENG 102	Reinforce what students learned.
	Effective	Appropriate	Writing- activity	ENG 102	Developed writing skills for higher college courses.
	Effective	Appropriate	Written - activity	ENG 102	Evaluation guidelines. Did a writing workshop as a preface to the assignment.
	Effective	Appropriate	Written - activity	PHI 101	Students think about Buddhism as they develop thesis statements.
	Somewhat	Appropriate	Journal - class	PHI 101	Weekly writing basis, journal writing
	Somewhat	Appropriate	Test - criterion reference	ENG 101	Complex assignment not recommended

Assessment of General Education Pilot Project Tool Survey Results for Fall 2001

<i>Method Description</i>	<i>Effectiveness</i>	<i>Process Time</i>	<i>Course Number</i>	<i>Outcome Category</i>	<i>Comments</i>
Debate.	Effective	Appropriate	GEO 131	Quantitative evaluation	Awareness about student material was increased. Ability to communicate, analyze and synthesize information.
Group activity	Effective	Very little	ENG 102	Communicate concepts	Communications skills, Brainstorm
Group activity	Effective	Appropriate	MAT 121	Problem solving	Worked in groups, prepared to present the solutions.
Group activity	Effective	Very little	ENG 102	Communicate concepts	Communication skills
Group activity	Not at all	Appropriate	MAT 121	Problem solving	Material builds upon itself. Problem solving
Group activity - Computer project module	Effective	Appropriate	CIS 120	Problem solving	Can answer questions while they run into problems as a group.
Group activity - Computer project module	Effective	Appropriate	CIS 120	Communicate concepts	Students have questions, can be answered as they run into problems
In-class activity	Effective	Appropriate	GEO 131	Problem solving	Lab solving apply concepts and theories in precise and measurable objectives
Journal - class	Somewhat	Appropriate	PHI 101	Writing composition	Weekly writing basis, Journal writing
observation	Effective	Very little	ECN 205	Problem solving	Excellent activity for students to gain applicable knowledge about concepts. Had groups develop demand schedules from personal traits and then graph the data points as a market and determine what price they would pay.
Oral - discussion	Effective	Appropriate	ANT 110	Problem solving	Utilizing the terms in lecture/seminar. Hands-on objectives. Used film and readings.

Assessment of General Education Pilot Project

Tool Survey Results for Fall 2001

<i>Method Description</i>	<i>Effectiveness</i>	<i>Process Time</i>	<i>Course Number</i>	<i>Outcome Category</i>	<i>Comments</i>
Oral - discussion	Effective	Appropriate	GEO 131	Quantitative evaluation	Related theories and concepts of the world's climate. Used climatic control matrix worksheet
Oral - evaluation	Effective	Appropriate	PHI 101	Communicate concepts	Oral presentations, critical evaluations
Oral -discussion	Effective	Appropriate	ANT 110	Aesthetic Awareness	Utilizing the terms in lecture/seminar. Hands-on objectives. Used film and readings.
Peer review	Effective	Appropriate	ENG 102	Writing composition	Reinforce what students learned.
Presentation	Effective	Very little	ENG 102	Communicate concepts	Evaluation. Done during presentations, audience learned also.
Presentation	Effective	Very little	ENG 102	Communicate concepts	Communications skills
Research	Effective	Appropriate	GEO 131	Problem solving	Apply lecture concepts in group activity. GIS exercise
research - Field trip	Effective	Appropriate	ANT 110	Problem solving	Develop questions of their own. Challenge an old paradigm.
research - Field trip	Effective	Appropriate	ANT 110	Problem solving	Develop questions, evidence presented or not.
Research - Field trips	Effective	Very little	GEO 131	Quantitative evaluation	Students able to see, investigate and describe classroom concepts as in the real world.
Test - criterion reference	Effective	Appropriate	ECN 204	Communicate concepts	Highly recommend. Students enjoyed assignment which was to synthesis an academic journal article and related how they would benefit from that information. Students said it was difficult to read some of the math formulas.

Assessment of General Education Pilot Project Tool Survey Results for Fall 2001

<i>Method Description</i>	<i>Effectiveness</i>	<i>Process Time</i>	<i>Course Number</i>	<i>Outcome Category</i>	<i>Comments</i>
Test - criterion reference	Effective	A lot	ENG 101	Writing composition	Recommended but time intensive. Provided plenty of information about the student's capability. Peer and instructor conferencing should fall on different days A more reasonable word count needed. Used in-class activity to generate ideas and organization process.
Test - criterion reference	Effective	A lot	PHI 101	Cultural awareness	2nd test shows the students continued progress. Critically thinking about philosophers
Test - criterion reference	Effective	A lot	ENG 101	Writing composition	Recommended but time intensive. Provided plenty of information about the student's capability. Peer and instructor conferencing should fall on different days A more reasonable word count needed. Used in-class activity to generate ideas and organization process.
Test - criterion reference	Effective	A lot	PHI 101	Cultural awareness	Students demonstrate their objective knowledge of ancient philosophy. Spend a lot of time on ancient topics
Test - criterion reference	Effective	Very little	PHI 101	Cultural awareness	Challenge for many students.
Test - criterion reference	Effective	Appropriate	MAT 121	Problem solving	Problem solving good for math students. Test mimicked material.
Test - criterion reference	Effective	Very little	ECN 204	Communicate concepts	Recommended. Students were able to convey their interpretation about concept by drawing conclusions about what they see around them.
Test - criterion reference	Effective	Appropriate	GEO 131	Problem solving	A base level consistent tool, to assess student comprehension of material three times during the length of the semester
Test - criterion reference	Effective	A lot	ENG 101	Writing composition	Recommended but time intensive. Provided plenty of information about the student's capability. Peer and instructor conferencing should fall on different days A more reasonable word count needed. Used in-class activity to generate ideas and organization process.
Test - criterion reference	Effective	Appropriate	MAT 121	Problem solving	Problem solving questions very good for math students.

Created by Paul Holbrook

Revised 03-May-01

Assessment of General Education Pilot Project Tool Survey Results for Fall 2001

<i>Method Description</i>	<i>Effectiveness</i>	<i>Process Time</i>	<i>Course Number</i>	<i>Outcome Category</i>	<i>Comments</i>
Test - criterion reference	Not at all	Appropriate	MAT 121	Problem solving	The material builds and problem solving questions are good for math students.
Test - criterion reference	Somewhat	Appropriate	ENG 101	Writing composition	Complex assignment not recommended
Writing- activity	Effective	Appropriate	ENG 102	Writing composition	Developed writing skills for higher college courses.
Written - activity	Effective	Appropriate	ENG 102	Writing composition	Evaluation guidelines. Did a writing workshop as a preface to the assignment.
Written - activity	Effective	Appropriate	PHI 101	Writing composition	Students think about Buddhism as they develop thesis statements.
Written - activity	Effective	A lot	PHI 101	Writing composition	Concepts of human nature as a response to a film. A thesis statement, well-developed argument.
Written - focus paper	Effective	Appropriate	ECN 204	Communicate concepts	Video contained much of the terminology learned that would have been otherwise Greek to the students and they knew enough to engage in a discussion about how they felt regarding the proposed debate. Video from CSPAN tax debate
Written - Journal	Somewhat	Appropriate	PHI 101	Cultural awareness	Writing on a weekly basics. students can explore their responses to the reading
Written proposal and presentation	Effective	Appropriate	GEO 131	Quantitative evaluation	Written assignments allowed students to demonstrate their ability to recognize socio-environmental



Teaching and Learning Conference

F. Brochure and Presentation Schedule

1st Annual Teaching & Learning Conference

Presentation Schedule



FLAGSTAFF CAMPUS



Coconino
Community
College





9:00 a.m. to 10:30 a.m.

TUESDAY, AUGUST 22, 2000

Enhancing Accessibility in the Classroom – Rm 7
Presenter: Nancy Elliott, Coordinator, Disability Resources, CCC & Karen Salt, Educator, CCC
Every educator wrestles with the challenges faced in making sure that every student in the classroom has an optimum learning experience. This workshop will focus on methods for assuring that happens!

Using WebCT – Rm 8a
Presenter: Alane Matthews, Instructional Technology Specialist, CCC
Learn to use WebCT to enhance your curriculum or to teach online courses. In this hands-on workshop we will explore WebCT from a student's perspective and then create a short online or web enhanced course. We will explore WebCT features such as e-mail, electronic chats,

online syllabi, and assessment tools. Enrollment limited to 20 participants.

The Whole Brain Market – Mind Mapping – Rm 22
Presenters: Dave Rudakewich, SBS Instructor, CCC and Sandra Dihilman, Adjunct SBS faculty, CCC
Discover the process and results of mind mapping and its impact on learning.

The \$100,000 Question: How does Copyright affect you? – Rm 21
Presenter: Marcia Ostrowski, Program Coordinator, Informational Resources, CCC
Faculty and staff alike can benefit from the important information provided. Learn about Copyright, how it affects your teaching and workplace, and where to find more answers.

10:45 a.m. to 12:15 p.m.

TUESDAY, AUGUST 22, 2000

Panel Discussions – Rm 3
Facilitators: Michelle Metcalf and Steve Franklin, Adjunct Instructors, CCC
10:45 Retention Strategies
11:30 Surviving as an Adjunct Faculty at a Community College
Participate in the discussion and share your ideas for student and faculty retention!

Faculty, CCC
This dual topic workshop will have something for everybody, staff or faculty alike. Find out how to start off on the right foot and promote critical thinking skills right where you are!

The Power of PowerPoint – Rm 8a
Presenter: Alane Matthews, Instructional Technology Specialist, CCC
Learn to use the PowerPoint to create multimedia presentations, classroom handouts and overhead transparencies. This course is designed for beginners and enrollment is limited to 20 participants.

Training the Adult Learner for the InfoTech Workplace – Rm 22
Presenter: Dr. Pattie Odgers, CIS Instructor, CCC
Terms like virtual workers, and distance education are reshaping the nature of work in America and redefining how educators should be preparing the information technology worker for the new millennium workplace. The results of new research on trends, challenges, and delivery modalities from the presenter's newest textbook, *Administrative Office Management* will be presented.

Learning Outcomes, What are they? And how can I measure them? – Rm 21
Presenter: Barbara Eickmeyer, Assessment Project Leader, CCC
Find out about learning outcomes and ways to improve how to guide your students to their final destination, success in your class! Ideas for assessing students will also be presented.

Critical Thinking & Community Building in the College Classroom – Rm 7
Presenters: Ruth Foster, Area Coordinator, Developmental English, CCC, and Stephany Brown, Adjunct English

12:30 to 1:15 p.m. Round-table Discussions
Lunch provided by the CCC Foundation – Rm 22
Topics will be listed at tables for general discussion.
PLEASE RSVP to Lisa Chastain at (520) 527-1222 or (800) 350-7122 ext. 353

It's Not How Smart You Are, But How You Are Smart! * – Rm 21
Presenters: Jim Rhodes, Social & Behavioral Sciences Area Coordinator, CCC and Monica Baker, Occupational & Vocational Division Chair, CCC
Respecting differences by understanding that students learn in many ways. In this workshop, identify your own learning style and apply learning styles theory in the development of your course to meet the needs of the variety of learners that enter your classroom.
*will be repeated on Wednesday, Aug 23.

How to write a memo people will read! – Rm 7: Campus communication for the 21st Century
Presenter: Jerry Baker, Interim VP Administrative Affairs, CCC
Learn how to use effective methods for written communication in the workplace. Participants will have practice opportunities and immediate feedback on-the-spot!

Using the SmartBoard* – Rm 22
Presenter: David Rudakewich, CCC,
This unique, interactive "white board" computer is

one of the recent additions to our college classroom. Come observe how it is used and find out how you might be able to use it in your class.
*will be repeated on Wednesday, Aug 23.

Teaching On line – A Panel Discussion – Rm 8a
Facilitators: Alan Peterson, Fine Arts Area Coordinator, CCC, Dr. Ron McFarland, Director for Distance Learning, CCC and Dr. Gerald Hughes, Professor of Sociology & Social Work, NAU
As the learner of the 21st Century changes, so must delivery methods for

instruction. Questions will be answered on how faculty can prepare their courses for distance delivery.

Making a Rubric – Rm 3: How to measure what your students are learning
Presenter: Barbara Eickmeyer, Assessment Project Leader, CCC
Participants in this hands-on workshop will learn how to write a holistic measurement tool for their subject. Whether you teach art or zoology, this workshop will help you focus on telling your students what to expect and how they will be graded!

1:00 p.m. to 2:30 p.m.

WEDNESDAY, AUGUST 23, 2000

It's Not How Smart You Are, But How You Are Smart! (Repeat) - Rm 21

Presenters: Jim Rhodes, Social & Behavioral Sciences Area Coordinator, CCC and Monica Baker, Occupational & Vocational Division Chair, CCC

Respecting differences by understanding that students learn in many ways. In this workshop, identify your own learning style and apply learning styles theory in the development of your course to meet the needs of the variety of learners that enter your classroom.

The ESL Student, What you need to know - Rm 7

Presenter: Holly Franquet, Adjunct Spanish Faculty, CCC
Find out the challenges faced by a student whose first language is not English. How can educators help these learners to overcome the hurdles in order to gain success!

Deep Learning: The Paradigm Shift in Higher Education - Rm 3

Presenter: Mary Feiler, Learning Specialist, CCC
Do teachers teach more when they preach less?

In this collaborative session, you'll find out why and how educators are integrating active learning in their classrooms. Specific strategies will be shared and demonstrated by guest speakers and the audience.

Using the SmartBoard (Repeat) - Rm 22

Presenter: David Rudakewich, CCC
This unique, interactive "white board" computer is one of the recent additions to our college classroom. Come observe how it is used and find out how you might be able to use it in your class.

Write a Syllabus in less than an hour! - Rm 8a

Facilitator: Kate Kozak, Interim Arts & Sciences Division Chair, CCC
Here's your chance to write a hassle-free syllabus that your students will read and USE! Other than having to make copies, you'll be ready to go after this workshop! Materials will be provided. Come early, seating is limited to 25!



2:45 p.m. to 4:15 p.m.

WEDNESDAY, AUGUST 23, 2000

How to propose a New Course at CCC - Rm 3

Presenter: Maxie Inigo, Curriculum Committee Chair, CCC

Some of the best ideas for courses never make it to the curriculum committee for lack of information! Learn how to propose a new course, from inception to implementation!

How to write a Test (or two!) - Rm 7

Presenter: Barbara Eickmeyer, Assessment Project Leader, CCC
One of the hardest things to do is write a test that actually measures what students are learning, while providing a learning experience at the same time. Find out different methods for writing a good test that will reap results!



True Colors - Rm 21

Presenter: Frammie Hill, NAU
Knowing your personality "colors" will help in your daily communication with people. This unique workshop will enhance your sensitivity to workplace and classroom interaction.

Popular Repeat Sessions - Rm 8a & 22

To be determined by participant input.

4:45 p.m. to 5:45 p.m.

WEDNESDAY, AUGUST 23, 2000

Vocational / Occupational Area Faculty Meetings - Rooms TBA

Arts & Sciences Area Faculty Meetings - Rooms TBA

Contact your area coordinator for details.

6:00 p.m. to 8:00 p.m.

WEDNESDAY, AUGUST 23, 2000

6:00 p.m. Convocation Dinner at Coconino High School
2801 N. Izabel Street.
All faculty and staff are welcome.

Convocation Address 7:00 p.m.
Guest speaker: Dr. Thomas S. Jordan, President CCC
President Jordan will address faculty and staff on the college's vision for the upcoming academic year.



Seating limited, RSVP to Lisa Chastain at (520) 527-1222 or (800) 350-7122 ext. 353.

1st Annual Teaching & Learning Conference

FLAGSTAFF CAMPUS

SCHEDULE AT A GLANCE



Tues, August 22	Rm 3	Rm 7	Rm 8a	Rm 21	Rm 22
9:00 -10:30	Check in & Registration room	Enhancing Accessibility in the classroom <i>Nancy Elliott & Karen Salt</i>	Using Web CT <i>Alane Matthews</i>	The \$100,000 Question, How does copyright affect you? <i>Marcia Ostrowski</i>	The Whole Brain Market - Mind mapping <i>Dave Rudakewich & Sandra Dihlman</i>
10:45-12:15	10:45 Retention Strategies & 11:30 Surviving as an Adjunct Faculty at CCC Panel Discussion <i>Michelle Metcalf & Steve Franklin</i>	Critical Thinking & Community Building in the classroom <i>Ruth Foster & Stephany Brown</i>	The Power of PowerPoint <i>Alane Matthews</i>	Learning Outcomes - What are they and how can I measure them? <i>Barb Eickmeyer</i>	Training the Adult Learner for the InfoTech Workplace <i>Dr. Pattie Odgers</i> *ends at 12:00
12:30-1:15	Roundtable Discussions- Rm 22 Lunch provided by the CCC Foundation Topics will be listed at each table for general discussion. PLEASE RSVP to Lisa Chastain at (520) 527-1222 or (800) 350-7122 ext. 353				
1:30-3:00	Making a Rubric - How to measure what your students are learning. (limited to 24) <i>Barb Eickmeyer</i>	How to write a memo that people will read! Campus Communication <i>Jerry Baker</i>	Teaching Online - A panel discussion <i>Alan Peterson, Dr. Ron McFarland & Dr. Gerald Hughes</i>	Learning Styles & Multiple Intelligences (limited to 30) <i>Jim Rhodes & Monica Baker</i>	Using the SmartBoard (limited to 25) <i>Dave Rudakewich</i>
Wed, August 23	Rm 3	Rm 7	Rm 8a	Rm 21	Rm 22
1:00 -2:30	Deep Learning: The Paradigm Shift in Higher Education <i>Mary Feiler</i>	The ESL Student - What you need to know <i>Holly Franquet</i>	Write a syllabus in less than an hour! <i>Kate Kozak</i>	Learning Styles & Multiple Intelligences - (limited to 30) REPEAT <i>Jim Rhodes & Monica Baker</i>	Using the SmartBoard - (limited to 25) REPEAT <i>Dave Rudakewich</i>
2:45-4:15	How to propose a new course at CCC <i>Maxie Inigo</i>	How to write a test (or two!) <i>Barb Eickmeyer</i>	Popular Repeat session	True Colors <i>Frannie Hill</i>	Popular Repeat session
4:45-5:45	Area Faculty Meetings - Contact your area coordinator for details.				
6:00 p.m.	Convocation Dinner at Coconino High School Cafeteria, 2801 N. Izabel Street				
7:00 p.m.	Convocation Address - Dr. Thomas S. Jordan				

For more information contact Lisa Chastain @ Coconino Community College, (520) 527-1222 or (800) 350-7122 ext 353. Please contact Human Resources ext 268, by August 14th, if you will need an accommodation to participate in any CCC sponsored activity.

This material may be made available in an alternative format by contacting the Disabilities Resources Office @ (520) 527-1222 or (800) 350-7122 ext 243. TTY/TTD (520) 527-8693. CCC is an Alternative Action/Equal Opportunity institution.

General Education Student Outcomes

G. General Education Student Outcomes
as approved by College Faculty
February, 2001

**GENERAL EDUCATION STUDENT OUTCOMES
COCONINO COMMUNITY COLLEGE**

COMMUNICATION SKILLS

Conveying of ideas using one or more methods of expression (written, oral, signed)

1. Present ideas developed from diverse sources and points of view with consideration of target audience
2. Demonstrate communication process through idea generation, organization, drafting, revision, editing, and presentation
3. Participate in and contribute to collaborative groups
4. Construct logical, coherent, well-supported arguments
5. Employ syntax, usage, grammar, punctuation, terminology, and spelling appropriate to academic discipline and the professional world
6. Demonstrate listening / interpretive skills in order to participate in communications and human exchange.

THINKING SKILLS

**Using a variety of inquiry methods, resources, and reasoning skills
that support and promote lifelong learning.**

1. Use appropriate method of inquiry to identify, formulate, and analyze a current or historical problem/question (may include recognizing significant components, collecting and synthesizing information, evaluating and selecting solution(s), applying and defending solution(s))
2. Translate quantifiable problems into mathematical terms and solve these problems using mathematical or statistical operations
3. Interpret graphical representations (such as charts, photos, artifacts) in order to draw appropriate conclusions
4. Recognize strengths and weaknesses in arguments
5. Demonstrate observational and experimental skills to use the scientific method to test hypotheses and formulate logical deductions.
6. Understand the uses of theories and models as applied in an area of study
7. Develop creative thinking skills for application in problem solving
8. Demonstrate a working knowledge of a technological application in an area of study

DIVERSITY AND GLOBAL PERSPECTIVE

**An understanding and appreciation of diverse cultures, values, beliefs,
and historical perspectives.**

1. Recognize the diversity of humanity at the local, regional and global levels
2. Synthesize information about needs, concerns and contributions of different cultures within society
3. Identify the influence of cultural and ethnic backgrounds on individual and group attitudes and values
4. Link cultural perspectives, practices, and interactions with the societal and physical environment from which they arose
5. Explain the importance of cross-cultural influences on physical, cultural and spiritual heritage
6. Relate and explain the connections between past and present events and/or issues

**GENERAL EDUCATION STUDENT OUTCOMES
COCONINO COMMUNITY COLLEGE**

AESTHETIC PERSPECTIVE

A better understanding, appreciation, and global application of the arts.

1. Analyze and evaluate literary, visual, or performing arts using discipline-specific approaches and criteria
2. Reflect on personal responses to aesthetic experiences
3. Incorporate aesthetic reflection into discipline-specific activities

ETHICAL AND CIVIL VALUES

A better understanding of oneself and others in order to clarify individual and societal responsibilities, needs, and values

1. Identify and assess community needs and the responsibility to balance individual and societal needs
2. Display responsibility and integrity in one's choices and actions
3. Integrate knowledge in order to establish an ethical position on an issue and defend it with logical arguments
4. Develop an appreciation of education and lifelong learning
5. Understand social values and analyze their implications for the individual, community, society, and world
6. Recognize the individual's responsibility to continue the exploration of the changing world and one's role in it

General Education Student Outcomes

H. March 23, 2001 Work Session Report

**Assessment of General Education
Curriculum Revision Day
March 23, 2001**

Participants (21 total):

Jerry Baker (Division Chair)	Jennifer Jameson (temp full time)
Bryan Bates	Kate Kozak
Lonny Born (Associate Faculty)	Marty Lara
Barbara Cress	Alan Petersen
Mike Devoley (temp full time)	Jeff Rhode
Barbara Eickmeyer	Jim Rhodes
Ruth Foster	Dave Rudakewich
Lloyd H. Hammonds (Dean, Page Campus)	Suzan Simmons (Curriculum Coordinator)
Paul Holbrook	Kirsten Squint
Maxie Inigo	Vennie White
	Pete Yanka (Advising rep)

Purpose of the work session

The primary purpose of the work session was for faculty to review general education course outlines and fill out a checklist that contained the college's general education student outcomes. The outcomes were written through a collaborative effort of faculty over the last three semesters and finalized in February 2001.

There are 92 courses listed in the college catalog in the general education core. We anticipated that perhaps a third of the outlines would be reviewed at the work session, however this was a generous estimate. The day of the work session, we were very pleased with the energetic response from faculty. Their enthusiasm served as motivation to get the job done and everyone got to work right away.

At the Work session

- 41 General Education outlines reviewed and/or modified at the work session
- 6 Non-General Education outlines modified at the work session

Program level review of the General Education core curriculum took place when we compared the course outlines to the new General Education program outcomes.

For the first time that the General Education program outcomes were "put through their paces" and applied to the curriculum.

At first glance, we discovered that the course level and program level outcomes in General Education are very well meshed!!

Unanticipated (but welcome!) Results

Faculty made modifications to course outlines to better reflect what is actually happening in the classroom.

Groups of faculty really discussed their programs in the process of completing the General Education checklist. A spirit of collegiality and collaboration prevailed.

Gaps and errors in the curriculum archives were detected.

**Assessment of General Education
Curriculum Revision Day
March 23, 2001**

Effective discussion with administrators took place regarding the future of General Education assessment and of student academic achievement in general.

A representative from Advising attended the work session and was able to gain knowledge of how the assessment of basic skills has a direct impact on student outcomes in General Education. Lloyd Hammonds, Dean of the Page Campus, shared a model for "Learner Readiness" that could be useful to our assessment program development.

It worked well for non General Education courses as well. Faculty members worked on non-General Education courses because they had time.

Ruth Foster commented, *Though I didn't work on General Education outlines Friday, the meeting gave me a chance to work with Paul [Holbrook] to complete a project we started months ago - combining ENG 135 with BUS 111 and ENG 136 with BUS 204 and retiring the two English classes. It really helped that you had all the forms there and the personnel to answer our questions. Without it, we would not have gotten around to finishing it this term, and if we had, we would have had to run around getting info and forms. In addition, seeing everyone together gave me a chance to discuss unrelated pressing business, especially with Lloyd.*

Other comments by participants:

Marty Lara, *This is one of those "must-be-done" things. I was shocked to discover that some outlines had not been updated in some time.*

Jim Rhodes, *This process allowed us to set aside a time to work on curriculum and discuss our programs. It was good to have it on campus. Perhaps earlier in the semester might be better.*

Vennie White, *It was so helpful in terms of seeing what we needed to do to be sure that what occurs in the classroom is reflected on the course outline and vice-versa. The process led to positive conversation about articulation and transfer of English courses.*

Jeff Rhode, *That was easy!*

Jerry Baker, *Very productive! I was impressed with how much participation there was from the temporary full time faculty. I also became more aware of faculty who demonstrated leadership in curriculum management and assessment.*

Considerations

This was an effective activity for general education program level review. We recommend a similar method for assessing programs in other areas.

This type of process should take place on an annual basis in order to ensure that curriculum is current and complete.

The college needs to determine how and where the results of program level assessment should be archived.

General Education Student Outcomes

H-1 Curriculum checklist for General Education Student Outcomes

GENERAL EDUCATION STUDENT OUTCOMES CHECKLIST

Course Outline Checklist for _____
(course prefix and name)

Place a check or X beside each outcome addressed by this course. Then list all appropriate Content numbers (E.4) or Outcome numbers (D.2) from the Course Outline that reflect each marked outcome.

A. Communication Skills: Conveying of ideas using one or more methods of expression (written, oral, signed)			
X		Content Items	Outcome Items
X	1. Present ideas developed from diverse sources and points of view with consideration of target audience		
	2. Demonstrate communication process through idea generation, organization, drafting, revision, editing, and presentation		
	3. Participate in and contribute to collaborative groups		
	4. Construct logical, coherent, well-supported arguments		
	5. Employ syntax, usage, grammar, punctuation, terminology, and spelling appropriate to academic discipline and the professional world		
	6. Demonstrate listening / interpretive skills in order to participate in communications and human exchange.		
B. Thinking Skills: Using a variety of inquiry methods, resources, and reasoning skills that support and promote lifelong learning			
	1. Use appropriate method of inquire to identify, formulate, and analyze a current or historical problem/question (may include recognizing significant components, collecting and synthesizing information, evaluating and selecting solution(s), applying and defending solution(s))		
	2. Translate quantifiable problems into mathematical terms and solve these problems using mathematical or statistical operations		
	3. Interpret graphical representations (such as charts, photos, artifacts) in order to draw appropriate conclusions		
	4. Recognize strengths and weaknesses in arguments		
	5. Demonstrate observational and experimental skills to use the scientific method to test hypotheses and formulate logical deductions.		
	6. Understand the uses of theories and models as applied in an area of study		
	7. Develop creative thinking skills for application in problem solving		
	8. Demonstrate a working knowledge of a technological application in an area of study		
C. Diversity and Global Perspective: An understanding and appreciation of diverse cultures, values, beliefs, and historical perspectives			
	1. Recognize the diversity of humanity at the local, regional and global levels		
	2. Synthesize information about needs, concerns and contributions of different cultures within society		
	3. Identify the influence of cultural and ethnic backgrounds on individual and group attitudes and values		
	4. Link cultural perspectives, practices, and interactions with the societal and physical environment from which they arose		
	5. Explain the importance of cross-cultural influences on physical, cultural and spiritual heritage		
	6. Relate and explain the connections between past and present events and/or issues		
D. Aesthetic Perspective: A better understanding, appreciation, and global application of the arts			
	1. Analyze and evaluate literary, visual, or performing arts using discipline-specific approaches and criteria		
	2. Reflect on personal responses to aesthetic experiences		
	3. Incorporate aesthetic reflection into discipline-specific activities		
E. Ethical and Civil Values: A better understanding of oneself and others in order to clarify individual and societal responsibilities, needs, and values			
	1. Identify and assess community needs and the responsibility to balance individual and societal needs		
	2. Display responsibility and integrity in one's choices and actions		
	3. Integrate knowledge in order to establish an ethical position on an issue and defend it with logical arguments		
	4. Develop an appreciation of education and lifelong learning		
	5. Understand social values and analyze their implications for the individual, community, society, and world		
	6. Recognize the individual's responsibility to continue the exploration of the changing world and one's role in it		

General Education Student Outcomes

I. Matrix of General Education Core Curriculum and Student Outcomes

**COCONINO COMMUNITY COLLEGE
GENERAL EDUCATION STUDENT OUTCOMES**

	ENG 101	ENG 102	MAT 142	MAT 151	MAT 187	MAT 212	MAT 220	MAT 230	MAT 241	MAT 262	ART 100	ART 201	ART 202	ART 221
COMMUNICATION SKILLS														
1. Present ideas developed from diverse sources and points of view with consideration of target audience.	X		X	X	X									
2. Demonstrate communication process through idea generation, organization, drafting, revision, editing, and presentation.	X	X												
3. Participate in and contribute to collaborative groups.	X	X										X		
4. Construct logical, coherent, well-supported arguments.	X	X	X	X	X	X	X	X	X	X				
5. Employ syntax, usage, grammar, punctuation, terminology, and spelling appropriate to academic discipline and the professional world.	X	X	X	X	X	X	X	X	X	X	X		X	X
6. Demonstrate listening / interpretive skills in order to participate in communications and human exchange.														
THINKING SKILLS														
1. Use appropriate method of inquiry to identify, formulate, and analyze a current or historical problem/question (may include recognizing significant components, collecting and synthesizing information, evaluating and selecting solution(s), applying and defending solution(s).	X	X	X	X	X	X	X	X	X	X				
2. Translate quantifiable problems into mathematical terms and solve these problems using mathematical or statistical operations.			X	X	X	X	X	X	X	X				
3. Interpret graphical representations (such as charts, photos, artifacts) in order to draw appropriate conclusions			X	X	X	X	X	X	X	X				
4. Recognize strengths and weaknesses in arguments	X	X	X	X	X		X	X	X	X				
5. Demonstrate observational and experimental skills to use the scientific method to test hypotheses and formulate logical deductions														
6. Understand the uses of theories and models as applied in the area of study	X	X	X	X	X	X	X	X	X	X				
7. Develop creative thinking skills for application in problem	X	X	X	X	X	X	X	X	X	X				
8. Demonstrate a working knowledge of a technological application in an area of study.	X	X	X	X	X		X		X	X				
DIVERSITY AND GLOBAL PERSPECTIVE														
1. Recognize the diversity of humanity at the local, regional and global levels	X	X										X	X	X
2. Synthesize information about needs, concerns and contributions of different cultures within society		X										X	X	X
3. Identify the influence of cultural and ethnic backgrounds on individual and group attitudes and values.		X									X	X	X	X
4. Link cultural perspectives, practices, and interactions with the societal and physical environment from which they arose.		X									X	X	X	X
5. Explain the importance of cross-cultural influences on physical, cultural and spiritual heritage.		X									X	X	X	X
6. Relate and explain the connections between past and present events and/or issues.		X	X								X	X	X	X
AESTHETIC PERSPECTIVE														
1. Analyze and evaluate literary, visual, or performing arts using discipline-specific approaches and criteria.	X	X					X	X	X	X	X	X	X	X
2. Reflect on personal responses to aesthetic experiences.		X									X		X	X
3. Incorporate aesthetic reflection into discipline-specific activities.		X					X				X	X	X	X
ETHICAL AND CIVIL VALUES														
1. Identify and assess community needs and the responsibility to balance individual and societal needs			X											
2. Display responsibility and integrity in one's choices and actions		X												
3. Integrate knowledge in order to establish an ethical position on an issue and defend it with logical arguments														
4. Develop an appreciation of education and lifelong learning			X	X	X	X	X							
5. Understand social values and analyze their implications for the individual, community, society, and world.		X												
6. Recognize the individual's responsibility to continue the exploration of the changing world and one's role in it.														

**COCONINO COMMUNITY COLLEGE
GENERAL EDUCATION STUDENT OUTCOMES**

	ENG 236	ENG 237	ENG 238	ENG 272	HUM 241	HUM 242	MUS 100	MUS 145	PHI 101	PHI 105	REL 201	THR 101	ANT 102	ANT 110	
COMMUNICATION SKILLS															
1. Present ideas developed from diverse sources and points of view with consideration of target audience.									X	X			X	X	
2. Demonstrate communication process through idea generation, organization, drafting, revision, editing, and presentation.					X	X			X						
3. Participate in and contribute to collaborative groups.					X	X									
4. Construct logical, coherent, well-supported arguments.					X	X			X	X			X	X	
5. Employ syntax, usage, grammar, punctuation, terminology, and spelling appropriate to academic discipline and the professional world.					X	X									
6. Demonstrate listening / interpretive skills in order to participate in communications and human exchange.															
THINKING SKILLS															
1. Use appropriate method of inquiry to identify, formulate, and analyze a current or historical problem/question (may include recognizing significant components, collecting and synthesizing information, evaluating and selecting solution(s), applying and defending solution(s)).					X	X				X			X	X	
2. Translate quantifiable problems into mathematical terms and solve these problems using mathematical or statistical operations.															
3. Interpret graphical representations (such as charts, photos, artifacts) in order to draw appropriate conclusions					X	X							X	X	
4. Recognize strengths and weaknesses in arguments					X	X			X				X	X	
5. Demonstrate observational and experimental skills to use the scientific method to test hypotheses and formulate logical deductions					X	X			X	X			X	X	
6. Understand the uses of theories and models as applied in the area of study					X	X			X	X			X	X	
7. Develop creative thinking skills for application in problem					X	X				X			X	X	
8. Demonstrate a working knowledge of a technological application in an area of study.														X	
DIVERSITY AND GLOBAL PERSPECTIVE															
1. Recognize the diversity of humanity at the local, regional and global levels					X	X	X	X					X	X	X
2. Synthesize information about needs, concerns and contributions of different cultures within society					X	X	X	X					X	X	X
3. Identify the influence of cultural and ethnic backgrounds on individual and group attitudes and values.					X	X	X	X					X	X	X
4. Link cultural perspectives, practices, and interactions with the societal and physical environment from which they arose.					X	X		X					X	X	X
5. Explain the importance of cross-cultural influences on physical, cultural and spiritual heritage.					X	X	X	X					X	X	X
6. Relate and explain the connections between past and present events and/or issues.					X	X	X	X	X	X			X	X	X
AESTHETIC PERSPECTIVE															
1. Analyze and evaluate literary, visual, or performing arts using discipline-specific approaches and criteria.					X	X	X	X					X	X	X
2. Reflect on personal responses to aesthetic experiences.					X	X	X	X					X		
3. Incorporate aesthetic reflection into discipline-specific activities.					X	X	X	X					X		
ETHICAL AND CIVIL VALUES															
1. Identify and assess community needs and the responsibility to balance individual and societal needs						X				X				X	
2. Display responsibility and integrity in one's choices and actions					X	X								X	X
3. Integrate knowledge in order to establish an ethical position on an issue and defend it with logical arguments					X	X			X	X				X	X
4. Develop an appreciation of education and lifelong learning					X	X								X	X
5. Understand social values and analyze their implications for the individual, community, society, and world.					X	X				X				X	
6. Recognize the individual's responsibility to continue the exploration of the changing world and one's role in it.					X	X				X				X	X

**COCONINO COMMUNITY COLLEGE
GENERAL EDUCATION STUDENT OUTCOMES**

	ANT 210	ANT 230	BUS 203	BUS 214	ECN 204	ECN 205	GEO 133	HIS 131	HIS 132	HIS 136	HIS 201	HIS 202	HIS 250	HIS 251
COMMUNICATION SKILLS														
1. Present ideas developed from diverse sources and points of view with consideration of target audience.	X	X	X				X	X	X		X	X		
2. Demonstrate communication process through idea generation, organization, drafting, revision, editing, and presentation.					X			X			X	X		
3. Participate in and contribute to collaborative groups.					X	X								
4. Construct logical, coherent, well-supported arguments.	X	X	X	X				X			X	X		
5. Employ syntax, usage, grammar, punctuation, terminology, and spelling appropriate to academic discipline and the professional world.			X	X	X						X	X		
6. Demonstrate listening / interpretive skills in order to participate in communications and human exchange.														
THINKING SKILLS														
1. Use appropriate method of inquiry to identify, formulate, and analyze a current or historical problem/question (may include recognizing significant components, collecting and synthesizing information, evaluating and selecting solution(s), applying and defending solution(s).	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2. Translate quantifiable problems into mathematical terms and solve these problems using mathematical or statistical operations.					X	X								
3. Interpret graphical representations (such as charts, photos, artifacts) in order to draw appropriate conclusions	X				X	X	X	X	X	X	X	X	X	X
4. Recognize strengths and weaknesses in arguments	X	X	X	X			X	X	X	X	X	X	X	X
5. Demonstrate observational and experimental skills to use the scientific method to test hypotheses and formulate logical deductions							X							
6. Understand the uses of theories and models as applied in the area of study	X	X			X		X	X	X	X	X	X	X	X
7. Develop creative thinking skills for application in problem		X			X	X		X	X				X	
8. Demonstrate a working knowledge of a technological application in an area of study.											X			
DIVERSITY AND GLOBAL PERSPECTIVE														
1. Recognize the diversity of humanity at the local, regional and global levels	X	X					X	X	X	X	X	X	X	X
2. Synthesize information about needs, concerns and contributions of different cultures within society	X	X					X	X	X	X	X	X	X	X
3. Identify the influence of cultural and ethnic backgrounds on individual and group attitudes and values.	X	X		X			X	X	X	X	X	X	X	X
4. Link cultural perspectives, practices, and interactions with the societal and physical environment from which they arose.	X	X					X	X	X	X	X	X	X	X
5. Explain the importance of cross-cultural influences on physical, cultural and spiritual heritage.	X	X					X	X	X	X	X	X	X	X
6. Relate and explain the connections between past and present events and/or issues.	X	X					X	X	X	X	X	X	X	X
AESTHETIC PERSPECTIVE														
1. Analyze and evaluate literary, visual, or performing arts using discipline-specific approaches and criteria.	X	X												
2. Reflect on personal responses to aesthetic experiences.														
3. Incorporate aesthetic reflection into discipline-specific activities.														
ETHICAL AND CIVIL VALUES														
1. Identify and assess community needs and the responsibility to balance individual and societal needs	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2. Display responsibility and integrity in one's choices and actions		X		X							X			
3. Integrate knowledge in order to establish an ethical position on an issue and defend it with logical arguments	X	X	X	X	X				X	X	X	X		
4. Develop an appreciation of education and lifelong learning	X						X	X	X	X	X	X		
5. Understand social values and analyze their implications for the individual, community, society, and world.	X	X	X	X			X	X	X	X	X	X		
6. Recognize the individual's responsibility to continue the exploration of the changing world and one's role in it.	X	X			X			X	X	X	X	X		

**COCONINO COMMUNITY COLLEGE
GENERAL EDUCATION STUDENT OUTCOMES**

	POS 101	POS 110	POS 120	POS 220	POS 233	PSY 101	PSY 227	PSY 236	PSY 240	PSY 250	SOC 101	SOC 132	SOC 142	SOC 210
COMMUNICATION SKILLS														
1. Present ideas developed from diverse sources and points of view with consideration of target audience.	X	X		X		X	X	X	X	X	X	X	X	X
2. Demonstrate communication process through idea generation, organization, drafting, revision, editing, and presentation.	X	X		X			X			X				X
3. Participate in and contribute to collaborative groups.														
4. Construct logical, coherent, well-supported arguments.	X	X		X			X	X		X	X	X	X	X
5. Employ syntax, usage, grammar, punctuation, terminology, and spelling appropriate to academic discipline and the professional world.	X	X		X			X			X				X
6. Demonstrate listening / interpretive skills in order to participate in communications and human exchange.														
THINKING SKILLS														
1. Use appropriate method of inquiry to identify, formulate, and analyze a current or historical problem/question (may include recognizing significant components, collecting and synthesizing information, evaluating and selecting solution(s), applying and defending solution(s).	X	X	X	X			X	X	X	X	X	X	X	X
2. Translate quantifiable problems into mathematical terms and solve these problems using mathematical or statistical operations.														
3. Interpret graphical representations (such as charts, photos, artifacts) in order to draw appropriate conclusions						X			X	X	X	X	X	X
4. Recognize strengths and weaknesses in arguments	X	X	X	X			X	X	X	X	X	X	X	X
5. Demonstrate observational and experimental skills to use the scientific method to test hypotheses and formulate logical deductions		X	X	X							X	X	X	
6. Understand the uses of theories and models as applied in the area of study	X	X	X	X		X	X		X	X	X	X	X	X
7. Develop creative thinking skills for application in problem	X	X	X								X	X	X	X
8. Demonstrate a working knowledge of a technological application in an area of study.												X		
DIVERSITY AND GLOBAL PERSPECTIVE														
1. Recognize the diversity of humanity at the local, regional and global levels	X		X	X		X	X	X	X	X	X	X	X	X
2. Synthesize information about needs, concerns and contributions of different cultures within society	X	X	X	X			X	X			X	X	X	X
3. Identify the influence of cultural and ethnic backgrounds on individual and group attitudes and values.	X	X	X	X		X	X	X	X	X	X	X	X	X
4. Link cultural perspectives, practices, and interactions with the societal and physical environment from which they arose.	X	X	X			X	X	X	X	X	X	X	X	X
5. Explain the importance of cross-cultural influences on physical, cultural and spiritual heritage.	X	X	X			X		X	X	X	X	X	X	X
6. Relate and explain the connections between past and present events and/or issues.	X	X	X	X		X	X	X	X	X	X	X	X	X
AESTHETIC PERSPECTIVE														
1. Analyze and evaluate literary, visual, or performing arts using discipline-specific approaches and criteria.								X		X			X	
2. Reflect on personal responses to aesthetic experiences.						X	X	X		X				
3. Incorporate aesthetic reflection into discipline-specific activities.						X	X	X		X				
ETHICAL AND CIVIL VALUES														
1. Identify and assess community needs and the responsibility to balance individual and societal needs	X	X	X	X		X		X	X	X	X	X	X	X
2. Display responsibility and integrity in one's choices and actions	X	X						X	X	X	X		X	
3. Integrate knowledge in order to establish an ethical position on an issue and defend it with logical arguments	X	X	X				X	X	X	X	X	X	X	X
4. Develop an appreciation of education and lifelong learning						X			X	X	X	X	X	X
5. Understand social values and analyze their implications for the individual, community, society, and world.	X	X	X	X		X	X	X	X	X	X	X	X	X
6. Recognize the individual's responsibility to continue the exploration of the changing world and one's role in it.	X	X	X			X	X	X	X	X	X	X	X	X

**COCONINO COMMUNITY COLLEGE
GENERAL EDUCATION STUDENT OUTCOMES**

	ANT 101	BIO 100	BIO 105	BIO 109	BIO 181	BIO 182	BIO 201	BIO 202	BIO 205	BIO 253	CHM 130	CHM 151	CHM 152	GEO 131
COMMUNICATION SKILLS														
1. Present ideas developed from diverse sources and points of view with consideration of target audience.		X	X			X	X	X		X	X	X	X	X
2. Demonstrate communication process through idea generation, organization, drafting, revision, editing, and presentation.			X	X	X		X	X			X	X	X	
3. Participate in and contribute to collaborative groups.			X	X	X		X	X	X	X	X	X	X	
4. Construct logical, coherent, well-supported arguments.	X			X			X	X		X	X	X	X	X
5. Employ syntax, usage, grammar, punctuation, terminology, and spelling appropriate to academic discipline and the professional world.		X	X	X			X	X	X		X	X	X	
6. Demonstrate listening / interpretive skills in order to participate in communications and human exchange.														
THINKING SKILLS														
1. Use appropriate method of inquiry to identify, formulate, and analyze a current or historical problem/question (may include recognizing significant components, collecting and synthesizing information, evaluating and selecting solution(s), applying and defending solution(s).	X	X	X	X	X	X				X	X	X	X	X
2. Translate quantifiable problems into mathematical terms and solve these problems using mathematical or statistical operations.			X	X	X	X					X	X	X	X
3. Interpret graphical representations (such as charts, photos, artifacts) in order to draw appropriate conclusions	X	X	X	X	X		X	X	X	X	X	X	X	X
4. Recognize strengths and weaknesses in arguments	X		X				X	X	X	X	X	X	X	
5. Demonstrate observational and experimental skills to use the scientific method to test hypotheses and formulate logical deductions	X	X	X	X	X	X	X	X	X	X	X	X	X	X
6. Understand the uses of theories and models as applied in the area of study	X		X	X	X	X	X	X		X	X	X	X	X
7. Develop creative thinking skills for application in problem	X		X	X		X	X	X	X	X	X	X	X	
8. Demonstrate a working knowledge of a technological application in an area of study.	X	X	X	X	X		X	X	X	X			X	X
DIVERSITY AND GLOBAL PERSPECTIVE														
1. Recognize the diversity of humanity at the local, regional and global levels			X	X		X					X			
2. Synthesize information about needs, concerns and contributions of different cultures within society				X		X					X			
3. Identify the influence of cultural and ethnic backgrounds on individual and group attitudes and values.				X										
4. Link cultural perspectives, practices, and interactions with the societal and physical environment from which they arose.	X		X	X										X
5. Explain the importance of cross-cultural influences on physical, cultural and spiritual heritage.			X	X										
6. Relate and explain the connections between past and present events and/or issues.	X		X	X		X					X			
AESTHETIC PERSPECTIVE														
1. Analyze and evaluate literary, visual, or performing arts using discipline-specific approaches and criteria.														
2. Reflect on personal responses to aesthetic experiences.														
3. Incorporate aesthetic reflection into discipline-specific activities.														
ETHICAL AND CIVIL VALUES														
1. Identify and assess community needs and the responsibility to balance individual and societal needs		X	X	X		X					X			
2. Display responsibility and integrity in one's choices and actions	X	X	X											
3. Integrate knowledge in order to establish an ethical position on an issue and defend it with logical arguments	X	X	X								X			
4. Develop an appreciation of education and lifelong learning	X		X	X							X			
5. Understand social values and analyze their implications for the individual, community, society, and world.		X	X								X			X
6. Recognize the individual's responsibility to continue the exploration of the changing world and one's role in it.	X		X	X							X			

**COCONINO COMMUNITY COLLEGE
GENERAL EDUCATION STUDENT OUTCOMES**

	GLG 101	GLG 102	PHY 107	PHY 111	PHY 112	PHY 161	PHY 180	PHY 253	PHY 262	ASL 101	ASL 102	ASL 201	ASL 202	CIS 120
COMMUNICATION SKILLS														
1. Present ideas developed from diverse sources and points of view with consideration of target audience.	X		X	X	X			X		X				
2. Demonstrate communication process through idea generation, organization, drafting, revision, editing, and presentation.	X		X	X	X	X			X	X				
3. Participate in and contribute to collaborative groups.			X	X	X	X		X	X	X				
4. Construct logical, coherent, well-supported arguments.	X	X	X	X	X	X			X					
5. Employ syntax, usage, grammar, punctuation, terminology, and spelling appropriate to academic discipline and the professional world.	X		X	X	X	X			X	X				
6. Demonstrate listening / interpretive skills in order to participate in communications and human exchange.										X				
THINKING SKILLS														
1. Use appropriate method of inquiry to identify, formulate, and analyze a current or historical problem/question (may include recognizing significant components, collecting and synthesizing information, evaluating and selecting solution(s), applying and defending solution(s)).	X	X	X	X	X	X	X	X	X					
2. Translate quantifiable problems into mathematical terms and solve these problems using mathematical or statistical operations.			X	X	X	X		X	X					X
3. Interpret graphical representations (such as charts, photos, artifacts) in order to draw appropriate conclusions	X	X	X	X	X	X	X	X	X					X
4. Recognize strengths and weaknesses in arguments			X	X	X	X	X	X	X					
5. Demonstrate observational and experimental skills to use the scientific method to test hypotheses and formulate logical deductions	X	X	X	X	X	X	X	X	X					
6. Understand the uses of theories and models as applied in the area of study	X	X	X	X	X	X	X	X	X					
7. Develop creative thinking skills for application in problem	X		X	X	X	X		X	X					
8. Demonstrate a working knowledge of a technological application in an area of study.	X	X	X	X	X	X		X	X					X
DIVERSITY AND GLOBAL PERSPECTIVE														
1. Recognize the diversity of humanity at the local, regional and global levels								X		X				
2. Synthesize information about needs, concerns and contributions of different cultures within society								X		X				
3. Identify the influence of cultural and ethnic backgrounds on individual and group attitudes and values.								X		X				
4. Link cultural perspectives, practices, and interactions with the societal and physical environment from which they arose.			X					X		X				
5. Explain the importance of cross-cultural influences on physical, cultural and spiritual heritage.								X		X				
6. Relate and explain the connections between past and present events and/or issues.	X	X	X		X			X		X				X
AESTHETIC PERSPECTIVE														
1. Analyze and evaluate literary, visual, or performing arts using discipline-specific approaches and criteria.														
2. Reflect on personal responses to aesthetic experiences.														
3. Incorporate aesthetic reflection into discipline-specific activities.								X						
ETHICAL AND CIVIL VALUES														
1. Identify and assess community needs and the responsibility to balance individual and societal needs			X		X									
2. Display responsibility and integrity in one's choices and actions														X
3. Integrate knowledge in order to establish an ethical position on an issue and defend it with logical arguments														X
4. Develop an appreciation of education and lifelong learning			X	X	X	X		X	X					
5. Understand social values and analyze their implications for the individual, community, society, and world.			X							X				
6. Recognize the individual's responsibility to continue the exploration of the changing world and one's role in it.			X	X	X	X			X					X

**COCONINO COMMUNITY COLLEGE
GENERAL EDUCATION STUDENT OUTCOMES**

	FRE 101	FRE 102	GER 101	GER 102	MAT 160	NAV 101	NAV 102	SPA 101	SPA 102	SPA 201	SPA 202	SPC 100
COMMUNICATION SKILLS												
1. Present ideas developed from diverse sources and points of view with consideration of target audience.								X	X			
2. Demonstrate communication process through idea generation, organization, drafting, revision, editing, and presentation.								X				
3. Participate in and contribute to collaborative groups.								X	X			
4. Construct logical, coherent, well-supported arguments.					X				X			
5. Employ syntax, usage, grammar, punctuation, terminology, and spelling appropriate to academic discipline and the professional world.					X				X			
6. Demonstrate listening / interpretive skills in order to participate in communications and human exchange.								X	X			
THINKING SKILLS												
1. Use appropriate method of inquiry to identify, formulate, and analyze a current or historical problem/question (may include recognizing significant components, collecting and synthesizing information, evaluating and selecting solution(s), applying and defending solution(s)).					X				X			
2. Translate quantifiable problems into mathematical terms and solve these problems using mathematical or statistical operations.					X							
3. Interpret graphical representations (such as charts, photos, artifacts) in order to draw appropriate conclusions					X							
4. Recognize strengths and weaknesses in arguments					X							
5. Demonstrate observational and experimental skills to use the scientific method to test hypotheses and formulate logical deductions					X							
6. Understand the uses of theories and models as applied in the area of study					X				X			
7. Develop creative thinking skills for application in problem					X			X	X			
8. Demonstrate a working knowledge of a technological application in an area of study.					X							
DIVERSITY AND GLOBAL PERSPECTIVE												
1. Recognize the diversity of humanity at the local, regional and global levels								X	X			
2. Synthesize information about needs, concerns and contributions of different cultures within society								X	X			
3. Identify the influence of cultural and ethnic backgrounds on individual and group attitudes and values.								X	X			
4. Link cultural perspectives, practices, and interactions with the societal and physical environment from which they arose.								X	X			
5. Explain the importance of cross-cultural influences on physical, cultural and spiritual heritage.								X	X			
6. Relate and explain the connections between past and present events and/or issues.								X	X			
AESTHETIC PERSPECTIVE												
1. Analyze and evaluate literary, visual, or performing arts using discipline-specific approaches and criteria.												
2. Reflect on personal responses to aesthetic experiences.												
3. Incorporate aesthetic reflection into discipline-specific activities.												
ETHICAL AND CIVIL VALUES												
1. Identify and assess community needs and the responsibility to balance individual and societal needs												
2. Display responsibility and integrity in one's choices and actions												
3. Integrate knowledge in order to establish an ethical position on an issue and defend it with logical arguments												
4. Develop an appreciation of education and lifelong learning					X							
5. Understand social values and analyze their implications for the individual, community, society, and world.												
6. Recognize the individual's responsibility to continue the exploration of the changing world and one's role in it.												

General Education Student Outcomes
J. Assessment Tools for Consideration

Assessment Tools for Consideration

Coconino Community College

Assessment Method / Instrument	Type	Population	What does it measure?	Procedure / How scored?	Statistical Results Available	How easy is it to use?	Cost	Personnel Impact
College Assessment of Academic Proficiency (CAAP) by ACT	exit exam for 2nd semester sophomores	AA or AAS degree completers	Reading Writing Math Science Critical Thinking	central for all (except English can be locally scored)	statistical comparison of local results with national sample	must be proctored, each test takes about 1.5 hrs.	\$330.00 per year plus module fee up to \$16.55	high
Evaluation Survey Services (ESS) by ACT	entrance/exit survey	2-yr completers	attitudes and opinions	central	statistical comparison of local results with national sample	4-pages, 30 minutes	\$13.65 per 25 (plus basic reporting pkg \$160 and scoring fees)	medium
(ASSET) by ACT	entrance, used as placement	all students	basic skills, plus advanced skills in math	local	local and national comparisons	computerized not timed		
Academic Profile by ETS	exit exam (long 2.5 hrs or short 40 min form) / criterion referenced	completers of gen ed or degrees	college level reading, critical thinking, writing, mathematics in the context of material from humanities, social and natural sciences	central or local	local and national comparisons	high	short form \$11.25 ea long form \$16.75 ea plus software & misc costs of about \$100	high
COMPASS (by ACT)	entrance or placement	all students also ESL	reading, writing, mathematics	computerized, scored locally	n/a	n/a	\$525 per license	low

Impact scale:
 1= high (FT facilitator with clerical help to meet deadlines)
 3= medium (PT facilitator with clerical help to meet deadlines)
 5= low (PT assistance)

Assessment Tools for Consideration

Coconino Community College

Assessment Method / Instrument	Type	Population	What does it measure?	Procedure / How scored?	Statistical Results Available	How easy is it to use?	Cost	Personnel Impact
WORK KEYS	entrance / exit	students in occupational degrees	applied math, applied technology, reading, listening, locating information	central or local	local and national comparisons	already in place in Continuing Ed.	site license plus per student cost < \$5.00	medium
College Outcome Measures Program (COMP by ACT)	exit exam for 2nd semester sophomores	gen ed complete	Communicating, problem solving, clarifying values, Functioning within Social institutions, Using Science and Technology, Using the Arts	central or local	local and national comparisons	composite exam 4.5 hrs, objective test 2.5 hrs activity inventory 1.5 writing 90 min speaking 30 min	Composite exam \$7,800 plus \$9,600 for faculty or ACT rating of open responses	high
College Basic Academic Subjects Examination (BASE)	exit exam after core curriculum	gen ed complete	English, mathematics, science, social studies	central	local and national comparisons	4 subject, short form with essay component	\$19.15 per student for scoring and delivery plus institutional summary report approx. \$110.00	high
Descriptive Test of Mathematical Skills (DTMS)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD

Impact scale:
 1= high (FT facilitator with clerical help to meet deadlines)
 3= medium (PT facilitator with clerical help to meet deadlines)
 5= low (PT assistance)

Assessment Tools / Conclusions

Method / instrument	Numbers (all population or sample)	Personnel impact	Validity	Reliability	Easy to use	Cost	Useability of results for improvement	Reporting usefulness	Faculty Input
CAAP	all Gen Ed completers	1	4	5	3	1	5	5	does not meet with our Gen Ed Student Outcomes criteria
ESS	sample	1	3	3	3	1	3	5	TBD
ASSET	all new students	2	4	4	5	3	4	3	TBD
ACADEMIC PROFILE	sample	3	4	4	3	3	4	4	TBD
COMPASS	all new students	2	4	4	3	3	4	4	TBD
WORK KEYS	students in specific programs such as business	4	4	4	4	4	4	4	already in use at SBDC, could work for some programs
COMP	all Gen Ed completers	2	4	4	3	2	4	3	TBD
COLLEGE BASE	sample population of Gen Ed completers	2	4	4	3	4	4	4	does not meet with our Gen Ed Student Outcomes criteria
Descriptive Test of Mathematical Skills (DTMS)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	Scale: 1=not good at all 2=not good 3=could be good or bad 4=good 5=very good	
Capstone Courses	TBD	TBD	TBD	TBD	TBD	TBD	TBD		



General Education Student Outcomes

K. Assessment of General Education Report 1999-2000

A Faculty Report on:
ASSESSMENT OF GENERAL EDUCATION AT COCONINO COMMUNITY COLLEGE
1999- 2000
Written by Barbara Eickmeyer

Contents:

- I Purpose and Overview of the Project
- II What we did
- III What we learned
- IV The Future

Purpose and Overview of the Project

In the fall semester of 1999, the Principal Committee for Institutional Effectiveness (PIE) approved the continuation of the General Education Assessment Pilot Project. This project began in 1996, but was put on hold due to personnel constraints. The Vice President for Educational Services authorized a full-time faculty member to lead the 1999-2000 project with the financial support of PIE.

The purpose of the project was twofold: first, to measure student achievement of course outcomes throughout the semester and second, to explore a cost-effective and meaningful method for reporting and documenting student academic achievement at Coconino Community College (CCC). Participants were asked to provide input regarding an "outcomes assessment form" and its usefulness for reporting student achievement.

As the fall study was under way, it became evident that the pilot project should continue and expand into a focused effort to write outcomes for General Education. The spring semester was designed with more specific goals and resulted in a concerted effort towards completion of the pilot project, as well as writing program outcomes for General Education at the college.

The project was met with considerable support from administration, full-time and adjunct faculty. During the two semesters, a total of seven full-time and fourteen associate faculty participated in the project. The three full-time faculty who coordinated the project were allocated a total of thirteen released hours. Adjunct faculty were paid by PIE for their participation, and other full-time faculty who participated received the benefits of satisfaction and experience. Although an invitation was extended through the Dean of the Page Campus, no faculty from Page participated.

What we did – Fall 1999

The participants agreed to meet on a monthly basis to discuss assessment methods and the challenges they were facing in this project. They were encouraged to suggest modifications to the outcomes assessment form and to explore effective methods for assessing their students.

Participants from different disciplines experienced a wide variety of challenges in determining outcomes assessment activities and measures. Assessment of outcomes became more "automatic" as a result of participation in this study, and teaching methodology was directly improved. Faculty found it difficult and time consuming to isolate and measure certain outcomes in their courses. One of the most important results of the fall semester study was that all who participated agreed that it should continue for at least another semester.

Although the main purpose for the study was to explore methods for measuring course outcomes and focus on process and mechanisms, it is interesting to note the results of that first semester. During the fall 1999 semester, assessment of outcomes was reported in the following Gen Ed courses: BIO 100, CIS 120, ECN 204, ECN 205, HUM 241, MAT 151, PHI 101, SOC 101, and SPA 101. Recognizing the limited validity of these initial results, we were pleased to discover that, of the total students assessed in the fall courses, 81% met the minimum measurement of outcomes (see Attachment A).

What we did – Spring 2000

In the spring 2000 semester, we continued the project in a similar manner, however we took a different approach to the process by teaming faculty together with similar courses. For example, math instructors teamed together to measure similar course outcomes at varying levels. The purpose was to explore how course level assessment methodology might be used to measure program level outcomes. Instructors reported that this "teaming" idea worked well for researching assessment methods. Some instructors used the same instruments for measuring similar outcomes (e.g. Accounting and Macroeconomics), while others worked together to create instruments that measured the same outcomes at varying levels in their courses (e.g. reading for Spanish 102 and 201).

During the spring 2000 semester, assessment of outcomes was reported in the following Gen Ed courses: ACC 101, ANT 110, ECN 205, ENG 102, GEO 131(2 sections), HUM 241/242, MAT 121/151, PSY 101 (2 sections), and SPA 102/201 (see Attachment B). Again, we recognize the limited validity of these results, however it was interesting to note that, of the total students assessed in the spring courses, 82% met the minimum measurement of outcomes.

Another direct result of this study was the development of faculty training workshops on assessment. This study made us aware that there was a strong need for faculty to learn how to assess student outcomes effectively, so we set up two training workshops for February, 2000. Twenty-one adjunct faculty participated in these paid training opportunities.

What we learned

Perhaps the most important result of this study was that we became acutely aware of the important need to write outcomes for the General Education program at the college as soon as

possible. While Joan Zumwalt had suggested this in the *Assessment of General Education Curriculum* (1997) publication, it was something that the faculty had not prioritized as the next step in assessment of student outcomes. During the process of this study, it became evident that in order for faculty to report student performance on course level outcomes, they would need more global common outcomes that related directly to all general education courses at the college. It wasn't enough, nor was it feasible, to begin reporting our student academic achievement solely on the results from measurement of course level outcomes. We needed to ask ourselves, "What should the Gen Ed completer 'look like' at the end of our program?" A proposal was accepted by the Vice President for Educational Services (Academic Affairs) for a three-semester assessment project, from spring 2000 to spring 2001, to write the outcomes for General Education with the faculty.

With a review of the literature, we collected a variety of sample outcome statements from colleges around the country. Then, a group of 15 faculty and 3 administrators met off-campus in a six hour work session to determine characteristics that would best reflect the college's general education program outcomes. They worked carefully to link the outcomes to the college mission, purpose statement, and general education values and criteria. This productive meeting yielded a preliminary foundation of program competencies that a student could anticipate upon completion of our general education program. The group then brought the results back to the entire faculty for further input and suggestions. At the final College Instructional Team (faculty) meeting in April, 2000, the faculty selected representatives to continue this important process during the summer.

This study was effective because of strong administrative support for the proposal and faculty involvement. We also learned that it would take time and effort for the college to have a viable, useful, and effective assessment plan. An assessment program must include a centralized management, faculty participation, financial support and administrative assistance. This project demonstrated that each component is necessary for success.

A final meeting was convened with the Vice President for Educational Services (Academic Affairs) and the faculty coordinators for the assessment project in May, 2000. His recommendations for priority in the 2000-2001 academic year included: finalizing the General Education Outcomes, determining appropriate measurement tools, and writing outcomes for programs other than General Education.

The Future

We acknowledge that training and development is a vital ingredient for faculty to have the necessary knowledge for this process. Training and professional development opportunities will be made available to faculty using PIE and Title III grant monies. A collaborative effort between the college president, the director for the Training and Development Center and the assessment

project coordinator has resulted in the college's first annual *Teaching and Learning Conference*. This will be a two-day conference prior to the start of the semester, dedicated to providing professional development opportunities to faculty and staff. There will be several work sessions available on assessment techniques and writing outcomes, as well as other training for improving teaching and learning.

The General Education Assessment Pilot Project will continue through the fall 2000 semester. The study will focus on determining effective measurement tools for course outcomes. Faculty who participated during fall/spring 1999-2001 will be asked to be a part of this final semester project. Once again, there will be three full-time faculty whose semester load will include assessment activities.

By the end of the fall semester, faculty will complete the General Education Outcomes for Coconino Community College. We anticipate a "domino effect" of program outcomes for degrees and certificates will immediately follow in the process. It is reasonable to anticipate that outcomes for all degrees, certificates and General Education will be in place by the end of the 2001 spring semester.

We also anticipate that the spring 2001 semester will be dedicated to exploring assessment instruments for the General Education Outcomes and training faculty in effective assessment of student academic achievement. The most important step in the process will be the implementation of the instruments for use in assessing student achievement of academic outcomes. We are committed to adopting the instrument(s) that will best measure the student outcomes identified in our degrees, certificates and General Education program. These should be ready for initial piloting or implementation in the fall 2001 semester.

At the culmination of the three-semester assessment project, the coordinator will meet with the Vice President for Educational Services (Academic Affairs) to report on the status of the project and make recommendations to keep the momentum of assessment of student academic achievement at the forefront of the institution's priorities. The journey is far from over, but the goal is within reach.

**Participants on the
Assessment of General Education**

Pilot Project 1999-2000

Full-time Faculty

Barbara Cress
Barbara Eickmeyer
Paul Holbrook
Marty Lara
Michelle Metcalf
Vennie White

Adjunct Faculty

Gerald Bacon
Michael Casey
Frank Chavez
Dan Crawley
Letty David
Stephen Franklin
Holly Franquet
Kate Harkins
Dan Lara
Tricia Ornela
Judy Plescia
NormaLee Roudabush
Judy Stiers

Administrative Staff

Dan Fishco
Greg Kerr
Stephen Hill

Writing Outcomes for Gen Ed

Full-time Faculty

Monica Baker
Bryan Bates
Candice Corrigan
Barbara Cress
Barbara Eickmeyer
Ruth Foster
Kate Kozak
Paul Holbrook
Marty Lara
Alan Petersen
Jim Rhodes
Vennie White
Kathy Wigal

Adjunct Faculty

Natalie Davenport

Administrative Staff

Dan Fishco
Stephen Hill
Nathaniel Nez

Attachment A
Fall 1999 – General Education Assessment Project Results

Course / Outcome	Number of students currently enrolled	Number of students assessed	Period of assessment by semester week	Students who met the requirements	Percentage of students meeting the minimum measurement
BIO 100					
Appraise the relationship between humans and their environment	22	22	7	19	86%
Participate in laboratory work, utilizing scientific methods and equipment	23	23	2, 9	17	74%
Solve problems in and explain processes involved in genetics	20	20	12	17	85%
CIS 120					
Describe computer hardware, software and information processing and application to business	20	20	3, 4, 7	14	72%
Describe current and future uses of computers	21	21	3	14	67%
Effectively operate a microcomputer system and various peripheral devices	21	20	2	20	100%
Correctly use computer-related vocabulary	19	19	5	14	74%
Describe the limitations of computer systems and their applications in various environments	19	19	6	18	95%
Discuss the impact of telecommunications and networks to the way computers are used	20	20	5	16	80%
Identify issues related to security, ethics, and privacy when using a computer	19	19	8	16	84%
Produce computer-generated projects through the use of word-processing, spreadsheet, database, presentation, e-mail, and web browsing software	19	19	9	19	100%
ECN 204					
Define economic vocabulary	15	15	4, 8, 15	13	87%
Explain and summarize how federal reserve system works	15	15	15	15	100%
Complete increasingly difficult writing assignments	15	15	4, 8, 15	15	100%
ECN 205 fast track					
Define economic vocabulary	22	22	3	20	91%
Examine and explain the structure of the American economic system	22	22	3	11	50%
Analyze and explain the demand cycle and consumer choice and interpret graphical representation	22	22	3	18	82%
Summarize market influences and theories	22	22	3	18	82%

Attachment A
Fall 1999 – General Education Assessment Project Results

Course / Outcome	Number of students currently enrolled	Number of students assessed	Period of assessment by semester week	Students who met the requirements	Percentage of students meeting the minimum measurement
HUM 241					
Develop skills in analyzing and synthesizing information		13	1, 7, 15	0	0%
Encourage awareness of faulty reasoning		9	1, 7, 15	9	100%
Foster flexible and creative thinking		8	1, 7, 15	8	100%
MAT 151					
Graph equations and functions using various methods including technology	24	19	16	15	79%
Solve linear, quadratic, rational, absolute value, polynomial, and radical equations	24	19	16	15	79%
Simplify expressions involving complex numbers	24	19	16	15	79%
PHI 101					
recognition of major ancient Greek philosophers and their ideas	41	41	5	41	100%
a basic understanding of principles of argument, an ability to summarize philosophical argument, and formulate their own argument	41	31	12	25	81%
SOC 101					
Concepts, Theories, and research methods in Sociology	30	30	1	5	17%
Definitions and classifications of individuals and groups	30	19	3	15	79%
Concepts and theories of stratification	23	19	7	14	74%
Social institutions	23	19	10	18	95%
SPA 101 fast track					
interpret written Spanish that contains learned vocabulary	15	14	3	13	93%
	12	12	5	12	100%
derive meaning from written material where context and/or extralinguistic background knowledge are supportive	15	14	3	11	79%
	12	12	5	12	100%
initiate and respond verbally to simple statements, ask and answer questions, and participate in simple conversations	13	12	4	12	100%
	12	12	7	11	92%
demonstrate comprehension of words and phrases from simple spoken questions, statements, high frequency commands, and courtesy formulae	12	12	7	11	92%
Totals	707	689		556	81%
Notes: ENG 102 data non quantitative					

Spring 2000 – General Education Assessment Project Results

Course / Outcome	Assessment Method	Number of students assessed	Period of assessment by semester week	Students who met the requirements	Percentage of students meeting the minimum measurement
ACC 101 (NOT IN GEN ED)					
Prepare and explain the Balance Sheet, Income Statement, and Statement of Retained Earnings	Observation	19	4	17	89%
	Problems	19	4	17	89%
	Instructor test	19	4	16	84%
Explain the Accounting Equation and the interaction of its elements	Observation	19	7	18	95%
	Problems	19	7	15	79%
	Instructor test	19	7	12	63%
Calculate and apply the necessary tools and techniques for ratio analysis related to statement analysis	Observation	19	10	17	89%
	Problems	19	10	14	74%
	Instructor test	19	10	12	63%
ANT 110					
What is Archaeology	Instructor test	16	3	11	69%
	Instructor test	17	7	17	100%
Develop techniques for analysis of cultural remains	Instructor test	14		12	86%
	Instructor test	7		7	100%
	Instructor test	6		6	100%
	Instructor test	15		15	100%
Understand cultural theory as it applies to interpreting prehistoric cultural systems.	Instructor test	13		10	77%
ECN 205					
Define economic vocabulary	Instructor test	25		24	96%
Summarize market influences and theories	Instructor test	18		16	89%
	Instructor test	22		22	100%
ENG 102					
Synthesize ideas from readings with their own ideas and research	Essay	13	5	12	92%
	Essay	13	13	12	92%
Follow the writing process	Essay	13	3	13	100%
	Essay	12	9	10	83%
Research and document sources; integrate source material skillfully	Essay	13	15	9	69%
GEO 131 Sec 1 & 2					
Identify, analyze and evaluate the theories and interpretations concerning physical geography and the forces at work therein	Instructor test	45	5	33	73%
	Instructor test	47	10	39	83%
	Instructor test	47	16	34	72%

Attachment B
Spring 2000 – General Education Assessment Project Results

Course / Outcome	Assessment Method	Number of students assessed	Period of assessment by semester week	Students who met the requirements	Percentage of students meeting the minimum measurement
GEO 131 Sec 1 & 2 (continued)					
Successfully complete laboratory exercise concerning physical geography through the application of the theories and concepts of physical geography and the scientific method	Problems	47	5	42	89%
	Matrix	47	12	44	94%
	Simulation	47	14	45	96%
Apply the theories and concepts of physical geography to local and global issues	Group activity	47	3	45	96%
	Essay	47	13	42	89%
	Debate	47	15	42	89%
HUM 241					
Develop skills in analyzing and synthesizing information	Essay	9	8-10	8	89%
		10	15	9	90%
Interpretation, and evaluation of evidence	Essay	9	8-10	8	89%
		10	15	8	80%
Successful completion of the writing component	Essay	14	8-10	14	100%
		14	15	14	100%
HUM 242					
Emphasize the gathering, interpretation, and evaluation of evidence		11	3	9	82%
		17	8	13	76%
		17	14	14	82%
Develop skills in analyzing and synthesizing information		11	3	6	55%
		17	8	12	71%
		17	14	10	59%
Successful completion of the writing component		17	14	12	71%
MAT 121 / 151					
Demonstrate graphing linear equations	Problems	31	11	18	58%
Solve systems of equations graphically & quantitatively & check solutions	Problems	31	11	16	52%
	Problems	35	16	26	74%
Simplify / solve rational, and radical expression & equations	Problems	35	16	21	60%
Develop an understanding of logarithmic operations	Problems	35	16	23	66%

Attachment B
Spring 2000 – General Education Assessment Project Results

Course / Outcome	Assessment Method	Number of students assessed	Period of assessment by semester week	Students who met the requirements	Percentage of students meeting the minimum measurement
PSY 101 SEC 3 & 4					
Concepts, theories, and research methods	Instructor test	51	4	29	57%
	oral presentations	19	8	18	95%
	Essay	50	13	47	94%
Emotions, motivation, memory and learning	Quiz	51	11	43	84%
	oral presentations	17	11	16	94%
	Instructor test	51	12	39	76%
Abnormal personalities and therapies	Quiz	50	15	39	78%
	oral presentations	15	15	14	93%
	Instructor test	49	16	30	61%
SPA 102					
Interpret written Spanish from texts that are linguistically non-complex	Pre/Post test	20	1	12	60%
	Instructor test	19	5	15	79%
	Instructor test	16	16	16	100%
Initiate and respond verbally to uncomplicated, basic communicative tasks and social situations	Pre/Post test	20	1	14	70%
	Oral examination	20	3	19	95%
	Pre/Post test	16	15	16	100%
Demonstrate comprehension of sentence-length statements or questions in a limited number of content areas	Pre/Post test	20	1	19	95%
	Instructor test	17	10	14	82%
	Oral examination	16	15	14	88%
SPA 201					
Interpret simple connected text	Verbal response	7	8-10	7	100%
	Verbal response	7	8-10	6	86%
	Verbal response	7	16	7	100%
	Verbal response	7	16	7	100%
Demonstrate increased comprehension of conversational discourse on a number of topics	Instructor test	7	16	7	100%
Initiate, sustain and close a general conversation utilizing learned grammatical strategies	Instructor test	7	9	6	86%
	Instructor test	7	16	7	100%
	Instructor test	7	8-10	6	86%
Totals		1722		1408	82%

***A Reminder from the
ERIC Clearinghouse for
Community Colleges. . . .***

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