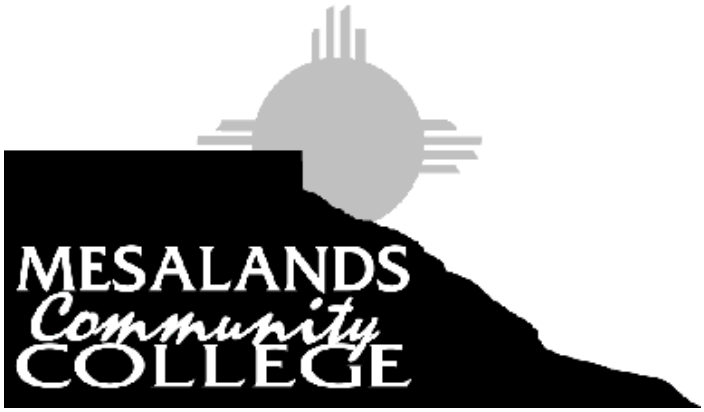
Student Learning Assessment Committee



STUDENT LEARNING ASSESSMENT PROGRAM REPORTS 2012-2013

August 2013

Student Learning Assessment Committee

STUDENT LEARNING ASSESSMENT PROGRAM REPORTS 2012-2013

August 2013

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INTRODUCTION

This document contains the thirteen individual *Student Learning Assessment Program Reports* which are referred to in the *Student Learning Assessment Committee Annual Report 2012-2013,* and should be considered an appendix to that report. These two reports taken together are a detailed summation of the College's activities as they relate to the assessment of student learning from June 2012 to May 2013.

This *Student Learning Assessment Program Reports 2012-2013* document presents the individual program efforts detailing the plan-do-study-adjust cycle of learning assessment at the program level. The amalgamation of the *Student Learning Assessment Program Reports* collectively documents the College's attempt to more succinctly and comprehensively identify and measure student learning outcomes attainment and to use this information to improve learning at the program-level. An analysis of the program-level assessment results can be found in the *Student Learning Assessment Committee's Annual Report 2012-2013.*

COMMITTEE COMPOSITION

During the 2012-2013 academic year, the Student Learning Assessment Committee consisted of the following members:

Tom Morris	Chair, Health and Wellness Facility Coordinator/Faculty
Donna Garcia	Director of Academic Affairs
Sabrina Gaskill	English/Communications Faculty
Natalie Gillard	Vice-President of Academic Affairs
Janet Griffiths	Pre-Collegiate Faculty
Dr. Axel Hungerbuehler	Museum Curator/Natural Sciences Faculty
Dr. Philip Kaatz	Mathematics/Physical Science Faculty
Kim Enriquez	Committee Secretary, Administrative Assistant/ Adjunct Faculty

COMMITTEE OBJECTIVES

The Student Learning Assessment Committee has four explicit objectives that are stated in the *Student Learning Assessment Model*. The objectives of the Student Learning Assessment Committee are to:

Objective 1 Enhance the knowledge of the faculty at Mesalands Community College about the assessment of student learning by conducting meetings and workshops, distributing materials, and by providing resources (e.g., Assessment Reserve Collection in the Library). All faculty will receive a copy of the *Student Learning Assessment Guide for Faculty* by the first week of classes. The Student Learning Assessment Committee will have at least one joint meeting with the Faculty Council every semester.

Objective 2 Spearhead the development of assessment at the College by producing, if needed, by August of each year, a revised *Student Learning Assessment Guide for Faculty*.

Objective 3 Facilitate and implement the development of feedback loops and information dissemination about assessment at the College by:

A. producing an *Annual Report* by October of each year
B. providing all faculty with copies of the *Student Learning Assessment Guide for Faculty* each academic year
C. having at least one joint meeting with the Faculty Council every fall and spring semester

D. providing all adjunct and new faculty with assessment-related training and an assessment mentor
E. presenting information on assessment at every new student orientation and during each section of ACS 100 Student College Success class, including delivery of the brochure *Student Guide to Learning Assessment*
F. conducting a semi-annual Assessment Day to be held every fall and spring semesters. The semi-annual Assessment Day is a joint meeting between the Committee and all full-time faculty used to discuss, update, and refine the assessment practices at the College

Objective 4 Oversee the implementation of the *Student Learning Assessment Model* and *Student Learning Assessment Guide for Faculty* so that faculty and staff will provide all the documents and reports specified in the *Model* and *Guide* within one week of the stated deadline.

PURPOSE OF PROGRAM LEVEL ASSESSMENT

The purpose of program level assessment is to document how well students are accomplishing the program specific objectives and general education competencies. The program objectives and general education competencies are Mesalands' contract with all students and reflect those competencies that students will possess and demonstrate upon graduation. These program objectives and general education competencies reflect those knowledge, skills and professional dispositions valued by workplace employers and other interested parties and represent the most deeply held values of the College, thereby driving much of what occurs at Mesalands.

Degree programs are required to assess both general education competency and program objective outcomes. Certificate programs are required to measure program objective outcomes only.

GENERAL EDUCATION COMPETENCIES
CRITERIA REFERENCES

Mesalands Community College has identified six different general education competencies that all students will possess upon graduating with a degree. These general education competencies are assessed wherever and however they are taught at the College using rubrics. Simply put, a rubric is a scoring tool that identifies specific expectations for a task or assignment. Rubrics divide the task into its component parts and provide a detailed description of what constitutes an acceptable or unacceptable level of performance for each of those parts (Stevens and Levi, 2005). The General Education Competency rubrics utilized by the College are located in Appendix A of the *Student Learning Assessment Guide for Faculty 2013-2014*. The criteria references are referred to through-out the thirteen individual *Student Learning Assessment Program Reports* and are identified below.

General Education Competency: Writing

Provides a clear, concise thesis statement

1.1.1 Statement is clear and concise
1.1.2 Statement is well reasoned
1.1.3 Statement leads to plentiful additional discussion

Provides supporting paragraphs which relate to the thesis

1.2.1 Supporting paragraphs are well reasoned
1.2.2 Supporting paragraphs clearly relate to the thesis
1.2.3 Supporting paragraphs are cohesive and logically developed

Correctly incorporates outside sources

1.3.1 Provides relevant outside sources
1.3.2 Cites outside sources correctly

Uses appropriate grammar, syntax, punctuation, and spelling

1.4.1 Writing is error free in all categories (sentence structure, punctuation, spelling and grammar)
1.4.2 Sentence structure and vocabulary are well developed and varied

General Education Competency: Oral Presentation

Provides a well organized speech with appropriate introduction and conclusion

2.1.1 Very well organized
2.1.2 Attention grabbing introduction
2.1.3 Convincing conclusion

Provides main points that are well-documented, compelling, supported with facts, developed clearly and concisely, and focused on the topic

2.2.1 All main points are well-documented and supported by numerous, compelling facts
2.2.1 Clearly and concisely presented
2.2.3 Remains focused on topic throughout entire presentation

Uses appropriate gestures, movements and eye contact

2.3.1 Excellent gestures and eye contact
2.3.2 Conversational presentation
2.3.3 Utilize note cards appropriately

Speaks clearly and understandably using standard, edited English with correct mechanics (pronunciation, sentence structure and grammar) relative to audience

2.4.1 Excellent mechanics throughout
2.4.2 Very appropriate presentation relative to audience
2.4.3 Tone is respectful and civil

Provides appropriate handouts and/or visual aids

2.5.1 Provides entire audience with useful, presentation quality handouts
2.5.2 Handouts/audiovisual aids contain appropriate amount of information
2.5.3 Grammatically correct material

General Education Competency: Information Technology

Demonstrates basic computer and operating skills

3.1.1 Access and change computer setting under Control Panel
3.1.2 Navigate file directory structures and paths
3.1.3 Perform file management tasks (select, copy, rename and/or delete files)
3.1.4 Create, save, open, and print a document from some application
3.1.5 Navigate and locate information from Windows Help

Performs core tasks of Microsoft Office applications

3.2.1 Format a document and how to use page layout, e.g., headers, footer, page breaks, bullets, etc.
3.2.2 Create tables, charts, graphs and/or formulas
3.2.3 Import and sort data and/or images in to a document and format them appropriately
3.2.4 Demonstrate techniques for copying, cutting and pasting text and/or images with a document
3.2.5 Review a document using tools: spelling, grammar, word count, thesaurus

Uses a search engine to access, navigate and evaluate information on the internet

3.3.1 Retrieve information from an internet search engine
3.3.2 Evaluate and rank sources of information for validity
3.3.3 Select, copy and paste information retrieved from the internet College database

Uses email with appropriate etiquette

3.4.1 Open, create and/or send email with attachments
3.4.2 Demonstrates appropriate email etiquette

General Education Competency: Mathematical Reasoning

Constructs and/or analyzes numerical or graphical representations of data

4.1.1 A correct solution using an appropriate strategy is given
4.1.2 Descriptions of the results are complete and coherent

Simplifies, evaluates, and/or solves various equations and/or formulas

4.2.1 Demonstrates complete understanding of the problems with correct solutions
4.2.2 Answers are interpreted correctly, with appropriate labels
4.2.3 Correctly identifies units and performs conversions

Formulates and communicates mathematical explanations

4.3.1 Gives a complete response with clear explanations
4.3.2 Communicates effectively to the intended audience; demonstrates complete understanding of the mathematical ideas and processes

General Education Competency: Scientific Reasoning

Problem is recognized and investigative question is formulated

5.1.1 Problem is recognized and explained in detail
5.1.2 Investigative question is clearly formulated

Reasonable, testable hypothesis is presented

5.2.1 Hypothesis is reasonable, clearly stated, and fully explains question

Prediction is formulated as logical consequence of the hypothesis

5.3.1 Prediction is logical and fully explained

Data/observations to test hypothesis are gathered or compiled

5.4.1 High quality date and /or high quantity of suitable data gathered and presented professionally (list or table)

Formulation of a conclusion

5.5.1 Conclusion is logical and well formulated
5.5.2 Conclusion explains in detail the degree of correctness of the hypothesis and identifies further avenues of testing, or formulates new hypothesis

General Education Competency: Critical Thinking

Identify and gather

6.1.1 Asks insightful questions
6.1.2 Critiques content
6.1.3 Examines inconsistencies

Analyze and evaluate

6.2.1 Analyzes and evaluates thoroughly
6.2.2 Uses reasonable judgment
6.2.3 Critically discriminates between good and bad information

Synthesize and formulate conclusion

6.3.1 Discusses issues thoroughly and argues succinctly
6.3.2 Assimilates information
6.3.3 Justifies conclusion

STUDENT LEARNING ASSESSMENT PROGRAM REPORTS

STUDENT LEARNING ASSESSMENT PROGRAM REPORT
ASSOCIATE OF APPLIED SCIENCE – GENERAL STUDIES
2012-2013

This experiential learning program allows students to apply work experience and training toward an Associate of Applied Science degree. It is a way for students to earn course credits at Mesalands Community College for having completed on-the-job training and courses where certificates are given. Obvious programs that may qualify for experiential learning credits are in certificate programs such as Diesel Technology, Farrier Science and other similar areas of study. Experiential learning allows the student to build upon their certificate to obtain an Applied Science degree.

Students who have had applicable training, previous vocational, or military experience may petition for college credit by submitting an Experiential Learning Portfolio. Up to 18 college credits may be awarded toward the Associated of Applied Science Degree in General Studies. Credit is awarded only if appropriate experiential learning has occurred and is documented in the Experiential Learning Portfolio Handbook.

General Education Competencies

Upon completion of the Associate of Applied Science General Studies Degree Program:

1) Students will read, write, listen and use verbal skills to organize and communicate information and ideas in personal and group settings (Communication).

2) Students will demonstrate mathematical principles and scientific reasoning by applying appropriate methods to the inquiry process (Quantitative and Scientific Reasoning).

3) Students will identify, evaluate and analyze evidence to guide decision making and communicate his/her beliefs clearly and accurately (Critical Thinking).

Overview

The Associate of Applied Science General Studies Degree assessment plan is a data driven process, is in its fourth year, and is addressed via the plan→do→study→adjust (PDSA) cycle that follows students from their first term through graduation.

General Education Competencies Assessment Plan

General education competencies are measured with multiple tools. The following **Curriculum Map** outlines those measurement tools and courses in which the program objectives are presented and/or measured:

General Education Competencies	Measurement Tools	Courses In Which Program Objectives are Presented and/or Measured
Communication 1. Present ideas in writing. 2. Present ideas orally according to standard usage. 3. Demonstrate application of information technology.	• GEA College Rubric • CAAP • ENG 299	• ACS 100 • COM 102 • CIS 101 • ENG 102 • ENG 104 • ENG 299 • Lab Science Elective • Social Sciences/ Humanities Elective
Quantitative and Scientific Reasoning 4. Demonstrate mathematical principles. 5. Demonstrate scientific reasoning. 6. Apply scientific methods to the inquiry process.	• GEA College Rubric • CAAP • ENG 299	• MATH 101 • Lab Science Elective
Critical Thinking 7. Read and analyze complex ideas. 8. Locate, evaluate and apply research information. 9. Evaluate and present well-reasoned arguments.	• GEA College Rubric • CAAP • ENG 299	• ACS 100 • Lab Science Elective • Social Sciences/ Humanities Elective

General Education Competencies Results

This section presents the general education competencies results. The Mesalands Community College created rubrics were used as the measurement tool each time the specific competency was evaluated during the program.

Measurement Tool: GEA College Rubric
General Education Objective(s): 1, 2, 3
Goal Results: 100% “excellent (4)”, “proficient (3)” or “adequate (2)’

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 1	3	2	67%(mean=2.50)
• 2	3	3	100%(mean=2.93)
• 3	3	3	100%(mean=4.25)*
2009-2010			
• 1	2	2	100%(mean=3.125)
• 2	2	2	100%(mean=3.375)
• 3	2	1	50%(mean=3.5)*

1 Present ideas in writing.
2 Present ideas orally according to standard usage.
3 Demonstrate application of information technology.
*Based on a 5 point scale.

Measurement Tool: GEA College Rubric
General Education Objective(s): 4, 5, 6
Goal Results: 100% “excellent (5)”,“proficient (4)” or “acceptable (3)’

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 4	3	0	0%(mean=1.25)
• 5	3	2	67%(mean=2.92)
• 6	3	2	67%(mean=3.08)
2009-2010			
• 4	2	0	0%(mean=2.125)
• 5	2	2	100%(mean=4.25)
• 6	2	2	100%(mean=4.0)

4 Demonstrate mathematical principles.
5 Demonstrate scientific reasoning.
6 Apply scientific methods to the inquiry process.

Measurement Tool: GEA College Rubric
General Education Objective(s): Critical Thinking-Science Eval.
Goal Results: 100% “excellent (4)”, “proficient (3)” or “acceptable (2)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 7	3	3	100%(mean=3.33)
• 8	3	3	100%(mean=2.67)
• 9	3	3	100%(mean=2.67)

7. Identify and gather information.
8. Analyze and evaluate information.
9. Synthesize and formulate conclusions.

Measurement Tool: GEA College Rubric
General Education Objective(s): Critical Thinking-English Eval.
Goal Results: 100% “excellent (4)”, “proficient (3)” or “acceptable (2)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 7	3	3	100%(mean=3.00)
• 8	3	3	100%(mean=3.00)
• 9	3	3	100%(mean=3.00)

7. Identify and gather information.
8. Analyze and evaluate information.
9. Synthesize and formulate conclusions.

Measurement Tool: GEA College Rubric
General Education Objective(s): 7, 8, 9
Goal Results: 100% “excellent (5)”, “proficient (4)” or “acceptable (3)’

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010			
• 7	2	2	100%(mean=3.87)
• 8	2	2	100%(mean=4.0)
• 9	2	2	100%(mean=3.25)

7. Read and analyze complex ideas.
8. Locate, evaluate and apply research information.
9. Evaluate and present well-reasoned arguments

Measurement Tool: ACT Collegiate Assessment of Academic Proficiency (CAAP)

General Education Objective(s): 1, 4-9

Goal Results: 50%

Legend: n (Mean Score)

Year	Writing	Math	Reading	Critical Thinking	Science
2013-2013	4(59.8%)	4(52.5%)	4(57.8%)	4(60.5%)	4(55.5%)
2011-2012	7(40.1%)	7(26.9%)	7(42.6%)	7(36.9%)	7(42.7%)
2010-2011	4(24.5%)	N/A	4(21.5%)	3(13%)	3(13%)
2009-2010	2(89%)	N/A	2(57%)	2(60%)	2(51%)

General Education Objective(s): 1-6

Goal Results: 90% “Excellent (4)”/ “Proficient(3)”/ “Adequate(2)”

General Education Competency: Writing

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 1.1.1	1	2	1	
• 1.1.2	1	2	1	
• 1.1.3	1	2	1	
• 1.2.1	1	2	1	
• 1.2.2	1	2	1	
• 1.2.3	1	2	1	
• 1.3.1	1	1	2	
• 1.3.2	1	1	2	
• 1.4.1	1	1	2	
• 1.4.2	1	2	1	
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2011-2012				
• 1.1.1			2	
• 1.1.2			2	
• 1.1.3			2	
• 1.2.1			2	
• 1.2.2			2	
• 1.2.3			2	
• 1.3.1		1	1	
• 1.3.2		1	1	
• 1.4.1			2	
• 1.4.2		1	1	

General Education Competency: Oral Presentation

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 2.1.1	1	2	1	
• 2.1.2		3	1	
• 2.1.3		3	1	
• 2.2.1	1	2	1	
• 2.2.2	1	2	1	
• 2.2.3	1	2	1	
• 2.3.1		1	3	
• 2.3.2		2	2	
• 2.3.3		3	1	
• 2.4.1		3	1	
• 2.4.2	1	2	1	
• 2.4.3	1	3		
• 2.5.1	1	1	1	1
• 2.5.2	1	1	1	1
• 2.5.3				
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2011-2012				
• 2.1.1			1	1
• 2.1.2		1		1
• 2.1.3			1	1
• 2.2.1			1	1
• 2.2.2			1	1
• 2.2.3			1	1
• 2.3.1			1	1
• 2.3.2			1	1
• 2.3.3			1	1
• 2.4.1			1	1
• 2.4.2		1		1
• 2.4.3		1		1
• 2.5.1			1	1
• 2.5.2		1		1
• 2.5.3		1		1

General Education Competency: Information Technology

Year	Pass (4)	Fail (1)
2012-2013		
• 3.1.1	2	2
• 3.1.2	2	2
• 3.1.3	2	2
• 3.1.4	4	
• 3.1.5	2	2
• 3.2.1	4	
• 3.2.2	2	2
• 3.2.3	3	1
• 3.2.4	3	1
• 3.2.5	3	1
• 3.3.1	1	3
• 3.3.2	1	3
• 3.3.3	1	3
• 3.4.1	2	2
• 3.4.2	2	2
Year	**Pass (4)**	**Fail (1)**
2011-2012		
• 3.1.1		
• 3.1.2		
• 3.1.3		
• 3.1.4	2	
• 3.1.5		
• 3.2.1		2
• 3.2.2		2
• 3.2.3	2	
• 3.2.4	1	1
• 3.2.5		2
• 3.3.1		2
• 3.3.2		
• 3.3.3		2
• 3.4.1		2
• 3.4.2		2

General Education Competency: Mathematical Reasoning

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 4.1.1		1	3	
• 4.1.2		1	2	1
• 4.2.1		1	3	
• 4.2.2		1	3	
• 4.2.3				
• 4.3.1		1	3	
• 4.3.2		1	3	
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2011-2012				
• 4.1.1	1			1
• 4.1.2	1			1
• 4.2.1		1		1
• 4.2.2		1		1
• 4.2.3				
• 4.3.1		1		1
• 4.3.2			1	1

General Education Competency: Scientific Reasoning

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 5.1.1		1	2	1
• 5.1.2		2	1	1
• 5.2.1		1	1	2
• 5.3.1			2	2
• 5.4.1		1	1	2
• 5.5.1		2	1	1
• 5.5.2		2	1	1
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2011-2012				
• 5.1.1				2
• 5.1.2				2
• 5.2.1				2
• 5.3.1				2
• 5.4.1				2
• 5.5.1				2
• 5.5.2				2

PDSA CYCLE 2009-2010
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

Lack of data (other than end of program data) to support whether or not general education competencies are being accomplished.

Goal

More and a greater variety of data needs to be collected other than during their last semester prior to graduation.

Action Plan

Problem Area and Goal will be discussed with Student Learning Assessment Committee (SLAC) who is charged with designing more meaningful and comprehensive collection of assessment data.

Results

No results reported. Action plan was not implemented.

PDSA CYCLE 2010-2011
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

Lack of data (other than end of program data) to support whether or not general education competencies are being accomplished.

Goal

Collect data based on *General Education Competency Reporting Schedule*.

Action Plan

1) Lead faculty member will identify students enrolled in AAS General Studies Program.
2) Lead faculty member will identify courses that those students are enrolled in.
3) Lead faculty will contact instructors of those courses in order to collect data based on *General Education Competency Reporting Schedule.*

Results

A small amount of data was collected and reported on as it relates to the assessment of learning of students enrolled in the AAS General Studies degree program. That data is presented in this report.

PDSA CYCLE 2011-2012
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

A continual lack of data (other than end of program data) to support whether or not general education competencies are being accomplished.

Goal

Identify a more effective process of collecting both formative and summative assessment data on students enrolled in the AAS General Studies degree program.

Action Plan

1) Discuss possible solutions to the process of collecting both formative and summative assessment data on students enrolled in the AAS General Studies degree program with the Student Learning Assessment Committee.

Results

Summative data was successfully collected for students graduating from the AAS General Studies degree program (see General Education Competencies Results section of this Report). There continues to be difficulty collecting formative data for students enrolled in this program of study.

PDSA CYCLE 2012-2013
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

There is a total lack of formative data being collected for students enrolled in this program of study.

Goal

Identify processes for collecting formative assessment data on students enrolled in the AAS General Studies degree program.

Action Plan

1) Discuss possible processes for collecting formative assessment data on students enrolled in the AAS General Studies degree program with the following stakeholders:
   - Student Learning Assessment Committee
   - Director of Enrollment Services (on how to best identify students presently enrolled in this program of study using Jenzabar (other than their last semester))
   - Vice-President of Academic Affairs (regarding how to identify and effectively staff a position responsible for overseeing the plan-do-study-adjust cycle of assessment for this program of study).

Results

To be reported during the 2013-14 cycle.

STUDENT LEARNING ASSESSMENT PROGRAM REPORT
ANIMAL SCIENCE
2012-2013

The Animal Science program provides opportunity and instruction towards employment as well as continuing education opportunities at the university level. Mesalands Community College, through its Animal Science Program, starts students on the pathway towards a variety of careers which are available in the field of animal science. From feed or agricultural medical sales to livestock nutritionist, buyer, handler and manager, the field of animal science offers a variety of prospective career paths.

The Animal Science program at Mesalands Community College provides educational options in either equine science or beef science.

1) Equine Science (horse science) involves multiple careers in the equine industry. Whether your interest is to work in a large stable, on a breeding farm or to have your own horses, having a background in equine science provides the foundation of sound equine management practices.

   The Equine Science option consists of three parts: Animal Science department core classes, Equine Science classes, and the general education required classes. The combination of these courses provides a comprehensive educational experience for many entry level positions in the equine industry.

2) Beef Science involves careers ranging from livestock exchange personnel to feed sales to farm/ranch managers. All segments of the beef industry from breeding and birth to slaughter and food sales create the need for knowledgeable people to be responsible for maintaining industry standards.

   The Beef Science option in Animal Science includes three parts of the curriculum: the Animal Science department core classes, the Beef Science option classes and the general education course requirements. The Beef Science option classes emphasize nutrition and beef production.

Program Objectives

Upon completion of the Animal Science Associate Degree Program:

1. The student will recognize, demonstrate, and explain the function and role of livestock within the agricultural and food industry.

2. The student will recognize and evaluate the use, structure, and function of livestock for various uses, as well as present their findings in a speech, such as a set of reasons.

3. The student will apply sound financial and management practices as well as principles utilized in the agricultural industry.

4. The Equine Science student will demonstrate a broad-based understanding of biological and management principles and develop the ability to incorporate the use of these principles into the horse industry along with aptitude to critically evaluate industry issues.

5. The Beef Science student will demonstrate a broad-based understanding of biological and management principles and develop the ability to incorporate the use of these principles into the beef cattle industry along with aptitude to critically evaluate industry issues.

General Education Competencies

Upon completion of the Animal Science Associate Degree Program and in addition to the above mentioned program objectives:

1. Students will read, write, listen and use verbal skills to organize and communicate information and ideas in personal and group settings (Communication).

2. Students will demonstrate mathematical principles and scientific reasoning by applying appropriate methods to the inquiry process (Mathematical and Scientific Reasoning).

3. Students will identify, evaluate and analyze evidence to guide decision making and communicate his/her beliefs clearly and accurately (Critical Thinking).

Overview

The Animal Science assessment plan is in its fourth year and is addressed via a plan→do→study→adjust cycle that begins every fall term and follows one Animal Science cohort from first term through graduation.

Program Objectives Assessment Plan

All program objectives are measured with multiple tools.
The following **Curriculum Map** outlines those measurement tools and courses in which the program objectives are presented and/or measured:

Program Objective	Measurement Tools	Courses In Which Program Objectives Are Presented and/or Measured
1. The student will recognize, demonstrate, and explain the function and role of livestock within the agricultural and food industry.	• Tests • CAT • Pre/Post-Test • Oral Tests • Class projects • Essays • Class Presentations	• ANSC 100 • RGSC 100 • ANSC 150 • ANSC 170 • ANSC 245 • ANSC 230 • ANSC 151 • ANSC 224 • ANSC 275 • ANSC 255
2. The student will recognize and evaluate the use, structure, and function of livestock for various uses, as well as present their findings in a speech, such as a set of reasons.	• Tests • CAT • Pre/Post-Test • Oral Tests • Class projects • Essays • Class Presentations	• ANSC 100 • RGSC 100 • ANSC 141 • ANSC 150 • ANSC 170 • ANSC 245 • ANSC 230 • ANSC 151 • ANSC 224 • ANSC 275 • ANSC 255
3. The student will apply sound financial and management practices as well as principles utilized in the agricultural industry	• Tests • CAT • Pre/Post-Test • Oral Tests • Class projects • Essays • Class Presentations	• ACS 100 • ANSC 100 • ABM 162 • ANSC 170 • ABM 264 • ANSC 245 • ANSC 230 • ABM 265 • ANSC 224 • ANSC 275 • BUS 221 • ANSC 255

4. The Equine Science student will demonstrate a broad-based understanding of biological and management principles and develop the ability to incorporate the use of these principles into the horse industry along with aptitude to critically evaluate industry issues.	• Tests • CAT • Pre/Post-Test • Oral Tests • Class projects • Essays • Lab's • Class Presentations	• ANSC 100 • RGSC 100 • ABM 162 • ANSC 150 • ANSC 170 • ABM 264 • ANSC 245 • ANSC 230 • ANSC 151 • ANSC 224 • ANSC 275
5. The Beef Science student will demonstrate a broad-based understanding of biological and management principles and develop the ability to incorporate the use of these principles into the beef cattle industry along with aptitude to critically evaluate industry issues.	• Tests • CAT • Pre/Post-Test • Oral Tests • Class projects • Essays • Lab's • Class Presentations	• ANSC 100 • RGSC 100 • ABM 162 • ANSC 150 • ANSC 170 • ABM 264 • ANSC 245 • ANSC 230 • ABM 265 • ANSC 275 • ANSC 255

Program Objective Results

This section presents the results of those measurement tools identified in the second column above.

Measurement Tool: Written Exam
Program Objective(s): 1, 2 ,3 ,4 ,5
Goal Results: 75% pass rate

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010 ANSC 100	11	10	91%
2009-2010 ANSC 270	3	3	100%
2010-2011 ANSC 100	10	9	90%(Mean=82.5%)
2010-2011 RGSC 100	7	7	100%(Mean=86.3%)
2010-2011 ANSC 150	2	2	100%(Mean=90.0%)
2010-2011 ANSC 170	2	2	100%(Mean=92.0%)
2010-2011 ANSC 224	12	10	83%(Mean=84.6%)
2010-2011 ANSC 230	6	4	66.6%(Mean=76.5%)
2010-2011 ANSC 245	5	5	100%(Mean=96.2%)
2010-2011 ANSC 255	5	5	100%(Mean=83.4%)
2010-2011 ANSC 270	3	3	100%(Mean=88.0%)
2010-2011 ANSC 275	11	11	100%(Mean=84.2%)
2010-2011 ANSC 285	3	3	100%(Mean=90.0%)
2011-2012 ANSC 100	5	5	100%(Mean=90.2%)
2011-2012 RGSC 100	8	8	100%(Mean=81.8%)
2011-2012 ANSC 150	18	16	88%(Mean=77.1%)
2011-2012 ANSC 170	8	8	100%(Mean=89.9%)
2011-2012 ANSC 190	2	2	100%(Mean=91.5%)
2011-2012ANSC 224	4	4	100%(Mean=93.0%)
2011-2012ANSC 230	10	8	80%(Mean=83.5%)
2011-2012ANSC 245	8	8	100%(Mean=81.9%)
2011-2012ANSC 255	5	5	100%(Mean=85.8%)
2011-2012ANSC 270	5	5	100%(Mean=84.2%)
2011-2012ANSC 275	6	6	100%(Mean=84.3%)
2011-2012ANSC 285	1	1	100%(Mean=91.0%)
2012-2013 ANSC 100	6	6	100%(Mean=90.0%)
2012-2013 RGSC 100	4	4	100%(Mean=81.0%)
2012-2013 ANSC 150	5	5	100%(Mean=78.1%)
2012-2013 ANSC 170	5	5	100%(Mean=90.9%)
2012-2013 ANSC 190	0	0	N/A
2012-2013ANSC 224	3	3	100%(Mean=93.0%)
2012-2013ANSC 230	4	4	100%(Mean=83.5%)
2012-2013ANSC 245	6	6	100%(Mean=82.9%)
2012-2013ANSC 255	5	5	100%(Mean=85.8%)
2012-2013ANSC 270	4	4	100%(Mean=83.5%)
2012-2013ANSC 275	6	6	100%(Mean=84.3%)
2012-2013ANSC 285	0	0	N/A

Measurement Tool: Project Paper
Program Objective(s): 1, 2, 3, 4, 5
Goal Results: 75% pass rate;

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010	8	8	100%
2010-2011 ANSC 100	10	8	80%(Mean=78.5%)
2010-2011 RGSC 100	7	7	100%(Mean=81.0%)
2010-2011 ANSC 150	2	2	100%(Mean=88.0%)
2010-2011 ANSC 170	2	2	100%(Mean=95.0%)
2010-2011 ANSC 224	12	9	75%(Mean=80.6%)
2010-2011 ANSC 230	6	5	83.3%Mean=82.0%)
2010-2011 ANSC 245	5	5	100%(Mean=96.2%)
2010-2011 ANSC 255	5	5	100%(Mean=83.4%)
2010-2011 ANSC 270	3	3	100%(Mean=90.0%)
2010-2011 ANSC 275	11	11	100%(Mean=80.0%)
2010-2011 ANSC 285	3	3	100%(Mean=91.0%)
2011-2012ANSC 100	5	5	100%(Mean=86.0%)
2011-2012RGSC 100	8	7	87.5%(Mean=82.1%)
2011-2012ANSC 150	18	16	88.9%(Mean=82.3%)
2011-2012ANSC 170	8	8	100%(Mean=92.0%)
2011-2012 ANSC 190	2	2	100%(Mean=91.5%)
2011-2012ANSC 224	4	4	100%(Mean=91.0%)
2011-2012ANSC 230	10	8	80%Mean=82.0%)
2011-2012ANSC 245	8	8	100%(Mean=84.5%)
2011-2012ANSC 255	5	5	100%(Mean=86.0%)
2011-2012ANSC 270	5	5	100%(Mean=85.0%)
2011-2012ANSC 275	6	6	100%(Mean=85.0%)
2011-2012ANSC 285	1	1	100%(Mean=91.0%)
2012-2013ANSC 100	6	6	100%(Mean=90.0%)
2012-2013RGSC 100	4	4	100%(Mean=81.0%)
2012-2013ANSC 150	5	5	100%(Mean=78.1%)
2012-2013 ANSC 190	0	0	N/A
2012-2013ANSC 230	4	4	100%(Mean=83.5%)
2012-2013ANSC 245	6	6	100%(Mean=82.9%)
2012-2013ANSC 275	6	6	100%(Mean=84.3%)
2012-2013ANSC 285	0	0	N/A

Measurement Tool: Livestock Evaluation Class Exercise (judge numerous classes of livestock and defend their decisions within the process)- ANSC 170, 270
Program Objective(s): 2
Goal Results: 100% pass rate;

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010	8	8	100%
2011-2012	8	8	100%(Mean=89.9%)
2012-2013	5	5	100%(Mean=90.9%)

Measurement Tool: Meat Animal/Carcass Evaluation Class Exercise - ANSC 270
Program Objective(s): 2
Goal Results: 75% pass rate

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010	3	3	100%
2010-2011	3	3	100%(Mean=84.7%)
2011-2012	5	5	100%(Mean=85.0%)
2012-2013	4	4	100%(Mean=83.5%)

Measurement Tool: Equine Management Project- ANSC 224
Program Objective(s): 4
Goal Results: 75% pass rate;

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011	12	10	83.3%(Mean=80.9%)
2011-2012	4	4	100%(Mean=91.0%)
2012-2013	3	3	100%(Mean=93.0%)

Measurement Tool: Beef Production Project- ANSC 255
Program Objective(s): 5
Goal Results: 75% pass rate;

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011	5	5	100%(Mean=79.0%)
2011-2012	5	5	100%(Mean=86.0%)
2012-2013	5	5	100%(Mean=85.8%)

General Education Competencies Assessment Plan

General education competencies are measured with multiple tools. The following **Curriculum Map** outlines those measurement tools and courses in which the program objectives are presented and/or measured:

General Education Competencies	Measurement Tools	Courses In Which Program Objectives Are Presented and/or Measured
Communication 1. Present ideas in writing. 2. Present ideas orally according to standard usage. 3. Demonstrate application of information technology.	• GEA College Rubric(used only for the first two years of reporting) • ENG 299 Capstone • CAAP • CAT • Class Presentation • Class Writing Assignment	• ACS 100 • ANSC 100 • RGSC 100 • ANSC 141 • ANSC 150 • ANSC 170 • ANSC 245 • ANSC 230 • ANSC 151 • ANSC 224 • ANSC 275 • ANSC 255 • COM 102 • CIS 101 • ENG 102 • Lab Sciences
Quantitative and Scientific Reasoning 4. Demonstrate mathematical principles. 5. Demonstrate scientific reasoning. 6. Apply scientific methods to the inquiry process.	• GEA College Rubric(used only for the first two years of reporting) • ENG 299 Capstone • CAAP • Class Exercises • Class Examinations	• ANSC 100 • RGSC 100 • ANSC 141 • ANSC 150 • ANSC 170 • ANSC 245 • ANSC 230 • ANSC 151 • ANSC 224 • ANSC 275 • ANSC 255 • Lab Sciences

Critical Thinking 7. Read and analyze complex ideas. 8. Locate, evaluate and apply research information. 9. Evaluate and present well-reasoned arguments.	• GEA College Rubric(used only for the first two years of reporting) • ENG 299 Capstone • CAAP • Class Exercises • Class Examinations	• ACS 100 • ANSC 100 • RGSC 100 • ANSC 141 • ANSC 150 • ANSC 170 • ANSC 245 • ANSC 230 • ANSC 151 • ANSC 224 • ANSC 275 • ANSC 255 • Lab Sciences • Social Sciences/ Humanities Elective

General Education Competencies Results

This section presents the general education competencies results. The Mesalands Community College created rubrics were used as the measurement tool each time the specific competency was evaluated during the program.

Measurement Tool: GEA College Rubric
General Education Objective(s): 1, 2, 3
Goal Results: 100% "excellent (4)", "proficient (3)" or "adequate (2)"

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010			
• 1	1	1	100%(mean=3.25)
• 2	1	1	100%(mean=2.6)
• 3	1	1	100%(mean=4.0)
2010-2011			
• 1	6	6	100%(mean=2.50)
• 2	6	6	100%(mean=2.83)
• 3	6	6	100%(mean=4.50)*

1 Present ideas in writing.
2 Present ideas orally according to standard usage.
3 Demonstrate application of information technology.
*Based on 5 point scale.

Measurement Tool: GEA College Rubric
General Education Objective(s): 4, 5, 6
Goal Results: 100% “excellent (5)”, “proficient (4)” or “acceptable (3)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010			
• 4	3	0	0% (mean = 1.75)
• 5	3	3	100%(mean=3.92)
• 6	3	1	33%(mean=2.75)
2010-2011			
• 4	6	0	0%(mean=1.21)
• 5	6	5	83%(mean=3.54)
• 6	6	5	83%(mean=3.39)

4 Demonstrate mathematical principles.
5 Demonstrate scientific reasoning.
6 Apply scientific methods to the inquiry process.

Measurement Tool: GEA College Rubric
General Education Objective(s): 7, 8, 9
Goal Results: 100% “excellent (5)”, “proficient (4)” or “acceptable (3)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010			
• 7	3	3	100%(mean=4.0)
• 8	3	3	100%(mean=3.67)
• 9	3	3	100%(mean=3.5)

7. Read and analyze complex ideas.
8. Locate, evaluate and apply research information.
9. Evaluate and present well-reasoned arguments

Measurement Tool: GEA College Rubric
General Education Objective(s): Critical Thinking-Science Eval.
Goal Results: 100% “excellent (4)”, “proficient (3)” or “acceptable (2)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 7	6	6	100%(mean=2.67)
• 8	6	6	100%(mean=2.83)
• 9	6	6	100%(mean=2.67)
2011-2012			
• 7	12	12	100%(mean=2.75)
• 8	12	11	92%(mean=2.67)
• 9	12	11	92%(mean=2.67)

7. Identify and gather information.
8. Analyze and evaluate information.
9. Synthesize and formulate conclusions.

Measurement Tool: GEA College Rubric
General Education Objective(s): Critical Thinking-English Eval.
Goal Results: 100% “excellent (4)”, “proficient (3)” or “acceptable (2)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 7	6	6	100%(mean=3.00)
• 8	6	6	100%(mean=3.00)
• 9	6	6	100%(mean=3.00)
2011-2012			
• 7	12	12	100%(mean=2.75)
• 8	12	11	92%(mean=2.67)
• 9	12	11	92%(mean=2.67)

7. Identify and gather information.
8. Analyze and evaluate information.
9. Synthesize and formulate conclusions.

Measurement Tool: Writing Across the Curriculum College Rubric

General Education Objective(s): 1

Goal Results: 90% "Excellent"/"Proficient"/ "Adequate"

Legend: ENG 102(No ENG 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2010-2011				
• 1.1.1	2(1)	2(2)	(14)	(2)
• 1.1.2	2	2(3)	(14)	(2)
• 1.1.3	2	2(6)	(10)	(3)
• 1.2.1	2(1)	1(5)	1(10)	(3)
• 1.2.2	2	2(6)	(12)	(1)
• 1.2.3	3	1(6)	(11)	(2)
• 1.3.1	4(2)	(10)	(7)	
• 1.3.2	3(4)	1(12)	(3)	
• 1.4.1		4(11)	(7)	(1)
• 1.4.2		4(11)	(7)	(1)
2011-2012				
• 1.1.1	4(1)	4(4)	(5)	(2)
• 1.1.2	4	4(6)	(4)	(2)
• 1.1.3	4	4(6)	(4)	(2)
• 1.2.1	4(1)	4(4)	(5)	(2)
• 1.2.2	4(1)	4(4)	(5)	(2)
• 1.2.3	4	4(6)	(5)	(1)
• 1.3.1	4	4(5)	(6)	(1)
• 1.3.2	4(1)	4(4)	(5)	(2)
• 1.4.1	4	4(6)	(4)	(2)
• 1.4.2	4	4(6)	(4)	(2)
2012-2013				
• 1.1.1	3(1)	3(3)	2(6)	(1)
• 1.1.2	3	3(6)	2(4)	(1)
• 1.1.3	3	4(6)	1(4)	(1)
• 1.2.1	3(1)	3(4)	2(4)	(2)
• 1.2.2	3(1)	3(4)	1(5)	1(1)
• 1.2.3	3	4(5)	1(5)	(1)
• 1.3.1	3	4(5)	1(6)	(1)
• 1.3.2	3(1)	3(4)	2(5)	(1)
• 1.4.1	3	3(6)	2(4)	(1)
• 1.4.2	3	4(6)	1(4)	(1)

Measurement Tool: Critical Thinking College Rubric
General Education Objective(s): 6
Goal Results: 90% “Excellent(4)”/“Proficient(3)”/ “Adequate(2)”
Legend: Laboratory Science(No Lab Sci)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2010-2011				
• 6.1.1	2(2)	(4)	(13)	(2)
• 6.1.2	2(2)	(4)	(13)	(2)
• 6.1.3	1(1)	(5)	(15)	(1)
• 6.2.1	1(1)	1(5)	(14)	(1)
• 6.2.2	2(3)	(7)	(11)	
• 6.2.3	2(3)	(5)	(12)	(1)
• 6.3.1	2(1)	(4)	(13)	(3)
• 6.3.2	2(2)	(6)	(12)	(1)
• 6.3.3	2(2)	(5)	(13)	(1)
2011-2012				
• 6.1.1	4(2)	2(3)	(7)	(2)
• 6.1.2	4(2)	2(3)	(7)	(2)
• 6.1.3	4(1)	2(4)	(7)	(2)
• 6.2.1	4(1)	2(5)	(6)	(2)
• 6.2.2	4(2)	2(3)	(7)	(2)
• 6.2.3	3(2)	2(5)	(6)	(2)
• 6.3.1	4(1)	2(5)	(6)	(2)
• 6.3.2	4(2)	2(3)	(7)	(2)
• 6.3.3	4(2)	2(3)	(7)	(2)
2012-2013				
• 6.1.1	3(0)	4(5)	1(5)	(1)
• 6.1.2	2(1)	5(3)	1(7)	(1)
• 6.1.3	2(1)	5(4)	1(4)	(2)
• 6.2.1	2(1)	5(4)	(5)	(1)
• 6.2.2	2(2)	5(3)	1(5)	(1)
• 6.2.3	1(1)	4(5)	3(4)	(1)
• 6.3.1	2(1)	5(5)	1(4)	(1)
• 6.3.2	2(2)	5(3)	1(5)	(1)
• 6.3.3	2(2)	5(3)	1(5)	(1)

Measurement Tool: ACT Collegiate Assessment of Academic Proficiency (CAAP)

General Education Objective(s): 1, 4-9
Goal Results: 50%
Legend: n (Mean Score)

Year	Writing	Math	Reading	Critical Thinking	Science
2012-2013	3(59.3%)	3(53.3%)	3(57.3%)	3(58.3%)	3(57.7%)
2011-2012	2(21%)	2(45.5%)	2(41%)	2(43%)	2(50%)
2010-2011	7(39.6%)	1(54%)	7(30.7%)	7(32.4%)	7(43%)
2009-2010	2(23%)	1(85%)	3(33%)	2(31%)	2(36%)

General Education Objective(s): 1-6
Goal Results: 90% "Excellent(4)"/"Proficient(3)"/ "Adequate(2)"

General Education Competency: Writing

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 1.1.1		2	1	
• 1.1.2		2	1	
• 1.1.3		2	1	
• 1.2.1		2	1	
• 1.2.2		2	1	
• 1.2.3		2	1	
• 1.3.1		1		2
• 1.3.2		1		1
• 1.4.1		2	1	
• 1.4.2		2	1	
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2011-2012				
• 1.1.1			1	
• 1.1.2			1	
• 1.1.3			1	
• 1.2.1			1	
• 1.2.2			1	
• 1.2.3			1	
• 1.3.1				1
• 1.3.2				1
• 1.4.1			1	
• 1.4.2		1		

General Education Competency: Oral Presentation

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 2.1.1		1		1
• 2.1.2		1		1
• 2.1.3		1		1
• 2.2.1		1		1
• 2.2.2		1		1
• 2.2.3		1		1
• 2.3.1		1		1
• 2.3.2			1	1
• 2.3.3			1	1
• 2.4.1			1	1
• 2.4.2			1	1
• 2.4.3			1	1
• 2.5.1				2
• 2.5.2			1	1
• 2.5.3				
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2011-2012				
• 2.1.1				1
• 2.1.2				1
• 2.1.3				1
• 2.2.1				1
• 2.2.2				1
• 2.2.3				1
• 2.3.1				1
• 2.3.2				1
• 2.3.3				1
• 2.4.1				1
• 2.4.2				1
• 2.4.3				1
• 2.5.1				1
• 2.5.2				1
• 2.5.3				

General Education Competency: Information Technology

Year	Pass (4)	Fail (1)
2012-2013		
• 3.1.1		3
• 3.1.2		3
• 3.1.3	1	2
• 3.1.4	1	2
• 3.1.5	2	3
• 3.2.1	2	1
• 3.2.2	2	1
• 3.2.3	1	2
• 3.2.4	2	1
• 3.2.5		3
• 3.3.1		3
• 3.3.2		3
• 3.3.3		3
• 3.4.1	2	1
• 3.4.2	2	1
Year	**Pass (4)**	**Fail (1)**
2011-2012		
• 3.1.1		
• 3.1.2		
• 3.1.3		
• 3.1.4	1	
• 3.1.5		
• 3.2.1	1	
• 3.2.2		1
• 3.2.3	1	
• 3.2.4	1	1
• 3.2.5		1
• 3.3.1	1	
• 3.3.2		
• 3.3.3		1
• 3.4.1		1
• 3.4.2		1

General Education Competency: Mathematical Reasoning

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 4.1.1		1	1	1
• 4.1.2		1		2
• 4.2.1		1	2	
• 4.2.2			3	
• 4.2.3				
• 4.3.1		1	2	
• 4.3.2		1	2	
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2011-2012				
• 4.1.1	1			
• 4.1.2	1			
• 4.2.1	1			
• 4.2.2	1			
• 4.2.3				
• 4.3.1		1		
• 4.3.2		1		

General Education Competency: Scientific Reasoning

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 5.1.1		1		2
• 5.1.2		1		2
• 5.2.1		1		2
• 5.3.1			1	2
• 5.4.1	1	1		1
• 5.5.1		1		2
• 5.5.2		1		2
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2011-2012				
• 5.1.1				1
• 5.1.2				1
• 5.2.1			1	
• 5.3.1			1	
• 5.4.1				1
• 5.5.1				1
• 5.5.2				1

PDSA CYCLE 2009-2010
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

Need more precise assessment tools.

Goal

Implement a capstone project via a Capstone Class. Students enrolling in their last semester enrolled in the Animal Science program will be required to complete a Capstone class.

Action Plan

Introduce the appropriate paperwork to add the Capstone class to both options within Animal Science.

Results

After completing the necessary reporting, it seems even more critical that a capstone class is needed for assessment of graduating students. My data set grew this year, which is a positive, but closing the loop, and implementing changes is a slow process. I feel that we as a college are moving in the correct direction though. In regards, to assessment and improving our teaching baseline, I need to personally increase my standards when it comes to grading. I feel that I have improved, but I must be more stringent in the future to prepare my students for the University atmosphere.

PDSA CYCLE 2010-2011
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

Need more precise and number of assessment tools.

Goal

Continue to implement a capstone project via a Capstone Class. Students enrolling in their last semester enrolled in the Animal Science program will be required to complete a Capstone class.

Action Plan

Introduce the appropriate paperwork to add the Capstone class to both options within Animal Science by October 2011.

Results

No Capstone class at this time. I understand that through the STEM grant I may have an opportunity to expand the Animal Science Department. This news is welcome, and hopefully, these improvements will be reflected in futures reports. I feel that we as a college, are moving in the correct direction, and in regards, to assessment and improving our teaching baseline, I need to continually increase my standards when it comes to grading stringency. I feel that I have improved, but I must do more to continue to challenge students and prepare them for the University atmosphere.

PDSA CYCLE 2011-2012
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

A never-ending need for more precise assessment tools. I would also like to expand laboratory opportunities (hands on learning) within the Animal Science Department.

Goal

To provide a more comprehensive learning atmosphere by implementing more hands on learning opportunities.

Action Plan

Work within our STEM grant to increase learning opportunities. I understand that through the new STEM grant I may have an opportunity to expand the Animal Science Department. This news is welcome, and hopefully, these improvements will be reflected in futures reports. I feel that we as a college, are moving in the correct direction, and in regards, to assessment and improving our teaching baseline, I need to continually increase my standards when it comes to student expectations. I feel that I have improved, but I must do more to continue to challenge students and prepare them for the university and/or private industry.

Results

I was successful at utilizing the STEM grant for increase our resources within the classroom. We able to update the lecterns as well as numerous other technical equipment. More improvements to come.

PDSA CYCLE 2012-2013
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

I would also like to expand laboratory opportunities (hands on learning) within the Animal Science Department.

Goal

To provide a more comprehensive learning atmosphere by implementing more hands on learning opportunities.

Action Plan

The Mesalands Community College Animal Science program needs to continually expand and grow via our STEM grant, which promotes the learning process. More online classes should be made available. Initially, I feel we can use STEM resources to accomplish this goal. I feel that we as a college are moving in the correct direction, and in regards to assessment and improving our teaching baseline. I would like for the college to clarify the ENG 299 Capstone class. Many of my students seemed to be confused of its purpose and significance. I need to continually increase my standards when it comes to student expectations. I feel that I have improved, but I must do more to continue to challenge students and prepare them for the university and/or private industry.

Results

To be reported in the 2013/2014 assessment reporting cycle.

STUDENT LEARNING ASSESSMENT PROGRAM REPORT
BUSINESS ADMINISTRATION
2012-2013

The Business Department at Mesalands Community College offers students a wide range of programs that award associate degrees. Associate of Applied Science degrees are awarded to students completing the degree plan requirements in our Business Administration program. These students are prepared to enter the workforce. An Associate of Arts degree is awarded to students who complete the Business Administration degree with plans to pursue a four-year degree.

The core courses of the Business Administration program allow students to acquire skills in accounting, business communications, business law, computers, economics, and management. Graduates of the Business Administration program are exposed to a variety of disciplines and given the opportunity to improve and enhance their interpersonal skills, critical thinking and problem solving skills.

Program Objectives
Upon completion of the Business Associate Degree Programs in Business Administration:

1) The student will demonstrate proficiency in public speaking and interpersonal communication.
2) The student will demonstrate the ability to create and present a final presentation with supportive documents.
3) The student will demonstrate the critical thinking skills necessary to be employable in his or her selected discipline.
4) The student will demonstrate the ability to conduct an environmental scan.

General Education Competencies

Upon completion of the Business Associate Degree Programs and in addition to the above mentioned program objectives:

1) Students will read, write, listen and use verbal skills to organize and communicate information and ideas in personal and group settings (Communication).
2) Students will demonstrate mathematical principles and scientific reasoning by applying appropriate methods to the inquiry process (Mathematical and Scientific Reasoning).

3) Students will identify, evaluate and analyze evidence to guide decision making and communicate his/her beliefs clearly and accurately (Critical Thinking).

Overview

The Business Administration assessment plan is in its fourth year and follows one Business cohort from first semester (fall) through graduation.

Program Objectives Assessment Plan

All program objectives are measured with multiple tools. The following **Curriculum Map** outlines those measurement tools and courses in which the program objectives are presented and/or measured:

Program Objective	Measurement Tools	Courses In Which Program Objectives Are Presented and/or Measured
1. The student will demonstrate proficiency in public speaking and interpersonal communication.	• ENG 299 • Course exams • CATs • Pre/Post-Tests • Speeches	• ACS 100 • BUS 221
2. The student will demonstrate the ability to create and present a final presentation with supportive documents.	• ENG 299 • Course exams • CATs • Pre/Post-Test • Research papers • Case analyses • Business Plan	• ACS 100 • ENG 102 • ENG 104 • COM 102 • BUS 221 • MGT 113
3. The student will demonstrate the critical thinking skills necessary to be employable in his or her selected discipline.	• ENG 299 • CAAP • Course exams • CATs • Pre/Post-Test • Case analyses	• ACS 100 • MGT 253 • ENG 102 • ENG 104 • ECON 251 • ECON 252
4. The student will demonstrate the ability to conduct an environmental scan.	• Course exams • CATs • Pre/Post-Test • Case analyses • Business Plan	• MGT 253 • MGT 113 • BUS 101

Program Objective Results

This section presents the results of those measurement tools identified in the second column above.

Measurement Tool: BUS 221 Final Presentation
Program Objective: 1
Goal Results: 90% pass rate; cut score is 75%[1]

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010	3	3	100% (mean = 88%)
2010-2011	7	7	100% (mean = 95%)
2011-2012	9	9	100% (mean=86.6%)
2012-2013	6	6	100% (mean=89.1%)

Measurement Tool: MGT 115 Business Plan
Program Objective: 2
Goal Results: 70% pass rate; cut score is 70%[2]

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010	9	6	67% (mean = 78%)
2010-2011	15	13	87% (mean = 84%)
2011-2012	18	10	56%(mean=75.8%)
2012-2013	14	9	64%(mean=77.3%)

Measurement Tool: ECON 252 Final Exam
Program Objective: 3
Goal Results: 70% pass rate; cut score is 70%[3]

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010	10	10	100% (mean = 85%)
2010-2011	6	6	100% (mean = 89%)
2011-2012	11	11	100%(mean=91.2%)
2012-2013	16	16	100% (mean=80.1%)

[1] After evaluation of the first year's results, adjustments were made to reflect more realistic expectations. BUS 221 Final Presentation pass rate goal was lowered from one hundred percent to ninety percent and the cut score was raised from seventy percent to seventy-five percent.
[2] Pass rate goal lowered from one hundred percent to seventy percent; cut score unchanged.
[3] Pass rate goal lowered from one hundred percent to seventy percent; cut score unchanged.

Measurement Tool: MGT 115 Business Plan
Program Objective: 4
Goal Results: 70% pass rate; cut score is 70%[4]

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010	9	6	67% (mean = 78%)
2010-2011	15	13	87% (mean = 84%)
2011-2012	18	10	56%(mean=75.8%)
2012-2013	14	9	64%(mean=77.3%)

General Education Competencies Assessment Plan

General education competencies are measured with multiple tools.
The following **Curriculum Map** outlines those measurement tools and courses in which the general education competencies are presented and/or measured:

General Education Competencies	Measurement Tools	Courses In Which General Education Competencies Are Presented and/or Measured
Communication 1. Present ideas in writing. 2. Present ideas orally according to standard usage. 3. Demonstrate application of information technology.	• GEA College Rubric • Capstone Portfolio • CAAP • CAT • Class Presentations • Exams	• ACS 100 • COM 102 • CIS 101 • ENG 102 • ENG 104 • ENG 299 • Lab Science Elective • Social Sciences/ Humanities Elective
Mathematical and Scientific Reasoning 4. Demonstrate mathematical principles. 5. Demonstrate scientific reasoning. 6. Apply scientific methods to the inquiry process.	• GEA College Rubric • CAAP • Capstone Portfolio • Exams • Discussion Posts • CATs • Pre/Post-Test • ENG 299	• BUS 103 • MATH 101 • ACCT 111 • ECON 251 • ECON 252 • ENG 299 • Lab Science Elective

[4] Pass rate goal lowered from one hundred percent to seventy percent; cut score unchanged.

Critical Thinking 7. Read and analyze complex ideas. 8. Locate, evaluate and apply research information. 9. Evaluate and present well-reasoned arguments.	• GEA College Rubric • CAAP • Capstone Portfolio • Research paper • ENG 299	• ACS 100 • CIS 101 • COM 102 • ECON 251 • ECON 252 • ENG 299

General Education Competencies Results

This section presents the general education competencies results. The Mesalands Community College created rubrics were used as the measurement tool each time the specific competency was evaluated during the program.

Measurement Tool: GEA College Rubric
General Education Objective(s): 1, 2, 3
Goal Results: 80% "excellent (4)", "proficient (3)" or "adequate (2)"

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 1	2	2	100%(mean=3.00)
• 2	3	3	100%(mean=2.67)
• 3	2	2	100%(mean=5.00)*
2009-2010			
• 1	4	4	100%(mean=3.13)
• 2	4	4	100%(mean=3.32)
• 3	4	4	100%(mean=4.50)*

1 Present ideas in writing.
2 Present ideas orally according to standard usage.
3 Demonstrate application of information technology.
*Based on a 5 point scale.

Measurement Tool: GEA College Rubric
General Education Objective(s): 4, 5, 6
Goal Results: 90% “excellent (5)”,“proficient (4)” or “acceptable (3)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 4	3	2	67%(mean=3.0)
• 5	3	2	67%(mean=3.58)
• 6	3	2	67%(mean=3.50)
2009-2010			
• 4	4	1	25% (mean=1.78)
• 5	4	3	75%(mean=3.84)
• 6	4	4	100%(mean=3.67)

4 Demonstrate mathematical principles.
5 Demonstrate scientific reasoning.
6 Apply scientific methods to the inquiry process.

Measurement Tool: GEA College Rubric
General Education Objective(s): Critical Thinking-Science Eval.
Goal Results: 100% “excellent (4)”, “proficient (3)” or “acceptable (2)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 7	3	2	67%(mean=3.00)
• 8	3	2	67%(mean=3.00)
• 9	3	3	67%(mean=2.00)

7. Identify and gather information.
8. Analyze and evaluate information.
9. Synthesize and formulate conclusions.

Measurement Tool: GEA College Rubric
General Education Objective(s): Critical Thinking-English Eval.
Goal Results: 100% “excellent (4)”, “proficient (3)” or “acceptable (2)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 7	3	2	100%(mean=2.67)
• 8	3	2	100%(mean=2.67)
• 9	3	2	100%(mean=2.67)

7. Identify and gather information.
8. Analyze and evaluate information.
9. Synthesize and formulate conclusions.

Measurement Tool: GEA College Rubric
General Education Objective(s): 7, 8, 9
Goal Results: 80% “excellent (5)”, “proficient (4)” or “acceptable (3)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010			
• 7	4	4	100%(mean=4.19)
• 8	4	3	75%(mean=3.13)
• 9	4	4	100%(mean=3.38)

7. Read and analyze complex ideas.
8. Locate, evaluate and apply research information.
9. Evaluate and present well-reasoned arguments

Measurement Tool: ACT Collegiate Assessment of Academic Proficiency (CAAP)
General Education Objective(s): 1, 4-9
Goal Results: 50%
Legend: n (Mean Score)

Year	Writing	Math	Reading	Critical Thinking	Science
2011-12	5(64.4%)	5(61%)	5(50%)	5(52.2%)	5(56%)
2010-11	6(66%)	5(70%)	6(60%)	6(70.8%)	6(82.3%)
2009-10	3(27.67%)	1(66%)	3(34.33%)	3(37.33%)	3(48%)

Measurement Tool: Writing Across the Curriculum College Rubric – COM 102 Post-Test
General Education Objective(s): 1
Goal Results: 90% “Excellent(4)”/”Proficient(3)”/ ”Adequate(2)”
Legend: ENG 102(No ENG 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2009-2010				
• 1.1.1		4(4)		
• 1.1.2		4(4)		
• 1.1.3		4(4)		
• 1.2.1		4(4)		
• 1.2.2		4(4)		
• 1.2.3		4(4)		
• 1.3.1		4(4)		
• 1.3.2		4(4)		
• 1.4.1		4(4)		
• 1.4.2		4(4)		

PDSA CYCLE 2010-2011
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

The last report stated that the failure of many students to write business plans "is unlikely to change because the majority of students who write unacceptable business plans simply fail to put forth the requisite effort. Those who submit drafts and other work throughout the semester generally produce acceptable results." Once again, this was true. The results, however, regressed.

Goal

During 2010-11, more effective organization (e.g., detailed calendars and chapter summaries) was expected to and did, in fact, create more time for writing assignments and critical discussions on current business topics.

Action Plan

In 2011-2012, there was more emphasis on using technology to provide immediate feedback on homework assignments via Aplia and CourseMate.

Results

After increasing from sixty-seven to eight-seven percent, the success rate on business plans fell all the way to 56 percent. This is somewhat misleading, however, because the majority of the failures were within a few points of the passing rate. All failed attempts resulted primarily from a lack of effort.

Even though there were exercises focusing on the financial section of the business plan, the most consistent weakness in the business plans was a failure to create a pro forma Statement of Cash Flows or other acceptable financial plan. Part of the problem undoubtedly stemmed from poor attendance and participation. Some of the absences were excused due to student activities but many of the absences were not excused and students simply chose to miss class even though attendance and participation was twenty percent of each student's final grade.

The lower rate of success may be in large part to a different student population. Both the mean age and academic experience of the students attempting business plans was lower in 2011-12 than in 2010-2011. Also, two of the students were not native speakers of English.

The case analyses required in the capstone course MGT 253 (Business Policy) were among the best that have been submitted in recent history. Students averaged 90% on the thirteen cases that were completed by five students (Two students submitted one incomplete case.). Students successfully completed environmental scans. Students followed instructions and successfully analyzed various opportunities and challenges facing three different companies. Students were able to identify mistakes by the companies and propose feasible recommendations.

In 2011-2012, results stemming from the use of technology to provide immediate feedback on homework assignments via Aplia and CourseMate was mixed. Aplia proved particularly effective in ACCT 111 but presented a few glitches in ACCT 210. In general, however, the use of immediate-feedback technology was positive and well-received by students. Not only were problem areas more apparent before class meetings but students will be able to develop improved critical thinking skills through interactive decision-making exercises. Also, classroom discussions were more focused and productive.

PDSA CYCLE 2011-2012
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

Many students fail to complete acceptable business plans. In general, the students that submit rough drafts and attend class and do adequate research are able to construct suitable plans. However, there will be renewed attempts to encourage improved students participation.

Goal

Continuously improve student writing and critical thinking is a constant goal. Improving financial statements is a specific goal for the upcoming cycle.

Action Plan

In 2012-13, there will also be more step-by-step exercises focused on the individual elements of a cash flow statement.

Results

In 2012-13, a different instructor taught ABM 264/MGT 115 and administered the business plans. Compared to past results, the grades did not vary significantly. The mean of 77.3% was only slightly below the 79.2% average of the three

previous years and corresponded almost exactly with the three-year median of 78%, suggesting that grades were determined more by student effort than by delivery.

Discussion with the other instructor indicated that financial statements were again a weakness of the plans despite a focus on exercises dealing with that portion of the plan.

Only one student took the capstone course, Business Policy, this past academic year. Her cases were even better than those of the previous year. One student, however, does not constitute an effective sample but her work—which reflected a variety of skills developed during her time at the College—was nonetheless pleasing.

In 2012-2013, the Aplia and CourseMate software contained fewer glitches and was utilized in ACCT 111. The same students who used the software in ACCT 111 requested more traditional paper-based homework in ACCT 210. In general, agreeing to the request was a short-term mistake but an enlightening experiment. Despite preview exercises that mirrored the homework assignments, performance was noticeably down. Students who, on average, completed about 85% of the Aplia assignments completed roughly 70% of the paper-based assignments. As a result, classroom discussions were less focused and productive.

PDSA CYCLE 2012-2013
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

Many students fail to act professionally despite increased focus on this area. Course syllabi include a section titled PAR (Participation/Professionalism, Attendance, and Respect). This academic year, students were tested on their knowledge of syllabi material, including cell phone usage, an area of particular concern. In the fall, course policy dictated that the first instance of inappropriate cell phone use would result in final grade of one letter lower (e.g., a B would become a C, with the option of writing an extra research paper to offset the penalty). Although this is a harsh policy, only one student was caught violating the policy. In the spring, however, the punitive action was omitted and many students blatantly violated the policy (resulting in their removal from that day's class meeting and forfeiture of that day's attendance points).

Goal

There will be continued emphasis on professional behavior, as employer surveys and first-hand experience have indicated this is a growing problem.

Action Plan

In 2013-14, there will also be more focus on the consequences of unprofessional behavior. The consequences of such behavior as an employee will be reinforced with examples and inappropriate behavior in the classroom will result in a warning initially and then loss of a letter grade (with the option of writing a research paper to offset some or all of the letter grade, based on the percentage grade earned on the paper).

Results

To be presented and analyzed in 2013-2014 report.

STUDENT LEARNING ASSESSMENT PROGRAM REPORT
BUSINESS OFFICE TECHNOLOGY
2012-2013

The Business Department at Mesalands Community College offers students a wide range of programs that award associate degrees. The Associate of Applied Science degree is awarded to students completing the degree plan requirements in the Business Office Technology program.

Advances in technology have increased the need for highly-skilled office employees who have the necessary training and confidence required to work with computer hardware and software, and office equipment. The Business Office Technology program has two options: General Office and Software Applications Specialist.

Program Objectives

Upon completion of the Business Office Technology Associate of Applied Science Degree Programs:

1) The student will demonstrate proficiency in the software applications most often used by industry (i.e., word processing, spreadsheet applications, database management, and presentations).
2) The student will demonstrate the ability to create and present a final presentation with supportive documents.
3) The student will demonstrate the critical thinking skills necessary to be employable in his or her selected discipline.

General Education Competencies

Upon completion of the Business Office Technology Associate of Applied Science Degree Programs and in addition to the above mentioned program objectives:

1. Students will read, write, listen and use verbal skills to organize and communicate information and ideas in personal and group settings (Communication).
2. Students will demonstrate mathematical principles and scientific reasoning by applying appropriate methods to the inquiry process (Mathematical and Scientific Reasoning).
3. Students will identify, evaluate and analyze evidence to guide decision making and communicate his/her beliefs clearly and accurately (Critical Thinking).

Overview

The Business assessment plan is in its fourth year and follows one Business cohort from first semester (fall) through graduation.

Program Objectives Assessment Plan

All program objectives are measured with multiple tools.
The following **Curriculum Map** outlines those measurement tools and courses in which the program objectives are presented and/or measured:

Program Objective	Measurement Tools	Courses In Which Program Objectives Are Presented and/or Measured
1. The student will demonstrate proficiency in the software applications most often used by industry (i.e., word processing, spreadsheet applications, database management, and presentations).	• GEA results • Capstone Portfolio • Exams • CATs • Pre/Post-Test	• CIS 101 • CIS 201 • CIS 202 • BUS 203 • BUS 110 • ENG 299
2. The student will demonstrate the ability to create and present a final presentation with supportive documents.	• GEA results • Capstone Portfolio • Exams • CATs • Pre/Post-Test	• ACS 100 • ENG 102 • ENG 104 • COM 102
3. The student will demonstrate the critical thinking skills necessary to be employable in his or her selected discipline.	• GEA results • CATs • Pre/Post-Test • Oral Tests • Capstone Portfolio	• ACS 100 • ENG 102 • ENG 104 • ENG 299 • COM 102 • MATH 101

Program Objective Results

This section presents the results of those measurement tools identified in the second column above.

Measurement Tool: CIS 101 Final Exam (Integration)
Program Objective: 1
Goal Results: 100% pass rate; cut score is 70%

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010	6	6	100% (mean=91%)
2010-2011	20	20	100% (mean = 93.75%)
2011-2012	4	4	100% (mean=96.25%)
2012-2013	16	16	100% (mean=94%)

Measurement Tool: BUS 221 Final Presentation
Program Objective: 2
Goal Results: 100% pass rate; cut score is 70%

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010	3	3	100% (mean=88%)
2010-2011	7	7	100% (mean = 95%)
2011-2012	9	9	100% (mean = 86.6%)
2012-2013	6	6	100% (mean=89.1%)

Measurement Tool: COM 102 Final Exam
Program Objective: 3
Goal Results: 100% pass rate; cut score is 70%

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010	3	3	100% (mean=91%)
2010-2011	N/A		
2011-2012	N/A		

General Education Competencies Assessment Plan

General education competencies are measured with multiple tools.
The following **Curriculum Map** outlines those measurement tools and courses in which the general education competencies are presented and/or measured:

General Education Competencies	Measurement Tools	Courses In Which Program Objectives Are Presented and/or Measured
Communication 1. Present ideas in writing. 2. Present ideas orally according to standard usage. 3. Demonstrate application of information technology.	• GEA College Rubric • CAAP • CAT • Class Presentations • Exams • Capstone Portfolio	• ACS 100 • COM 102 • CIS 101 • ENG 102 • ENG 104 • ENG 299 • Lab Science Elective • Social Sciences/ Humanities Elective
Mathematical and Scientific Reasoning 4. Demonstrate mathematical principles. 5. Demonstrate scientific reasoning. 6. Apply scientific methods to the inquiry process.	• GEA College Rubric • CAAP • Capstone Portfolio • Exams • Discussion Posts • CATs • Pre/Post-Test	• BUS 103 • ENG 299 • MATH 101 • ACCT 110 • Lab Science Elective
Critical Thinking 7. Read and analyze complex ideas. 8. Locate, evaluate and apply research information. 9. Evaluate and present well-reasoned arguments.	• GEA College Rubric • CAAP • Capstone Portfolio • Research paper	• ACS 100 • CIS 101 • COM 102 • ENG 299

General Education Competencies Results

This section presents the general education competencies results. The Mesalands Community College created rubrics were used as the measurement tool each time the specific competency was evaluated during the program.

Measurement Tool: GEA College Rubric
General Education Objective(s): 1, 2, 3
Goal Results: 80% "excellent (4)", "proficient (3)" or "adequate (2)"

Reporting Period	# of Students Attempting	# Passing	% Passing
2011-2012			
• 1	1	1	100%(mean=3.25)
• 2	1	1	100%(mean=2.00)
• 3	1	1	100%(mean=2.00)*
2009-2010			
• 1	1	0	100%(mean=2.25)
• 2	1	1	100%(mean=3.0)
• 3	1	1	100%(mean=4.00)

1 Present ideas in writing.
2 Present ideas orally according to standard usage.
3 Demonstrate application of information technology.
*Based on 5-point scale.

Measurement Tool: GEA College Rubric
General Education Objective(s): 4, 5, 6
Goal Results: 90% "excellent (5)","proficient (4)" or "acceptable (3)"

Reporting Period	# of Students Attempting	# Passing	% Passing
2011-2012			
• 4	1	0	0% (mean = 1.0)
• 5	1	1	100%(mean=3.00)
• 6	1	1	100%(mean=3.00)
2009-2010			
• 4	1	0	0% (mean = 1.0)
• 5	1	1	100%(mean=3.5)
• 6	1	0	100%(mean=1.75)

4 Demonstrate mathematical principles.
5 Demonstrate scientific reasoning.
6 Apply scientific methods to the inquiry process.

Measurement Tool: GEA College Rubric
General Education Objective(s): 7, 8, 9
Goal Results: 80% “excellent (5)”, “proficient (4)” or “acceptable (3)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2011-2012			
• 7	1	1	100%(mean=3.33)
• 8	N/A	N/A	N/A
• 9	1	1	100%(mean=3.25)
2009-2010			
• 7	1	1	100%(mean=3.75)
• 8	1	0	0%(mean=2.5)
• 9	1	1	100%(mean=4.00)

7. Read and analyze complex ideas.
8. Locate, evaluate and apply research information.
9. Evaluate and present well-reasoned arguments

Measurement Tool: ACT Collegiate Assessment of Academic Proficiency (CAAP)
General Education Objective(s): 1, 4-9
Goal Results: 50%
Legend: n (Mean Score)

Year	Writing	Math	Reading	Critical Thinking	Science
2011-2012	1(21%)	1(10%)	1(70%)	1(75%)	1(71%)
2010-2011	2(22%)	N/A	2(32.5%)	2(28.5%)	2(20.5%)
2009-2010	1(6%)	N/A	1(6%)	1(0%)	1(4%)

Measurement Tool: Writing Across the Curriculum College Rubric – COM 102 Post-Test

General Education Objective(s): 1

Goal Results: 90% “Excellent(4)”/”Proficient(3)”/ ”Adequate(2)”

Legend: ENG 102(No ENG 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2009-2010 • 1.1.1 • 1.1.2 • 1.1.3		 1(0) 1(0) 1(0)		
• 1.2.1 • 1.2.2 • 1.2.3		1(0)	 1(0)	1(0)
• 1.3.1 • 1.3.2		1(0)	 1(0)	
• 1.4.1 • 1.4.2			 1(0)	1(0)

PDSA CYCLE 2010-2011
OPPORTUNITIES FOR IMPROVEMENT

Analysis

Problem Area

Many students still struggle with time management in the online CIS 101 course despite detailed schedules and frequent messages regarding progress or lack of it.

Goal

As with the Business Administration program, more effective organization (e.g., detailed calendars and chapter summaries) did, in fact, create more time for writing assignments and critical discussions on current business topics.

Action Plan

In 2011-12, there will be increased focus on research methods and techniques borrowed from colleagues at the New Mexico Statewide Articulation meetings.

Results

The previous action plan called for increased use of assignments requiring outside research.

The CIS 101 final exam was again an integration exercise. Although the number of students who tested was considerably fewer, the students who attempted the final easily met the passing standard, in contrast to the previous cycle during which at least two students barely surpassed the standard.

The final presentations in BUS 221 were again markedly better than the initial presentations. Students also showed consistent improvement from one speech to the next. Each student was again required to actively participate in peer review and students were graded on improvement. This method again proved effective. Also, the research that each student did on a company of their choice was impressive and enlightening in many cases. Students, thus, demonstrated the ability to discern between meaningful and trivial information as it related to researching companies during the interview process.

PDSA CYCLE 2011-2012
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

Many students enter the program lacking skills that are often taken for granted. Some students, for example, are not punctual. Others try to covertly send text messages in class although the use of cell phones in the classroom is prohibited.

Goal

To provide tangible steps for improving student professionalism through syllabi and other documentation. Evaluation will focus on punctuality, respect, appropriateness of discussion contributions, and ability to communicate effectively with others. Although these skills have been assessed previously, there will be more specific instruction of desirable and undesirable workplace behaviors.

Action Plan

In 2012-2013, there will be stricter and more specific plans regarding student professionalism. One colleague at the New Mexico Statewide Articulation meetings indicated that she drops any student using a cell phone in class a letter grade when final grades are calculated. Although this is a severe punishment,

she states this policy clearly in her syllabi and tests students over their comprehension of the policy. She reports that cell phone use has decreased from numerous instances per semester to only one or two. Forfeiture of attendance points for the day on which texting occurred has not proven satisfactorily effective, so a similar policy to the loss of a letter grade will be considered.

Results

Texting and other discourteous behaviors (not recognizing the speaker who holds the floor, lack of punctuality, improper acknowledgment, etc.) continue to be a problem but were less pronounced during the fall semester than in the spring when the one obvious difference was application of policy. Other factors, of course, such as end-of-school-year fatigue, "cabin fever," etc. could have contributed, but students were undeniably more compliant when the proposed penalties were more severe. From a behavioristic perspective, many educators prefer a "Theory Y" approach and view increased penalties as a "Theory X" approach. However, part of an educator's job is to clarify the relationship between action and consequence, especially for many younger students who are just beginning to grasp such concepts.

PDSA CYCLE 2012-2013
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

The lack of professional skills continues to be a problem. Students fail to see the repercussions of unprofessional behavior and/or believe they can change old habits at will.

Reliance of technology is reaching alarming levels in many cases. Technology allows us to do many wonderful things that might have seemed like science fiction only a few decades ago. That same technology, however, when misapplied can lead to deleterious habits. As an older colleague in Denmark astutely suggested, students (and people in general) are losing the ability to think in nonlinear methods. I agreed strongly, adding that unaided sequential thought is a challenge for many students and that effective sequential thought adjusted for the introduction of multiple dependent factors is rarely demonstrated. Unfortunately for our students, life does not always present factors in neat linear patterns but rather thrusts unexpected decisions at us when we least expect them. Effective living depends on decisions made outside the margins of standard routines.

The inability of many people to effectively analyze multivariate factors and draw effective conclusions becomes most apparent when students take microeconomics and macroeconomics. Technology students are particularly vulnerable to an unhealthy reliance on technologically derived solutions. As with any tool, a technologically advanced application can be only as effective as the performance of designer (i.e., programmer) and the user allows. Reliance on a solution without understanding factors that may require adjustment of the model often leads to unintended consequences.

Goal

To incorporate more application that requires not only critical thinking but also different types of thought processes in conjunction with reinforcement of the relationship between action and consequence.

Action Plan

In 2013-2014, there will be more specific plans regarding student professionalism. In addition, increased use of guest speakers will be considered. In many cases, students may lend more credence to the words of a person holding a job they seek that those coming from a professional educator. All good educators want their students to “become better” than the educators themselves, as a colleague from Wisconsin recently suggested. Students, however, cannot be expected to inherently understand this intrinsic maxim. Those of us who realize and appreciate the efforts of our own educators often do so only after the passage of many years. So, it becomes necessary to rely on the examples of those who students aspire to be.

Increased use of guest speakers may provide students with a more concrete set of values, attitudes, and behaviors to model (and avoid). Increased use of case studies, brain-storming activities, and problem-solving exercises may encourage students to develop more complex thought patterns.

Results

To be presented and analyzed in 2013-2014 report.

STUDENT LEARNING ASSESSMENT PROGRAM REPORT
EARLY CHILDHOOD EDUCATION
2012-2013

What early childhood professionals know and can do significantly influence children's development, learning, and success in school. Since the period of early childhood spans the first eight years of a child's life, these early care and education professionals are being prepared to work in varied settings that include child care centers, family child care homes, Head Start, early intervention programs, public and private schools through third grade, preschools, and family support programs. Professionals may refer to themselves as teachers, educational assistants, assistant teachers, teacher aides, caregivers, or providers. In the final analysis, they all teach and they all provide care.

Program Objectives

Upon completion of the Early Childhood Education Associate Degree Program:

1. The student will incorporate understanding of developmental stages, processes, and theories of growth, development, and learning into developmentally appropriate practice.

2. The student will demonstrate knowledge of relevant content for young children and developmentally appropriate ways of integrating content into teaching and learning experiences for children from birth through age eight.

3. The student will demonstrate effective written and oral communication skills when working with children, families, and early care, education, and family support professionals.

General Education Competencies

Upon completion of the Early Childhood Education Associate Degree Program and in addition to the above mentioned program objectives:

1. Students will read, write, listen and use verbal skills to organize and communicate information and ideas in personal and group settings (Communication).
2. Students will demonstrate mathematical principles and scientific reasoning by applying appropriate methods to the inquiry process (Mathematical and Scientific Reasoning).

3. Students will identify, evaluate and analyze evidence to guide decision making and communicate his/her beliefs clearly and accurately (Critical Thinking).

Overview

The Early Childhood Education assessment plan is in its fourth year and is addressed via the plan→do→study→adjust cycle that begins every fall term and follows one Early Childhood cohort from first term through graduation.

Program Objectives Assessment Plan

All program objectives are measured with multiple tools. The following **Curriculum Map** outlines those measurement tools and courses in which the program objectives are presented and/or measured:

Program Objective	Measurement Tools	Courses In Which Program Objectives Are Presented and/or Measured
1. The student will incorporate understanding of developmental stages, processes, and theories of growth, development, and learning into developmentally appropriate practice.	• CAT • Pre/Post-Test • Course Projects • Written Tests over Course Content	• ECE 103 • ECE 104 • ECE 106 • ECE 107 • ECE 109 • ECE 111 • ECE 112 • ECE 113 • ECE 114 • ECE 115 • ECE 265
2. The student will demonstrate knowledge of relevant content for young children and developmentally appropriate ways of integrating content into teaching and learning experiences for children from birth through age eight.	• Written Tests over Course Content • CAT • Pre/Post-Test • Course Projects	• ECE 103 • ECE 104 • ECE 106 • ECE 107 • ECE 109 • ECE 111 • ECE 112 • ECE 113 • ECE 114 • ECE 115 • ECE 265

3. The student will demonstrate effective written and oral communication skills when working with children, families, early care, education, and family support professionals.	• Written Tests Over Course Content • Oral and Written Projects • ENG 299 • CAAP	• ECE 103 • ECE 104 • ECE 106 • ECE 107 • ECE 109 • ECE 111 • ECE 112 • ECE 113 • ECE 114 • ECE 115 • ECE 265

Program Objective Results

This section presents the results of those measurement tools identified in the second column above.

Measurement Tool: **Course Project**
Program Objectives: **1,2,3**
Goal: **70% Pass Rate**

Course Project 2009-2010				
Course	**Project**	**# of Students Attempting**	**# Passing**	**% Passing**
ECE 103	Paper	10	10	100%(Mean=91%)
ECE 104	Paper	15	12	80%(Mean=68%)
ECE 106	Interview	3	3	100%(Mean=93%)
ECE 107	Assessment	17	15	88%(Mean=77%)
ECE 109	Teaching	13	12	92% (Mean=86%)
ECE 111	Teaching	13	13	100%(Mean=86%)
ECE 112	Practicum	13	12	92%(Mean=87%)
ECE 113	Paper	2	2	100%(Mean=91%)
ECE 114	Teaching	16	15	94%(Mean=90%)
ECE 115	Practicum	16	15	94%(Mean=85%)
ECE 265	Paper	4	4	100%(Mean=90%)

Course Project 2010-2011				
Course	**Project**	**# of Students Attempting**	**# Passing**	**% Passing**
ECE 104	Paper	15	13	87% (Mean 73%)
ECE 106	Interview	12	9	75% (Mean 69%)
ECE 113	Paper	12	9	75% (Mean 63%)
ECE 265	Paper	15	13	87% (Mean 78%)
Course Project 2011-2012				
Course	**Project**	**# of Students Attempting**	**# Passing**	**% Passing**
ECE 104	Paper	19	14	74% (Mean 66%)
ECE 107	Assessment	8	7	88% (Mean 84%)
ECE 109	Teaching	11	9	82% (Mean 80%)
ECE 111	Teaching	13	12	92% (Mean 91%)
ECE 112	Practicum	13	12	92% (Mean 91%)
ECE 114	Teaching	12	8	67% (Mean 64%)
ECE 115	Practicum	12	7	58% (Mean 56%)
Course Project 2012-2013				
Course	**Project**	**# of Students Attempting**	**# Passing**	**% Passing**
ECE 104	Paper	13	9	69% (Mean 69%)
ECE 106	Interview	6	5	83% (Mean 92%)
ECE 113	Paper	5	4	80% (Mean 92%)
ECE 265	Paper	10	8	80% (Mean 64%)

Measurement Tool: **Written Tests Over Course Content**
Program Objectives: **1,2,3**
Goal: **70% Pass Rate**

Written Tests 2009-2010			
Course	**# of Students Attempting**	**# Passing**	**% Passing**
ECE 103	10	10	100% (Mean=91%)
ECE 104	15	12	80%(Mean=67%)
ECE 106	3	3	100%(Mean=93%)
ECE 107	17	15	88%(Mean=77%)
ECE 109	13	12	92% (Mean=86%)
ECE 111	13	13	100%(Mean=86%)
ECE 112	13	12	92%(Mean=87%)
ECE 113	2	2	100%(Mean=91%)
ECE 114	16	15	94%(Mean=90%)

ECE 115	16	15	94%(Mean=85%)
ECE 265	4	4	100%(Mean=90%)
Written Tests 2010-2011			
Course	**# of Students Attempting**	**# Passing**	**% Passing**
ECE 104	15	13	87% (Mean 64%)
ECE 106	12	10	75% (Mean 73%)
ECE 113	12	9	75% (Mean 65%)
ECE 265	15	13	87% (Mean 87%)
Written Tests 2011-2012			
Course	**# of Students Attempting**	**# Passing**	**% Passing**
ECE 104	12	9	68% (Mean 56%)
ECE 107	8	7	88% (Mean 76%)
ECE 109	11	9	82% (Mean 79%)
ECE 111	13	12	92% (Mean 83%)
ECE 112	13	12	92% (Mean 88%)
ECE 114	12	8	67% (Mean 56%)
ECE 115	12	7	67% (Mean 52%)
Written Tests 2012-2013			
Course	**# of Students Attempting**	**# Passing**	**% Passing**
ECE 104	13	9	69% (Mean 58%)
ECE 106	6	5	83% (Mean 92%)
ECE 113	5	4	80% (Mean 93%)
ECE 265	10	8	80% (Mean 64%)

Measurement Tool: **Pre/Post Tests**
Program Objectives: **1,2**
Goal: **50% Improvement**

Pre-Test/Post Test Results 2010-2011			
Course	**Pre-Test**	**Post-Test**	**Percent Improvement**
ECE 104	40%	61%	53%
ECE 106	45%	77%	71%
ECE 113	38%	65%	71%
ECE 265	51%	67%	31%
Pre-Test/Post Test Results 2011-2012			
Course	**Pre-Test**	**Post-Test**	**Percent Improvement**
ECE 104	40%	61%	53%
ECE 107	38%	58%	53%
ECE 109	42%	64%	52%
ECE 111	48%	85%	77%
ECE 112	52%	77%	48%
ECE 114	47%	66%	40%
ECE 115	55%	82%	49%
Pre-Test/Post Test Results 2012-2013			
Course	**Pre-Test**	**Post-Test**	**Percent Improvement**
ECE 104	43%	58%	35%
ECE 106	60%	81%	35%
ECE 113	41%	69%	68%
ECE 265	52%	67%	29%

General Education Competencies Assessment Plan

General education competencies are measured with multiple tools. The following **Curriculum Map** outlines those measurement tools and courses in which the program objectives are presented and/or measured:

General Education Competencies	Measurement Tools	Courses In Which General Education Competencies Are Presented and/or Measured
Communication 1. Writing 2. Oral Presentation 3. Information Technology	• ENG 299 • CAAP • CAT • Class Presentations • Writing Across Curriculum Rubric • Critical Thinking Rubric • Oral Presentation Rubric	• ECE 103 • ECE 104 • ECE 106 • ECE 107 • ECE 109 • ECE 111 • ECE 112 • ECE 113 • ECE 114 • ECE 115 • ECE 265 • ENG 102 • ENG 104 • COM 102
Mathematical and Scientific Reasoning 4. Mathematical Reasoning 5. Scientific Method	• ENG 299 • CAAP • Laboratory Exercise • Laboratory Report	• MATH 107 • MATH 110 • MATH 261 • Required Science Classes
Critical Thinking 6. Critical Thinking	• ENG 299 • CAAP • Laboratory Exercise	• ECE 103 • ECE 104 • ECE 106 • ECE 107 • ECE 109 • ECE 111 • ECE 112 • ECE 113 • ECE 114 • ECE 115 • ECE 265 • Required Science Classes

General Education Competencies Results

This section presents the general education competencies results. The Mesalands Community College created rubrics were used as the measurement tool each time the specific competency was evaluated during the program.

Measurement Tool: GEA College Rubric
General Education Objectives: 1, 2, 3
Goal Results: 80% "excellent (4)", "proficient (3)" or "adequate (2)'

Reporting Period	# of Students Attempting	# Passing	% Passing
2011-2012			
• 1	2	2	100% (mean=2.7)
• 2	2	2	100% (mean=2.6)
• 3	2	2	100% (mean=3.5)
Reporting Period	**# of Students Attempting**	**# Passing**	**% Passing**
2009-2010			
• 1	1	1	100% (mean=3.0)
• 2	1	1	100% (mean=3.0)
• 3	1	1	100% (mean=3.75)

1. Present ideas in writing.
2. Present ideas orally according to standard usage.
3. Demonstrate application of information technology.

Measurement Tool: GEA College Rubric
General Education Objectives: 4, 5, 6
Goal Results: 80% "excellent (5)","proficient (4)" or "acceptable (3)'

Reporting Period	# of Students Attempting	# Passing	% Passing
2011-2012			
• 4	2	2	100% (mean=3.3)
• 5	2	1	50% (mean=2.1)
• 6	2	2	100% (mean=3.5)
Reporting Period	**# of Students Attempting**	**# Passing**	**% Passing**
2009-2010			
• 4	1	0	0% (mean=1.0)
• 5	1	1	100% (mean=4.75)
• 6	1	1	100% (mean=3.5)

4. Demonstrate mathematical principles.
5. Demonstrate scientific reasoning.
6. Apply scientific methods to the inquiry process.

Measurement Tool: GEA College Rubric
General Education Objectives: 7, 8, 9
Goal Results: 80% “excellent (5)”, “proficient (4)” or “acceptable (3)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2011-2012			
• 7	2	2	100% (mean=3.6)
• 8	N/A	N/A	N/A
• 9	2	2	100% (mean=3.5)
Reporting Period	**# of Students Attempting**	**# Passing**	**% Passing**
2009-2010			
• 7	1	1	100% (mean=4.5)
• 8	1	1	100% (mean=3.75)
• 9	1	1	100% (mean=3.5)

7. Read and analyze complex ideas.
8. Locate, evaluate and apply research information.
9. Evaluate and present well-reasoned arguments.

Measurement Tool: ACT Collegiate Assessment of Academic Proficiency (CAAP)
General Education Objectives: 1, 4-9
Goal Results: 50%
Legend: n (Mean Score)

Year	Writing	Math	Reading	Critical Thinking	Science
2009-2010	1(39%)		1 (53%)		

Measurement Tool: Writing Across the Curriculum College Rubric

General Education Objective(s): 1

Goal Results: 90% “Excellent (4)”, ”Proficient (3)”, or ”Adequate (2)”

Legend: ENG 102(No ENG 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2009-2010 1.1.1 1.1.2 1.1.3	16	16(23)	1(5)	
1.2.1 1.2.2 1.2.3	18(6)	12(15)	3(7)	
1.3.1 1.3.2	6	21(18)	5(8)	1(2)
1.4.1 1.4.2	16(1)	15(13)	2(13)	(1)
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2010-2011				
• 1.1.1	6	20 (5)	3 (3)	
• 1.1.2	6	20 (5)	3 (3)	
• 1.1.3	6	20 (5)	3 (3)	
• 1.2.1	7	16 (3)	6 (4)	
• 1.2.2	7	16 (3)	6 (4)	
• 1.2.3	7	16 (3)	6 (4)	
• 1.3.1	5	3 (1)	9 (4)	2 (3)
• 1.3.2	5	3 (1)	9 (4)	2 (3)
• 1.4.1	5	21 (3)	3 (5)	
• 1.4.2	5	21 (3)	3 (5)	

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2011-2012				
• 1.1.1	26 (2)	24 (4)	4 (3)	1
• 1.1.2	26 (2)	24 (4)	4 (3)	1
• 1.1.3	26 (2)	24 (4)	4 (3)	1
• 1.2.1	28 (1)	24 (5)	3 (2)	1
• 1.2.2	28 (1)	24 (5)	3 (2)	1
• 1.2.3	28 (1)	24 (5)	3 (2)	1
• 1.3.1	24 (3)	19 (2)	9 (2)	3 (2)
• 1.3.2	24 (3)	19 (2)	9 (2)	3 (2)
• 1.4.1	20 (2)	33 (4)	2 (3)	
• 1.4.2	20 (2)	33 (4)	2 (3)	
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2012-2013				
• 1.1.1	7 (2)	4(11)	(1)	
• 1.1.2	7 (2)	4 (11)	(1)	
• 1.1.3	7 (2)	4 (11)	(1)	
• 1.2.1	6 (2)	5 (11)	(1)	
• 1.2.2	6 (2)	5 (11)	(1)	
• 1.2.3	6 (2)	5 (11)	(1)	
• 1.3.1	3 (2)	2 (5)	2 (1)	1 (5)
• 1.3.2	3 (2)	2 (5)	2 (1)	1 (5)
• 1.4.1	4 (2)	6 (8)	1 (4)	
• 1.4.2	4 (3)	6 (7)	1 (4)	

Measurement Tool: Oral Presentation College Rubric
General Education Objective(s): 2
Goal Results: 90% “Excellent(4)”/”Proficient(3)”/ ”Adequate(2)”
Legend: COMM 102(No COMM 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2010-2011				
• 2.1.1	2	7		
• 2.1.2	2	7		
• 2.1.3	2	7		
• 2.2.1	1	7	1	
• 2.2.2	1	7	1	
• 2.2.3	1	7	1	
• 2.3.1	5	3	1	
• 2.3.2	5	3	1	
• 2.3.3	5	3	1	
• 2.4.1	7	2		
• 2.4.2	7	2		
• 2.4.3	7	2		
• 2.5.1	1		8	
• 2.5.2	1		8	
• 2.5.3	1		8	
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2011-2012				
• 2.1.1	1	21	2	
• 2.1.2	1	21	2	
• 2.1.3	1	21	2	
• 2.2.1	9	14	1	
• 2.2.2	9	14	1	
• 2.2.3	9	14	1	
• 2.3.1	4	14	6	
• 2.3.2	4	14	6	
• 2.3.3	4	14	6	
• 2.4.1	7	17		
• 2.4.2	7	17		
• 2.4.3	7	17		
• 2.5.1	12	5	3	4
• 2.5.2	12	5	3	4
• 2.5.3	12	5	3	4

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 2.1.1	1 (1)	4 (2)		
• 2.1.2	1 (1)	4 (2)		
• 2.1.3	1 (1)	4 (2)		
• 2.2.1	1	5 (1)	1	
• 2.2.2	1	5 (1)	1	
• 2.2.3	1	5 (1)	1	
• 2.3.1	4	3	1	
• 2.3.2	4	3	1	
• 2.3.3	4	3	1	
• 2.4.1	3	3 (2)		
• 2.4.2	3	3 (2)		
• 2.4.3	3	3 (2)		
• 2.5.1	4	(1)	2	(1)
• 2.5.2	4	(1)	2	(1)
• 2.5.3	4	(1)	2	(1)

PDSA CYCLE 2009-2010
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

Students need to continue to work on writing and communication skills. We work on those in class projects, but the GEA and CAAP scores show that more practice or supervision is needed in these areas. I will continue to have all of my classes write more and present orally more. This will also enhance the College's Writing Across the Curriculum emphasis.

I want to make sure that my Early Childhood students exit my program with skills that will not only enable them to be employed now, but that they will also be prepared to continue on with their higher education goals.

Goal

Every program student will research an early childhood topic, according to the class that they are enrolled in, and will present both an oral and written report using criteria outlined in our GEA Rubric. These will be evaluated by the Rubric and given back to the student for personal assessment.

Action

Give each student the assignment. Set up a conference after completion with each student to discuss areas in need of improvement.

Results

I did have the students research an early childhood topic and present a written report. But, due to time constraints, I only did the oral presentation in one class. I also didn't have individual conferences with each student due to time restraints also.

PDSA CYCLE 2010-2011
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

Students need more work on communication, both in writing and oral presentations. GEA and CAAP scores show that students need more help in these communication areas. After analyzing the results of my classes this year, I have also determined that my students need more direction in studying for tests and getting work turned in on time. This reflects not only on their success in college, but also reflects on their employment skills.

Goal

I want to make sure that my Early Childhood Education students exit my program with skills that will not only enable them to be employed now, but will also prepare them to be successful in their pursuit of higher education.
I want them to be able to continue with their bachelor's program and also be successful in taking state standardized exams.

I will continue with my goal that every program student will research an early childhood topic and will present both an oral and written report using criteria outlined in our GEA Rubrics. I will also add in the element of Critical Thinking using the Critical Thinking Rubric also.

In order to make this a learning experience, I will plan to give feedback on these presentations.

Action

Present the Rubrics to each student. Discuss how they will be evaluated.

Give the assignment to each student. Set up a conference after completion with each student to discuss areas in need of improvement. I will also give more clear expectations of when assignments are due, and go over consequences of not meeting those deadlines.

Results

The oral and written rubrics were given to the students in the classes where they were evaluated. The scores on the rubrics improved. I still didn't have a chance to talk to the students about their scores because of the end of the semester. I set this as a new goal for next year. I worked on each syllabus and tried to clarify the grading criteria, so students would know exactly how grades would be calculated. I still need to stress the importance of reading and understanding this information.

PDSA CYCLE 2011-2012
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

Students continue to need more work on communication, both in writing and oral presentations. This is indicated by GEA and CAAP scores. I also realized that students are not reading and interpreting their syllabus that explains what work is due, when it is due, and how their grades are calculated. I need to work on clarification of this for the next cycle of classes. I also realized that because of the number of classes that are required in Early Childhood and the time frame to fit them all in, some of the first semester students had to take classes they didn't have the background for.

Goal

Many Early Childhood students come into the program already employed in the field. I need to continue to work with them to have them further advance their education and be ready to advance to the next level of education. I would like to see many of the students continue to work on their bachelor's degree. Work is being done to collaborate with other colleges to help students fulfill this need.

I will continue with my goal that every program student will research topics in early childhood and present information both orally and written. The College general education competency rubrics outline the criteria for these. I would like to add in the element of critical thinking using the Critical Thinking Rubric also. In order to make this a learning experience, I will plan to give feedback on these

presentations. I need to set the due date earlier in the semester, so there is time to give feedback.

Action

Devote more time to the syllabus in the beginning of the semester. Let students know how attendance and participation calculate into their final grade. Go over point system that I use for each class and make sure students understand what is required of them. Present the grading rubrics to each student and let them know how they are going to be evaluated. I did that this year, and oral presentation scores improved. Make time to discuss results with each student, but having due date earlier in the semester. Continue to have students write and present.

Results

I did give the oral and written rubrics ahead of time this year and I did have a chance to return them to the students, so improvements could be made in the future. I also stressed the importance of attendance in all classes and showed where attendance was tied to their overall grade. This seemed to help with their final grades. I want students to continue to improve their writing and presentation skills and understand the quality that I am striving for in their assignments.

PDSA CYCLE 2012-2013
OPPORTUNITIES FOR IMPROVMENT

ANALYSIS

Problem Area

The number of Early Childhood students was smaller this year. Hopefully, we will see an increase in this number in the future. I also had a few students who had to drop their early childhood classes for various reasons. Unfortunately, this puts them behind on their quest to finish their classes. We have eleven early childhood classes that need to be completed in two years. If they miss a cycle of classes, it is hard to catch up and complete those classes. I still have a problem with attendance with a few students. It is hard to get the complete information that is presented in the course, if students are not there for the discussion and teaching of the concepts.

Goal

I hope to see the early childhood numbers increase this year. I would like to see presentation scores increase both in writing and oral communication. My goal is to prepare students for success in the early childhood field of work as well as

have them prepared to advance their education. Another goal is to improve attendance for classes.

Action

I plan to visit both Head Start centers and see if there are teachers who need to further their education. Hopefully, we will have some new majors enroll in the fall semester. I will also contact the students who dropped out this year, and see if they are ready to continue with their classes. I did add a point component to the attendance this year. There are points attached to every class period and if a student misses a class, they automatically lose points. They did help with attendance with the committed students. It doesn't seem to matter to a few of them. I need to keep reminding students of how their grades are calculated throughout the semester. I did go over the oral rubrics more thoroughly this year and this did help their presentations. I had them do the presentations earlier in the semester, so I could give them feedback on them. I would like to incorporate this in more of my classes next year. I will continue to have students work on writing skills in every class.

Results

To be analyzed and presented in 2013-2014 report.

STUDENT LEARNING ASSESSMENT PROGRAM REPORT
FARRIER SCIENCE
2012-2013

Farrier Science is primarily a self-employed field; therefore, farriers must be knowledgeable and skilled in all facets of the business. The Farrier Science degree program offers hands-on experience in horsemanship, trimming and shoeing, forging and welding. Instruction in anatomy and physiology, business management, and other aspects of horseshoeing are provided in the classroom. The degree program also offers an in-depth study of therapeutic and pathological shoeing, including the physiology, forging and application of shoes.

Program Objectives

Upon completion of an Associate Degree in Farrier Science students will:

1. Apply knowledge of the anatomy and physiology of the equine limb as it relates to a sound horse according to American Farriers Association (AFA) standards.
2. Perform and defend keg shoe modifications according to AFA standards or veterinary prescription.
3. Identify equine gaits and gait faults according to AFA standards or veterinary prescription.
4. Identify pathological conditions of the equine limb and successfully apply the appropriate therapeutic shoeing technique according to AFA standards or veterinary prescription.

General Education Competencies

Upon completion of the Associate Degree in Farrier Science and in addition to the above mentioned program objectives:

1. Students will read, write, listen and use verbal skills to organize and communicate information and ideas in personal and group settings (Communication).
2. Students will demonstrate mathematical principles and scientific reasoning by applying appropriate methods to the inquiry process (Mathematical and Scientific Reasoning).
3. Students will identify, evaluate and analyze evidence to guide decision making and communicate his/her beliefs clearly and accurately (Critical Thinking).

Overview

The Farrier Science assessment program is based upon the Professional Farrier's Association certification program and is designed to assess trimming and shoeing skills. In addition to testing these "hands-on" aspects of competency, the program includes written examinations designed to test comprehension of equine anatomy, physiology, and biomechanics. The test also includes sections requiring scientific reasoning skills, application of knowledge, and communication skills.

The Farrier Science assessment plan is in its fourth year and is addressed via the plan→do→study→adjust cycle that begins every fall term and follows one Farrier Science cohort from first term through graduation.

Program Objectives Assessment Plan

All program objectives are measured with multiple tools.
The following **Curriculum Map** outlines those measurement tools and courses in which the program objectives are presented and/or measured:

Program Objective	Measurement Tools	Courses In Which Program Objectives Are Presented and/or Measured
1. Apply knowledge of the anatomy and physiology of the equine limb as it relates to a sound horse according to American Farrier's Association (A.F.A.) standards.	• A.F.A. Curriculum Written Tests • A.F.A. Curriculum Performance Tests • CAT • Pre/Post-Test • Oral Tests	• ANSC 151 • FAS 111 • FAS 121 • FAS 112 • FAS 223 • FAS 224
2. Perform and defend keg shoe modifications according to A.F.A. standards or veterinary prescription.	• A.F.A. Curriculum Written Tests • A.F.A. Curriculum Performance Tests • CAT • Pre/Post-Test • LAB Practicals	• FAS 121 • FAS 131 • FAS 122 • FAS 132 • FAS 223 • FAS 233 • FAS 224
3. Identify equine gaits and gait faults according to A.F.A. standards or veterinary prescription.	• Lab Practicals • A.F.A. Curriculum Written Tests • A.F.A. Curriculum Performance Tests • CAT • Pre/Post-Test • Oral Tests	• FAS 111 • FAS 112 • FAS 223 • FAS 224

4. Identify pathological conditions of the equine limb and successfully apply the appropriate therapeutic shoeing technique according to A.F.A. standards or veterinary prescription.	• Lab Practical • A.F.A. Curriculum Written Tests • A.F.A. Curriculum Performance Tests • CAT • Pre/Post-Test • Oral Tests	• FAS 223 • FAS 233 • FAS 253 • FAS 224 • FAS 289

Program Objective Results

This section presents the results of those measurement tools identified in the second column above.

Measurement Tool: A.F.A. Certified Farrier Exam
Program Objective(s): 1
Goal Results: 70% pass rate

Reporting Period	# of Students Attempting	# Passing	% Passing
2012-2013	N/A		
2011-2012	3	2	67%
2010-2011	2	2	100%
2009-2010	5	3	60%

Measurement Tool: A.F.A. Certified Farrier Exam
Program Objective(s): 2
Goal Results: 70% pass rate

Reporting Period	# of Students Attempting	# Passing	% Passing
2012-2013	N/A		
2011-2012	3	2	67%
2010-2011	2	2	100%
2009-2010	5	4	80%

Measurement Tool: A.F.A. Certified Farrier Exam
Program Objective(s): 4
Goal Results: 70% pass rate

Reporting Period	# of Students Attempting	# Passing	% Passing
2012-2013	N/A		
2011-2012	3	2	67%
2010-2011	2	2	100%
2009-2010	5	5	100%

Measurement Tool: A.F.A. Certified Farrier Exam
Program Objective(s): 1-4
Goal Results: 70 % pass rate

Year	# of Students Tested	# of Students Passing on First Attempt	# of Students Retested	# of Students Passing Upon Retest	Total # of Students Passing	Total % of Students Passing
2012-2013	N/A					
2011-2012	3	2	N/A		2	67%
2010-2011	2	2	N/A		2	100%
2009-2010	5	4	N/A		4	80%
2008-2009	5	4	N/A		4	80%

General Education Competencies Assessment Plan

General education competencies are measured with multiple tools.
The following **Curriculum Map** outlines those measurement tools and courses in which the program objectives are presented and/or measured:

General Education Competencies	Measurement Tools	Courses In Which General Education Competencies Are Presented and/or Measured
Communication 1. Present ideas in writing. 2. Present ideas orally according to standard usage. 3. Demonstrate application of information technology.	• FAS 112 • College Rubrics • CAAP • Writing Rubric • ENG 299	• ACS 100 • COM 102 • CIS 101 • ENG 102 • Lab Science Elective • Social Sciences/ Humanities Elective • FAS 111, 112, 223, 289
Mathematical and Scientific Reasoning 4. Demonstrate mathematical principles. 5. Demonstrate scientific reasoning. 6. Apply scientific methods to the inquiry process.	• FAS 112 • College Rubrics • CAAP • Critical Thinking Rubric • ENG 299	• Lab Science Elective • FAS 121, 122, 253, 224

Critical Thinking 7. Read and analyze complex ideas. 8. Locate, evaluate and apply research information. 9. Evaluate and present well-reasoned arguments.	• FAS 112 • College Rubrics • CAAP • Critical Thinking Rubric • ENG 299	• ACS 100 • Lab Science Elective • Social Sciences/ Humanities Elective • FAS 233, 289

General Education Competencies Results

This section presents the general education competencies results. The Mesalands Community College created rubrics were used as the measurement tool each time the specific competency was evaluated during the program.

Measurement Tool: Writing Across the Curriculum College Rubric FAS 112

General Education Objective(s): 1

Goal Results: 90% "Excellent"/"Proficient"/ "Adequate" ENG 102(No ENG 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 1.1.1		5	2	
• 1.1.2		5	2	
• 1.1.3		5	2	
• 1.2.1		5	2	
• 1.2.2		5	2	
• 1.2.3		5	2	
• 1.3.1	1	4	2	
• 1.3.2	1	4	2	
• 1.4.1		4	2	1
• 1.4.2		4	3	
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2011-2012				
• 1.1.1	1(1)	1(1)	(3)	1
• 1.1.2	1(1)	1(2)	(2)	1
• 1.1.3	1(1)	1(1)	(3)	1
• 1.2.1	1(1)	1(2)	(2)	1
• 1.2.2	1(1)	1(1)	(3)	1
• 1.2.3	1(1)	1(1)	(3)	1

• 1.3.1	NA			
• 1.3.2	NA			
• 1.4.1	1(1)	1(1)	(3)	1
• 1.4.2	2	1(2)	(2)	1
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2010-2011				
• 1.1.1	4(1)	3(4)	(2)	
• 1.1.2	2(2)	4(2)	1(3)	
• 1.1.3	1(1)	5(3)	1(3)	
• 1.2.1	2	4(4)	1(3)	
• 1.2.2	4	3(4)	(3)	
• 1.2.3	3	4(5)	2	
• 1.3.1	NA			
• 1.3.2	NA			
• 1.4.1	1	4(3)	2(4)	
• 1.4.2	2	4(3)	1(4)	

Measurement Tool: Oral Presentation College Rubric FAS 112

General Education Objective(s): 2

Goal Results: 90% “Excellent(4)”/”Proficient(3)”/ ”Adequate(2)”

Legend: COMM 102(No COMM 102)

Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2011-2012				
• 2.1.1	(3)	(2)	(4)	
• 2.1.2		(5)	(4)	
• 2.1.3	(2)	(3)	(4)	
• 2.2.1		(5)	(4)	
• 2.2.2	(3)	(2)	(4)	
• 2.2.3	(3)	(4)	(2)	
• 2.3.1	(4)	(3)	(2)	
• 2.3.2	(4)	(5)		
• 2.3.3	NA			
• 2.4.1	(4)	(6)		
• 2.4.2	(4)	(6)		
• 2.4.3	(4)	(4)	(1)	
• 2.5.1	NA			
• 2.5.2	NA			
• 2.5.3	(3)	(2)	(4)	

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2010-2011				
• 2.1.1	1	5(5)	2(1)	
• 2.1.2		5(4)	3(2)	
• 2.1.3	3	2(4)	3(2)	
• 2.2.1		6(3)	2(3)	
• 2.2.2	1	6(3)	1(3)	
• 2.2.3	2	5(4)	(3)	
• 2.3.1	2	6(2)	(4)	
• 2.3.2	4	4(4)	(2)	
• 2.3.3	NA			
• 2.4.1	1(1)	7(5)		
• 2.4.2	2(1)	6(5)		
• 2.4.3	6(2)	2(3)	(1)	
• 2.5.1	NA			
• 2.5.2	NA			
• 2.5.3	2(1)	6(4)	(1)	

Measurement Tool: Critical Thinking College Rubric
FAS 112

General Education Objective(s): 6

Goal Results: 90% “Excellent(4)”/”Proficient(3)”/ ”Adequate(2)”

Legend: Laboratory Science(No Lab Sci)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2011-2012				
• 6.1.1	1(2)	(2)	(4)	
• 6.1.2	1(2)	(2)	(4)	
• 6.1.3	1(2)	(2)	(4)	
• 6.2.1	1	(4)	(4)	
• 6.2.2	1(3)	(5)		
• 6.2.3	1(3)	(5)	1	
• 6.3.1		1(4)	(4)	
• 6.3.2	1	(6)	(2)	
• 6.3.3	1(2)	(3)	(3)	

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2010-2011				
• 6.1.1	1	4(4)	1(4)	
• 6.1.2	1	4(6)	1(2)	
• 6.1.3	1	4(6)	1(2)	
• 6.2.1	2	2(7)	2(1)	
• 6.2.2	2(3)	2(5)	2	
• 6.2.3	2(1)	3(7)	1	
• 6.3.1		4(4)	2(4)	
• 6.3.2	1	5(4)	1(4)	
• 6.3.3	1(2)	4(5)	1(1)	

Measurement Tool: ACT Collegiate Assessment of Academic Proficiency (CAAP)
General Education Objective(s): 1, 4-9
Goal Results: 50%
Legend: n (Mean Score)

Year	Writing	Math	Reading	Critical Thinking	Science
2012-2013	1(61%)	1(56%)	1(66%)	1(64%)	1(63%)
2011-2012	2(4.5%)	2(35%)	2(27%)	2(11%)	2(7.5%)
2010-2011	1(48%)	N/A	1(33%)	1(56%)	1(13%)
2009-2010	1(39%)	N/A	2(33%)	1(25%)	1(21%)

Measurement Tool: GEA College Rubric
General Education Objective(s): 1, 2, 3
Goal Results: 100% “excellent (4)”, “proficient (3)” or “adequate (2)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 1	1	1	100%(mean=2.40)
• 2	1	0	0%(mean=1.75)
• 3	1	1	100%(mean=5.00)*
2009-2010			
• 1	4	3	75%(mean=2.18)
• 2	4	4	100%(mean=2.45)
• 3	4	4	100%(mean=2.87)*

1 Present ideas in writing.
2 Present ideas orally according to standard usage.
3 Demonstrate application of information technology.

Measurement Tool: GEA College Rubric
General Education Objective(s): 4, 5, 6
Goal Results: 100% “excellent (5)”, “proficient (4)”, or “acceptable (3)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 4	1	0	0%(mean=1.50)
• 5	1	0	0%(mean=2.50)
• 6	1	0	0%(mean=2.25)
2009-2010			
• 4	4	0	0% (mean = 1.5)
• 5	5	2	40% (mean=2.8)
• 6	5	3	60% (mean=3.25)

4 Demonstrate mathematical principles.
5 Demonstrate scientific reasoning.
6 Apply scientific methods to the inquiry process.

Measurement Tool: GEA College Rubric
General Education Objective(s): 7, 8, 9
Goal Results: 100% “excellent (5)”, “proficient (4)”, or “acceptable (3)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010			
• 7	5	3	100%(mean=2.7)
• 8	5	3	60%(mean=2.85)
• 9	5	2	40%(mean=2.75)

7. Read and analyze complex ideas.
8. Locate, evaluate and apply research information.
9. Evaluate and present well-reasoned arguments

Measurement Tool: GEA College Rubric
General Education Objective(s): Critical Thinking-Science Eval.
Goal Results: 100% “excellent (4)”, “proficient (3)” or “acceptable (2)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 7	1	1	100%(mean=2.00)
• 8	1	1	100%(mean=2.00)
• 9	1	1	100%(mean=2.00)

7. Identify and gather information.
8. Analyze and evaluate information.
9. Synthesize and formulate conclusions.

Measurement Tool: GEA College Rubric
General Education Objective(s): Critical Thinking-English Eval.
Goal Results: 100% “excellent (4)”, “proficient (3)” or “acceptable (2)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 7	1	1	100%(mean=2.00)
• 8	1	1	100%(mean=3.00)
• 9	1	1	100%(mean=2.00)

7. Identify and gather information.
8. Analyze and evaluate information.
9. Synthesize and formulate conclusions.

PDSA CYCLE 2010-2011
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

The A.F.A. Certified Farrier exam has been the most widely accepted industry standard for the last 25 years. In the last five years there has been a noticeable shift towards other standards. The reason for this is that the A.F.A. has undergone lots of inner turmoil and has lost most of its membership as farriers in general have moved towards alternatives to the A.F.A. Just in the last year they changed their grading procedure to if a student failed one portion of the test s/he automatically fails all sections. That means I do not get any feedback on the other areas because they are not even graded. I have come to the conclusion that the A.F.A. exams no longer serve the purpose of helping me evaluate student competency and I need to explore other alternatives. Another problem with the A.F.A. and is the main reason industry professionals are moving away from that organization is that they have failed to make changes as the horseshoeing industry has changed.

Goal

My goal for next year is to change to an alternative industry standard. I am working with Chris Gregory of Heartland Shoeing School in adopting a new Industry standard. If that does not prove to be functional I will look into the Brotherhood of Working Farriers certification exams.

Action

Implement new industry testing standards.

Results

The organization that I made contact with in regard to a new form of assessment was the Professional Farriers of America. They are under the leadership of Brian Quinsey, former CEO of the A.F.A. One of their stated goals was the education of future farriers. I made contact with Brian several times during the year to check up on how they were coming with their testing format for setting a standard of competency for farriers. Brian felt confident they would have the new tests in time for my students to take the tests. Unfortunately they were unable to work out all of the bugs in time for my students to take the test. Fortunately for me I had several students who wanted to go to Oklahoma and take the A.F.A. exam. They felt it was important for their careers to have some type of accreditation beyond an associate degree from Mesalands to prove competency to future clients. Both students were able to make it all the way through the exam, so I was able to get some feedback on program strengths and weaknesses. I will continue to look into alternative means of program assessment. I have several options beyond The Professional Farrier's of America. I am an approved tester with the A.F.A. and I might be able to get them to make some changes with their testing format that would allow educators to better utilize the A.F.A. examinations for program evaluation. I have also been in contact with Chris Gregory of Heartland Horseshoeing School. In June 2012, he will be giving his students the Farrier International Testing System (FITS) exam. He is also searching for some type of outside program assessment beyond the A.F.A. I will contact him after his students have taken the exam. If he is satisfied that the FITS is a better exam than the A.F.A., I will see if we can get a FITS exam here. I believe it is critical for the well-being of my program to have some type of program assessment and will continue to research the different venues for 2012-13. If I am unable to find a better alternative than the A.F.A. exam I will continue to use it.

PDSA CYCLE 2011-2012
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

In last year's (2010-11) report, I stated that I was having difficult assessing program strengths and weaknesses from the A.F.A. exam and planned on changing to tests provided by The Professional Farriers of America. Unfortunately they were unable to work out all the bugs in time for the current year, so my students took the A.F.A. exam in Oklahoma. Feedback from the two students who took the A.F.A. exam in Oklahoma was good on the written. They reported the test as easy and that classroom work was adequate. They reported struggling on the shoe board however and felt inadequately prepared on that portion of the test. They were able to pass the exam, but failed in areas such as

boxing and shaping of the shoe. I only had two of three students who graduated take the test, so I had a small test sample. In my results I put the student who did not take the exam as failing. The students who did take the exam were exceptional (above average) students.

Goal

My goal for 2012-13 will be to stress nuances of the shoe board portion of the test. In years past if students struggled in this area it was because they missed too much class or lack of effort on their part. This year I did not emphasize the shoe board as much as I have in the past, because it was a program strength in former years. As a result of less time spent in class and lab this year my students struggled. They understood the basic principles of the test and could make the modifications, but were lacking in some of the small things that testers look at. My failure was in believing that I could cut back on time spent on the shoe board portion and invest it on the written portion. I also started too late in the year in assigning their shoe board and by the time I realized there were deficiencies it was time for the test. As a consequence I was unable to make the necessary changes before they had to turn in their shoe boards for the exam.

Action

I need to go back to teaching and using the same time lines as in previous years on the shoe board. I took some shortcuts on the shoe board because it wasn't the major area of concern and spent more time on the written portion. They did better on the written, but struggled on the shoe board. I will stay with what I am doing preparing them for the written and go back to previous methods of preparing students on the shoe board.

Results

The Professional Farriers of America never followed through on coming up with an industry based test. I was informed by Bryan Quinsey that the organization believed that coming up with a test that was acceptable to everyone was not possible and they would focus on education but not coming up with a standardized test. I did discover however that The Texas Professional Farriers Association had come up with an industry wide accepted test that can be taken online. The Texas Professional Farriers are a subchapter of the American Farriers Association so in future reports A.F.A. standards but test with the Texas chapter. As it turns out of the seven students who were slated to graduate this semester only one was able to meet all of his core educational requirements. This revealed to me that my major area of concern was in students passing core classes. As it turns out I will have all of these students returning. Even the one who graduated is returning for the Gnathology certificate so I will give the Texas test next fall to all 7 and make appropriate changes based on results from the test.

PDSA CYCLE 2012-2013
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

For the last two years I have been focusing on program strengths and weaknesses in regard to students' acquiring the necessary skills to be successful as farriers. The form of assessment was to be an outside industry based skill test. The Professional Farriers of America never adopted a testing format so I will move to the Texas Professional Farriers who have recently adopted a standardized test and use that test next year. For this year I only had one student graduate and he will be back next fall so I will test him with the others. The overriding area of concern in the farrier program is students not fulfilling their general education requirements. The one student graduating has an impressive skill set as do most of his classmates as far as shoeing is concerned but the six other students in his class are a semester to two semesters behind in their general education requirements. As I began to research and look into why students were falling behind in this area I discovered most of them are testing into up to as many as four remedial core classes before they even begin taking core classes. Some of them are not passing the remedial classes nor are they taking any summer classes so they are a year behind in graduating. Over 50% are opting out of the Associates degree for the certificate option. They are satisfied with the skills they have acquired as farriers and feel qualified to begin their careers so are not actually graduating from the program. Either they do not see the importance of finishing their degrees or are discouraged in being able to pass the core classes or some are just not prepared to spend three years here. Having graduating students take an industry based test will be fairly simple to adopt as they can do that now over the internet in 2014. My major area of concern for next year's incoming freshman will be to place my focus on facilitating strategies that will enable students to be successful in core classes.

Goal

My goal for 2013-14 will be twofold. The first goal is to have 3rd semester students take the Texas Farrier on-line test and address any shortcomings they might have. I will use that as a pretest and post-test. The pre-test will serve as a guide as to what I need to focus on with students for their 3rd and 4th semesters. The post-test will be given upon completion of the fourth semester for program evaluation. My primary focus will be in making program changes to address student needs in the area of core education classes.

Action

Results from the Texas online test will guide me into what actions I need to take in regard to farrier skills. As for addressing student failure in passing core education classes I plan on focusing more on utilizing the I-Best program with Joyce Garrett in FAS 111 and FAS 112. I will modify my syllabi to include focusing on giving students more remedial help in attaining success in core requirements. I will then modify my FAS 233 syllabi to pick up the areas I will exclude from FAS 111 and 112. I will drop completely from the program some of the blacksmithing skills required in FAS 233 because they are no longer relevant. The reason some of the blacksmithing skills are no longer relevant is that shoe manufactures are now manufacturing shoes such as the heart bar and modern day farriers are no longer hand making these shoes. Current veterinary practices have also for the most part discontinued using this shoe as a therapeutic measure for laminitis and have moved to Equine digital support shoe. By making these changes I hope to address the problem with students fulfilling core requirements and also modernize my syllabi to be more concurrent with industry changes.

Results

To be presented and analyzed in 2013-2014 report.

STUDENT LEARNING ASSESSMENT PROGRAM REPORT
FINE ARTS
2012-2013

Contemporary artists need strong practical technical proficiency so they can convey conceptual ideas through visual material reality. The Fine Arts program emphasizes the important aesthetic correlation of appropriate media manipulation with manifestation of a desired affective outcome. The program offers hands-on creative experience with a variety of media applications to visual problem solving including: bronze casting, fabrication with a variety of materials, carving, drawing and painting. There is an equal emphasis upon student development of appropriate technical manipulation, individual creative initiative and conceptual awareness and intent.

Bronze sculpture has a strong tradition in Mesalands' foundry; however, other media options are strongly pursued. Exploration in combining several media is encouraged.

Program Objectives

Upon successful completion of the Fine Arts Degree Program:

1. The student will demonstrate the ability to produce fine art by demonstration of technical skills in 2D and/or 3D medium.
2. The student will demonstrate the ability to defend projects using fine art criteria.
3. The student will demonstrate the ability to produce an idiosyncratic body of work for self-promotion.

General Education Competencies

Upon completion of the Fine Arts Degree Program and in addition to the above mentioned program objectives:

1. Students will read, write, listen and use verbal skills to organize and communicate information and ideas in personal and group settings (Communication).
2. Students will demonstrate mathematical principles and scientific reasoning by applying appropriate methods to the inquiry process (Mathematical and Scientific Reasoning).

3. Students will identify, evaluate and analyze evidence to guide decision making and communicate his/her beliefs clearly and accurately (Critical Thinking).

Overview

The Fine Arts assessment plan is in its fourth year and is addressed via the plan→do→study→adjust cycle that begins every other fall term and follows one Fine Arts cohort from first term through graduation.

Program Objectives Assessment Plan

All program objectives are measured with multiple tools. The following **Curriculum Map** outlines those measurement tools and courses in which the program objectives are presented and/or measured:

Program Objective	Measurement Tools	Courses In Which Program Objectives Are Presented and/or Measured
1. The student will demonstrate the ability to produce fine art by demonstration of technical skills in 2D and/or 3D medium.	• Capstone Projects • Capstone Art Show • Contracts	• ART 105 • ART 112 • ART 113 • ART 114 • ART 160 • ART 203 • ART 204 • ART 205 • ART 215 • ART 222 • ART 225 • ART 230 • ART 293
2. The student will demonstrate the ability to defend projects using fine art criteria.	• Capstone Projects • Pre/Post-Test • Critiques	• ART 101 • ART 103 • ART 104 • ART 105 • ART 112 • ART 113 • ART 114 • ART 160 • ART 203 • ART 204 • ART 205 • ART 215

		• ART 222 • ART 225 • ART 230 • ART 293
3. The student will demonstrate the ability to produce an idiosyncratic body of work for self-promotion.	• Capstone Projects • Capstone Art Show • Contracts	• ART 103 • ART 104 • ART 105 • ART 112 • ART 113 • ART 114 • ART 160 • ART 203 • ART 204 • ART 205 • ART 215 • ART 222 • ART 225 • ART 230 • ART 293

Program Objective Results
This section presents the results of those measurement tools identified in the second column above.

Academic Cycle: 2012-13
Measurement Tool: Capstone Project for listed courses
Program Objective(s): 1, 2, 3
Goal Results: 60% or higher Faculty evaluated critique

Course	# of Students Attempting	# Succeeding
ART 101	10	8
ART 103	1	1
ART 104	3	3
ART 112	7	7
ART 113		
ART 205	3	3
ART 215	6	6
ART 222	1	1
ART 225	4	4

Academic Cycle: 2012-13
Measurement Tool: Capstone Art Show for listed courses
Program Objective(s): 1, 3
Goal Results: 60% or higher Faculty evaluated critique

Course	# of Students Attempting	# Succeeding
ART 101	10	8
ART 103	1	1
ART 104	3	3
ART 112	7	7
ART 205	3	3
ART 215	6	6
ART 222	1	1
ART 225	4	4
ART 230	2	2
ART 293	4	3

Academic Cycle: 2012-13
Measurement Tool: Critiques for listed courses
Program Objective(s): 2
Goal Results: 60% or higher Faculty/student evaluated critique

Course	# of Students Attempting	# Succeeding
ART 103	1	1
ART 104	3	3
ART 112	7	7
ART 113	3	2
ART 114	8	8
ART 205	3	3
ART 215	6	6
ART 222	1	1
ART 225	13	13
ART 230	4	4

Academic Cycle: 2012-13
Measurement Tool: Pre-Test/Post Test Results for listed courses
Program Objective(s): 2
Goal Results: 50% or higher passing score

Course	# of Students	Pre-test Average	Post-test Average	# Succeeding
ART 101	24[10]	36 %[20%]	81%[68%]	14[10]
ART 103	1	43%	72%	1

Academic Cycle: 2012-13
Measurement Tool: Contracts for listed courses
Program Objective(s): 1, 3
Goal Results: 60% or higher per student completion rate

Course	# of Students Attempting	# Fulfilling Contracts
ART 112	7	7
ART 113	3	2
ART 114	5	5
ART 205	3	1
ART 215	6	5
ART 222	1	1
ART 225	13	12
ART 230	4	4

Academic Cycle: 2011-12
Measurement Tool: Capstone Project for listed courses
Program Objective(s): 1, 2, 3
Goal Results: 60% or higher Faculty evaluated critique

Course	# of Students Attempting	# Succeeding
ART 101	20	14
ART 103	1	1
ART 104	4	3
ART 112	4	4
ART 113	3	2
ART 205	5	4
ART 215	7	7
ART 222	3	3
ART 225	9	8

Academic Cycle: 2011-12
Measurement Tool: Capstone Art Show for listed courses
Program Objective(s): 1, 3
Goal Results: 60% or higher Faculty evaluated critique

Course	# of Students Attempting	# Succeeding
ART 101	22	20
ART 103	1	1
ART 104	4	3
ART 112	4	4
ART 205	5	4
ART 215	7	7
ART 222	3	3
ART 225	9	7
ART 230	2	2
ART 293	1	1

Academic Cycle: 2011-12
Measurement Tool: Critiques for listed courses
Program Objective(s): 2
Goal Results: 60% or higher Faculty/student evaluated critique

Course	# of Students Attempting	# Succeeding
ART 103	1	1
ART 104	4	3
ART 112	4	4
ART 113	3	2
ART 114	5	5
ART 205	5	4
ART 215	7	7
ART 222	3	3
ART 225	9	9
ART 230	2	2

Academic cycle: 2011-12
Measurement Tool: Pre-Test/Post Test Results for listed courses
Program Objective(s): 2
Goal Results: 50% or higher passing score

Course	# of Students	Pre-test Average	Post-test Average	# Succeeding
ART 101	14	.36	8.1	14
ART 103	1	0	10	1

Academic cycle: 2011-12
Measurement Tool: Contracts for listed courses
Program Objective(s): 1, 3
Goal Results: 60% or higher per student completion rate

Course	# of Students Attempting	# Fulfilling Contracts
ART 112	4	3
ART 113	3	2
ART 114	5	5
ART 205	5	4
ART 215	6	6
ART 222	3	3
ART 225	9	8
ART 230	4	4

Evaluation for Senior Capstone Show

Each graduate must execute senior capstone show before graduation. The show will include past capstone projects for previous classes as well as work completed in last semester. Student will present defense of the work. Grade is determined by rubric of 5-1 with 5 being excellent and 1 being unacceptable

Academic Year	# of students	Media Used	Defense	Creativity	Craftsmanship	Deadlines
2010-2011	1	2D and 3D	4	4.5	4.5	4
2011-2012	1	2D and 3D	4	5	3.5	3

General Education Competencies Assessment Plan

General education competencies are measured with multiple tools.
The following **Curriculum Map** outlines those measurement tools and courses in which the program objectives are presented and/or measured:

General Education Competencies	Measurement Tools	Courses In Which Program Objectives Are Presented and/or Measured
Communication 1. Writing. 2. Oral Presentation. 3. Information technology.	• ENG 299 • CAAP • Writing Across the Curriculum	• ACS 100 • CIS 101 • COM 102 • ENG 102 • Lab Science Elective • Social/Behavioral Science • Humanities/Fines Arts Elective • ART 101
Mathematical and Scientific Reasoning 4. Mathematical Reasoning. 5. Scientific Methodology	• ENG 299 • CAAP	• Lab Science Elective
Critical Thinking 6. Critical Thinking	• ENG 299 • CAAP • Capstone Project	• ACS 100 • Lab Science Elective • Social Sciences/Humanities Elective • ART 101 • ART 103 • ART 104

General Education Competencies Results

This section presents the general education competencies results. The Mesalands Community College created rubrics were used as the measurement tool each time the specific competency was evaluated during the academic course of study.

Measurement Tool: GEA College Rubric
General Education Objective(s): 1, 2, 3
Goal Results: 100% "excellent (4)", "proficient (3)" or "adequate (2)"

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010			
• 1	1	0	0%(mean=1.75)
• 2	1	0	0%(mean=2.4)
• 3	1	0	0%(mean=1.64)

1 Present ideas in writing.
2 Present ideas orally according to standard usage.
3 Demonstrate application of information technology.

Measurement Tool: GEA College Rubric
General Education Objective(s): 4, 5, 6
Goal Results: 100% "excellent (5)", "proficient (4)" or "acceptable (3)"

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010			
• 4	1	0	0% (mean=2.0)
• 5	1	1	100%(mean=4.5)
• 6	1	0	0%(mean=2.0)

4 Demonstrate mathematical principles.
5 Demonstrate scientific reasoning.
6 Apply scientific methods to the inquiry process.

Measurement Tool: GEA College Rubric
General Education Objective(s): 7, 8, 9
Goal Results: 100% “excellent (5)”, “proficient (4)” or “acceptable (3)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010 • 7 • 8 • 9	 1 1 1	 1 0 1	 100%(mean=4.5) 0%(mean=2.0) 100%(mean=3.0)

7. Read and analyze complex ideas.
8. Locate, evaluate and apply research information.
9. Evaluate and present well-reasoned arguments

Year	Writing	Math	Reading	Critical Thinking	Science
2012-2013	2(62.5%)	2(53%)	2(62.5%)	2(60.5%)	2(55.5%)
2009-2010	N/A	1(66%)	N/A	N/A	N/A

Measurement Tool: Writing Across the Curriculum College Rubric
General Education Objective(s): 1
Goal Results: 90% “Excellent(4)”/”Proficient(3)”/ ”Adequate(2)”
Legend: ENG 102(No ENG 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
Spring 2013 • 1.1.1 • 1.1.2 • 1.1.3	4(2) 4(2) 4(2)	1(1) 1(1) 1(1)	0(0) 0(0) 0(0)	2(0) 2(0) 2(0)
• 1.2.1 • 1.2.2 • 1.2.3	4(2] 4(2) 4(2)	1(1) 1(1) 1(1)	0(0) 0(0) 0(0)	2(0) 2(0) 2[0)
• 1.3.1 • 1.3.2	1[1) 2(2)	4(1) 3(1)	0(1) 0(0)	2(0) 2(0)
• 1.4.1 • 1.4.2	3(1) 4(1]	2(1) 1(1)	0(1) 0(1)	2[0) 2(0]
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
Fall 2012 • 1.1.1 • 1.1.2 • 1.1.3	1(0) 1(0) 1(0)	7(0) 7(0) 7(0)	7(6) 7(6) 6(5)	6(1) 6(1) 6(1)

• 1.2.1 • 1.2.2 • 1.2.3	1(0) 1(0) 1(0)	7(0) 7(0) 7(0)	7(6) 7(6) 7(6)	6(1) 6(1) 6(1)
• 1.3.1 • 1.3.2	1(0) 1(0)	7(0) 7(0)	7(6) 7(6)	6(1) 6(1)
• 1.4.1 • 1.4.2	1 1	4(0) 7(2)	6(4) 6(5)	10(5) 7(2)
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2011-2012 • 1.1.1 • 1.1.2 • 1.1.3	 7(3) 7(2) 7(2)	 10(5) 8(5) 9(4)	 6(1) 8(1) 8(2)	 2(0) 2(0) 1(0)
• 1.2.1 • 1.2.2 • 1.2.3	7(4) 7(4) 8(4)	9(3) 11(3) 4(2)	8(1) 5(1) 7(20	1 2 1
• 1.3.1 • 1.3.2	0() 6(6)	(2) 5()	11(2) 1()	2(2) 1()
• 1.4.1 • 1.4.2	6(2) 5(3)	10(4) 9(3)	8(2) 9(1)	2() 1(1)
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2010-2011 • 1.1.1 • 1.1.2 • 1.1.3	 1(1) 1(1) 1(1)	 6 6 7	 2(2) 2(2) 2(2)	 1 1 0
• 1.2.1 • 1.2.2 • 1.2.3	1(1) 1(1) 1(1)	6(0) 7(0) 7(0)	2(2) 1(2) 2(2)	1 1 0
• 1.3.1 • 1.3.2	0(0) 0(0)	6 7	3(1) 2(1)	1(2) 1(2)
• 1.4.1 • 1.4.2	0(0) 1(0)	7(2) 7(2)	3(1) 2(1)	0(0) 0(0)

PDSA CYCLE 2009-2010
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

Students are uncomfortable doing critiques in front of an audience.
Attendance is the main problem in getting students to compete work.

Goal

Make students more comfortable doing critiques with continued emphasis on critiques and personal performance. Encourage students to attend classes so they can achieve deadlines for finishing work.

Action Plan

Increase the number of class critiques students are required to participate in.
Make attendance 10% of final grade.

Results

Four critiques were held. One of the four critiques had a written component which could be used to promote students' art work. Students do not like writing about their art. Attendance was not made 10% of the final grade as attending class should be expected. If attendance was poor, up to one letter grade (10%) was deducted from final grade instead. When students had poor attendance, it did not seem to matter to the students about overall grades or performance.

PDSA CYCLE 2010-2011
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

Students have trouble completing deadlines for assignments.

Goal

Encourage students to achieve deadlines for finishing work.

Action Plan

Break assignments into smaller pieces so students feel like they are accomplishing more and do not become overwhelmed.

Results from 2011-12

Whether or not assignments were smaller, students were not interested especially if attendance was poor. Students who were present normally, seems to retain more in smaller bits. Will try again.

PDSA CYCLE 2011-2012
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

Attendance is the basic problem. When students miss classes, they don't hear lectures, miss assignments and as a result, have trouble finishing assignments on time if at all.

Goal

Students attend classes regularly to retain more in class work, lectures and verbally participate in class discussions.

Action Plan

Give regular weekly quiz to encourage student attendance.

Results

Weekly quizzes did not seem to be much of an incentive for attendance. Slight improvement in attendance on quiz days but less attendance on non-quiz days.

PDSA CYCLE 2012-2013
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

In the 3 dimensional courses, 10 % of students do well until they begin to miss classes. Once they started missing (missing 70 % of classes), they did not come back.

In Art Appreciation 101, 33% of students had a greater problem with consistent attendance by missing 60 % or less classes. Referrals did not seem to help either group.

Goal

Keep students engaged and wanting to come to class.

Action Plan

Give students greater choice in what assignments they chose to encourage more personal investment.

Results

To be presented and analyzed in 2013-2014 report.

Student Learning Assessment Program Report
Natural Sciences
2012-2013

The Natural Science program at Mesalands Community College provides educational options in either paleontology or geology.

The option in paleontology provides a primary education in the earth and biological sciences with an emphasis on paleontology. Students will be exposed to the fundamentals of geology, biology, and paleontology. The paleontology option emphasizes practical knowledge of fossils through field trips and laboratory work. Courses take advantage of the rich natural resources of the mesalands country of eastern New Mexico, a high technology science laboratory, and the College's paleontology museum, the Mesalands Dinosaur Museum. The Paleontology option emphasizes fossils, particularly their collection and study.

The option in geology provides a primary education in the natural sciences. Students will be exposed to the fundamentals of geology, biology, and computer science. The geology program emphasizes practical knowledge through field trips and laboratory work. Courses take advantage of the rich natural resources of the mesa country of eastern New Mexico, a state-of-the-art, computer-interactive science laboratory, and the College's natural history museum, the Mesalands Dinosaur Museum.

Program Objectives

Upon completion of the Natural Sciences Associate Degree Program:

1) The student will demonstrate an in-depth understanding of the concepts and associated geological processes of the Theory of Plate Tectonics.

2) The student will identify common minerals and rocks, and explain their genesis and the environments in which they form.

3) The student will demonstrate an understanding of geological time and the principles of stratigraphy.

4) The student will correctly apply appropriate field and laboratory techniques to successfully complete assigned projects.

5) The student will demonstrate the skills to conduct and present a scientific research project under guidance of the instructor.

In addition, upon completion of the Natural Sciences Associate Degree Program with option Paleontology

6) The student will demonstrate an understanding of anatomical structures and their function in the principal groups of invertebrates and vertebrates.

7) The student will demonstrate a broad-based understanding of the components of the Theory of Evolution.

8) The student will demonstrate an understanding of the principles of museum displays and collections, and of conservation and curation of natural history specimens.

In addition, upon completion of the Natural Sciences Associate Degree Program with option Geology

9) The student will demonstrate an understanding of the genesis, occurrence, and exploitation of geological resources (mineral, energy, water).

10) The student will demonstrate an understanding of the nature of geological hazards, and demonstrate the ability to evaluate such hazards.

General Education Competencies

Upon completion of the Natural Sciences Associate Degree Program and in addition to the above mentioned program objectives:

1) Students will read, write, listen and use verbal skills to organize and communicate information and ideas in personal and group settings (Communication).

2) Students will demonstrate mathematical principles and scientific reasoning by applying appropriate methods to the inquiry process (Mathematical and Scientific Reasoning).

3) Students will identify, evaluate and analyze evidence to guide decision making and communicate his/her beliefs clearly and accurately (Critical Thinking).

Overview

The Natural Sciences assessment plan is in its fourth year and is addressed via the plan→do→study→adjust cycle that begins every fall term and follows one Natural Sciences cohort from first term through graduation.

Program Objectives Assessment Plan

All program objectives are measured with multiple tools. The following **Curriculum Map** outlines those measurement tools and courses in which the program objectives are presented and/or measured:

PROGRAM OBJECTIVE	MEASUREMENT TOOLS	COURSES IN WHICH PROGRAM OBJECTIVES ARE PRESENTED AND/OR MEASURED
1) The student will demonstrate an in-depth understanding of the concepts and associated geological processes of the Theory of Plate Tectonics.	• Laboratory Exercise • Pre/Post-Test • Faculty-prepared Examination	• GEOL 151 • GEOL 152
2) The student will identify common minerals and rocks, and explain their genesis and the environments in which they form.	• Laboratory Exercise • Pre/Post-Test • Faculty-prepared Examination	• GEOL 151 • GEOL 152 • GEOL 190 • GEOL 290 • GEOL 293
3) The student will demonstrate an understanding of geological time and the principles of stratigraphy	• Laboratory Exercise • Pre/Post-Test • Faculty-prepared Examination	• GEOL 151 • GEOL 152 • GEOL 210
4) The student will correctly apply appropriate field and laboratory techniques to successfully complete assigned projects.	• Laboratory Exercise • Field Exercise • Program-specific Rubrics • Capstone Project • Museum and Laboratory Projects	• GEOL 118 • GEOL 120 • GEOL 122 • GEOL 190 • GEOL 290 • GEOL 293 • Museum volunteer activities
5) The student will demonstrate the skills to conduct and present a scientific research project under guidance of the instructor.	• Research Project • Scientific Report • Oral and Poster Presentations	• GEOL 190 • GEOL 290 • GEOL 289
6) The paleontology student will demonstrate an understanding of	• Laboratory Exercise • Pre/Post-Test • Faculty-prepared	• GEOL 152 • GEOL 120 • GEOL 210

anatomical structures and their function in the principal groups of invertebrates and vertebrates.	Examination • Class Presentations • Museum and Laboratory Projects	• GEOL 289 • GEOL 293 • GEOL 293K • BIOL 113 • BIOL 250 • Museum volunteer activities
7) The paleontology student will demonstrate a broad-based understanding of the components of the Theory of Evolution.	• Class Presentations • Laboratory Exercise • Pre/Post-Test • Faculty-prepared Examination	• BIOL 113 • GEOL 141 • GEOL 152 • GEOL 210 •
8) The paleontology student will demonstrate knowledge of the principles of museum displays and collections, and of conservation and curation of natural history specimens.	• Faculty-prepared Examination • Pre/Post-Test • Class Assignment • Museum and Laboratory Projects	• GEOL 105 • GEOL 120 • GEOL 190 • GEOL 290 • GEOL 289 • Museum volunteer activities
9) The geology student will demonstrate an understanding of the genesis, occurrence, and exploitation of geological resources (mineral, energy, water).	• Faculty-prepared Examination • Pre/Post-Test • Laboratory Exercise	• GEOL 141 • GEOL 151 • GEOL 230
10) The geology student will demonstrate an understanding of the nature of geological hazards, and demonstrate the ability to evaluate such hazards.	• Faculty-prepared Examination • Pre/Post-Test • Laboratory Exercise • Case Study	• GEOL 141 • GEOL 151 • GEOL 230

Program Objective Results

This section presents the results of those measurement tools identified in the second column above.

Measurement Tool: Chapter Test “Plate Tectonics”, GEOL 151 Physical Geology
Program Objective(s): 1
Goal Results: 100% pass rate; cut score is 80%

Reporting Period	# of students attempting	# passing	% passing
2010-2011	1	1	100% (mean=87%)
2011-2012	2	2	100% (mean=83%)
2012-2013	test not administered	n/a	n/a

Measurement Tool: Laboratory Exercise “Plate Boundaries of an Unknown Ocean and Continent”, GEOL 151 Physical Geology
Program Objective(s): 1
Goal Results: 100% pass rate; cut score is 80%

Reporting Period	# of students attempting	# passing	% passing
2010-2011	1	1	100% (mean=97%)
2011-2012	exercise not conducted	n/a	n/a
2012-2013	1	0	0% (mean=64%)

Measurement Tool: Laboratory Exercise “Plate Tectonics and the Origin of Magma”, GEOL 151 Physical Geology
Program Objective(s): 1
Goal Results: 100% pass rate; cut score is 80%

Reporting Period	# of students attempting	# passing	% passing
2010-2011	1	0	0% (mean=59%)
Remark: The overall failure of the student is due to the last-minute-submission of an incomplete exercise. The completed parts of the exercise scored 77%.			
2011-2012	1	1	100% (mean=33%)
2012-2013	1	1	100% (mean=74%)

Measurement Tool: Laboratory Exercise “Seafloor Spreading”, GEOL 152 Historical Geology
Program Objective(s): 1
Goal Results: 100% pass rate; cut score is 80%

Reporting Period	# of students attempting	# passing	% passing
2009-2010	4	3	75% (mean=83%)
2010-2011	1	1	100% (85%)
2011-2012	3	2	66.6% (66.6%)
2012-2013	1	1	100% (85%)

Measurement Tool: 4 Laboratory Exercises (identification and genesis of minerals, igneous, sedimentary and metamorphic rocks)
GEOL 151 Physical Geology
Program Objective(s): 2
Goal Results: 100% pass rate; cut score is 80%

Reporting Period	# of students attempting	# passing	% passing
2010-2011	1	1	100% (mean=97%)
2011-2012	2	2	100% (mean=94%)
2012-2013	1	1	100% (mean=92%)

Measurement Tool: Final Exam Section (relative dating, conformities)
GEOL 151 Physical Geology
Program Objective(s): 3
Goal Results: 100% pass rate; cut score is 80%

Reporting Period	# of students attempting	# passing	% passing
2010-2011	1	1	100% (mean=100%)
2011-2012	2	1	50% (mean=86%)
2011-2012	1	1	100% (mean=72%)

Measurement Tool: Laboratory Exercise “Geological Time”
GEOL 151 Physical Geology
Program Objective(s): 3
Goal Results: 100% pass rate; cut score is 80%

Reporting Period	# of students attempting	# passing	% passing
2010-2011	1	1	100% (mean=98%)
2011-2012	2	2	100% (mean=85%)

Measurement Tool: Laboratory Exercise “Relative Dating”, GEOL 152 Historical Geology
Program Objective(s): 3
Goal Results: 80% pass rate; cut score is 75%

Reporting Period	# of students attempting	# passing	% passing
2009-2010	4	4	100% (mean=83.5%)
2010-2011	1	1	100% (mean=95%)
2011-2012	2	2	100% (mean=100%)
2012-2013	1	1	100% (mean=87%)

Measurement Tool: Practical Assignment: Construction of a Storage Plaster Jacket
GEOL 105 Introduction to Museum Science
Program Objective(s): 4, 8
Goal Results: 100% pass rate; Pass/Fail

Reporting Period	# of students attempting	# passing	% passing
2010-2011	3	3	100%
2012-2013	2	2	100%

Measurement Tool: Practical Assignment: Stabilization and Preparation of Eocene Fish Slab
GEOL 105 Introduction to Museum Science
Program Objective(s): 4, 8
Goal Results: 100% pass rate; Pass/Fail according to criteria defined in rubric

Reporting Period	# of students attempting	# passing	% passing
2010-2011	3	2	67%

Remarks: The failing student did not pass because he tried an inappropriate tool for this kind of preparation. Subsequently, he was given a second assignment which he passed.

Measurement Tool: Field exercise: Construction of a Field Plaster Jacket
GEOL 120 Paleontology Field Exploration
Program Objective(s): 4
Goal Results: 100% pass rate; Pass/Fail according to criteria defined in rubric

Reporting Period	# of students attempting	# passing	% passing
2010-2011	3	2	66%
2011-2012	0	0	N/A
2012-2013	2	2	100%

Measurement Tool: Field Assignment: Retrieval of Fossil in Sandstone Using Mechanical Tools
GEOL 120 Paleontology Field Exploration (Summer 2010, 2011)
Museum Volunteer Activity (Fall 2011, Summer 2012)

Program Objective(s): 4

Goal Results: 100% pass rate; Pass/Fail according to criteria defined in rubric

Reporting Period	# of students attempting	# passing	% passing
2010-2011	3	3	100%
2011-2012 (Summer)	1	1	100%
2011-2012 (Fall)	1	1	100%
2012-2013 (Summer)	1	0	0%

Remarks: The student took apart parts of the admittedly poorly preserved and very difficult to handle fossil, despite explicit instruction not to do so, and subsequently failed to reassemble these parts. Although the preparation was overall successful, the loss of information due to inappropriate handling is the reason for failing.

Measurement Tool: Lab Exercise: Preparation of Fossil with Airtool
GEOL 120 Paleontology Field Exploration
Museum Volunteer Activity (Fall 2012)

Program Objective(s): 4

Goal Results: 100% pass rate; Pass/Fail according to criteria defined in rubric

Reporting Period	# of students attempting	# passing	% passing
2010-2011	3	3	100%
2011-2012	1	1	100%
2012-2013 (volunteer)	1	1	100%
2012-2013	1	1	100%

Measurement Tool: Lab Exercise: Reassembling of Fragmentary Recovered Fossil
GEOL 120 Paleontology Field Exploration
Museum Workstudy Activity (Fall 2012)

Program Objective(s): 4

Goal Results: 100% pass rate; Pass/Fail according to criteria defined in rubric

Reporting Period	# of students attempting	# passing	% passing
2010-2011	3	3	100%
2011-2012	1	1	100%
2012-2013	1	0	0%
2012-2013	1	1	100%

Measurement Tool: Field/Lab Assignment: Data Recording and Storage during Fossil Recovery
GEOL 120 Paleontology Field Exploration

Program Objective(s): 4

Goal Results: 100% pass rate; cut rate is 90% according to criteria defined in rubric

Reporting Period	# of students attempting	# passing	% passing
2010-2011	3	3	100% (mean=97%)
2011-2012	1	1	100%
2012-2013	1	1	100%

Measurement Tool: Scientific Report/Practical Application: "Construction of Identification Key for Pennsylvanian Fern Leaves"
GEOL 189 Independent Study in Geoscience

Program Objective(s): 5

Goal Results: 100% pass rate; cut score is 80% as defined by project-specific criteria

Reporting Period	# of students attempting	# passing	% passing
2010-2011	1	1	100% (mean=100%)

Measurement Tool: Scientific Report: “Morphological Description of Phytosaur Osteoderms”
GEOL 189 Independent Study in Geoscience
Program Objective(s): 5
Goal Results: 100% pass rate; cut score is 80% measured by criteria deemed acceptable in published descriptions

Reporting Period	# of students attempting	# passing	% passing
2010-2011	1	1	100% (mean=90%)

Measurement Tool: Written Report “Scientific article summary”
GEOL 289 Independent Study in Geosciences
Program Objective(s): 5
Goal Results: 100% pass rate; pass/fail score according to rubric score

Reporting Period	# of students attempting	# passing	% passing
2011-2012 (Fall)	3	3	100% (mean=100%)
2012-2013 (Fall)	2	2	100%
2012-2013 (Spring)	assignment not given	n/a	n/a

Measurement Tool: Exercise “Scientific illustration”
GEOL 289 Independent Study in Geosciences
Program Objective(s): 5
Goal Results: 100% pass rate; pass/fail score measured by criteria deemed acceptable in published illustrations

Reporting Period	# of students attempting	# passing	% passing
2011-2012 (Spring)	3	2	66% (mean=66%)
2013-2013 (Fall)	2	2	100%
2013-2013 (Spring)	2	1	50%

Remarks: Failing student did not finish assignment.

Measurement Tool: Lab Exercise: Anatomy of Corals
GEOL 210 History of Life
Program Objective(s): 6
Goal Results: 80% pass rate; cut score is 80%

Reporting Period	# of students attempting	# passing	% passing
2010-2011	3	2	66% (mean=76%)
2012-2013	2	2	100%

Measurement Tool: Oral Recapitulation (Evolutionary History and Functional Interpretation of Anatomical Characters in Archosaurs [phytosaurs, aetosaurs, basal dinosaurs])
GEOL 120 Paleontology Field Exploration
Program Objective(s): 6
Goal Results: 100% pass rate; Pass/Fail

Reporting Period	# of students attempting	# passing	% passing
2010-2011	3	3	100%
2011-2012	1	1	100%

Measurement Tool: Lab Exercise “Homology of Vertebrate Forelimb”
BIOL 113 Introduction to Biology
Program Objective(s): 6
Goal Results: 100% pass rate; cut score is 80%

Reporting Period	# of students attempting	# passing	% passing
2011-2012	1	1	100% (mean=75%)

Measurement Tool: Two chapter tests “Evolution of Populations; Evolution of Diversity”
BIOL 113 Introduction to Biology
Program Objective(s): 7
Goal Results: 100% pass rate; cut score is 80%

Reporting Period	# of students attempting	# passing	% passing
2011-2012	1	1	100% (mean=80%)

Measurement Tool: Final Exam Section (Principles of Evolution)
GEOL 210 History of Life
Program Objective(s): 7
Goal Results: 100% pass rate; cut score is 80%

Reporting Period	# of students attempting	# passing	% passing
2010-2011	3	3	100% (mean=88%)

Measurement Tool: Oral Final Exam Section (Explaining of Principles of Evolution using an Example)
GEOL 210 History of Life
Program Objective(s): 7
Goal Results: 100% pass rate; pass/fail score

Reporting Period	# of students attempting	# passing	% passing
2012-2013	2	2	100%

Measurement Tool: Practical/Written Assignment: Condition Report "Identification of Eocene fossil material for display"
GEOL 105 Introduction to Museum Science
Program Objective(s): 8
Goal Results: 100% pass rate; Pass/Fail

Reporting Period	# of students attempting	# passing	% passing
2010-2011	3	3	100%

Measurement Tool: Practical/Written Assignment: Curation of natural history specimens (process of inventorizing)
GEOL 105 Introduction to Museum Science (Fall 2010, 2012)
GEOL 270 Invertebrate Paleontology (Spring 2011)
Program Objective(s): 8
Goal Results: 100% pass rate; Pass/Fail

Reporting Period	# of students attempting	# passing	% passing
2010-2011 (Fall)	3	3	100%
2010-2011 (Spring)	1	1	100%
2012-2013 (Fall)	2	2	100%

Measurement Tool: Laboratory Exercise “Coal Property Evaluation”
GEOL 230 Environmental Geology
Program Objective(s): 9
Goal Results: 100% pass rate; cut score is 80%

Reporting Period	# of students attempting	# passing	% passing
2011-2012	1	1	100% (score 98%)

Measurement Tool: Laboratory Exercise “Volcanic Hazard Assessment”
GEOL 151 Physical Geology
Program Objective(s): 10
Goal Results: 100% pass rate; cut score is 80%

Reporting Period	# of students attempting	# passing	% passing
2011-2012	2	1	50% (mean=85%)
2012-2013	1	1	100% (mean=82%)

Remarks: The failing student scored 0% because of failure to submit exercise.

Measurement Tool: 3 Laboratory Exercises “Hazard Evaluation (earthquakes, volcano, hurricane/tsunami)”
GEOL 230 Environmental Geology
Program Objective(s): 10
Goal Results: 100% pass rate; cut score is 80%

Reporting Period	# of students attempting	# passing	% passing
2011-2012	1	1	100% (cumulative score 94%)

General Education Competencies Assessment Plan

General education competencies are measured with multiple tools. The following **Curriculum Map** outlines those measurement tools and courses in which the program objectives are presented and/or measured:

GENERAL EDUCATION COMPETENCIES	MEASUREMENT TOOLS	COURSES IN WHICH PROGRAM OBJECTIVES ARE PRESENTED &/OR MEASURED.
Communication: 1. Present ideas in writing. 2. Present ideas orally according to standard usage. 3. Demonstrate application of information technology.	• GEA College Rubric • CAAP • CAT • Class Presentation	• ACS 100 • GEOL 105 • GEOL 151 • GEOL 152 • GEOL 210 • GEOL 230 • GEOL 190 • GEOL 290 • GEOL 293 • COM 102 • CIS 101 • ENG 102 • ENG 104 • Lab Science Elective • Soc. Sci./Humanities Elective
Mathematical and Scientific Reasoning: 4. Demonstrate mathematical principles. 5. Demonstrate scientific reasoning. 6. Apply scientific methods to the inquiry process.	• GEA College Rubric • CAAP • Laboratory Exercise • Laboratory Report	• GEOL 151 • GEOL 152 • GEOL 190 • GEOL 210 • GEOL 230 • GEOL 289 • GEOL 290 • BIOL 113 • BIOL 250 • Lab Science Elective
Critical Thinking: 7. Read and analyze complex ideas. 8. Locate, evaluate and apply research information. 9. Evaluate and present well-reasoned arguments.	• GEA College Rubric • CAAP • Capstone Project • Laboratory Exercise	• ACS 100 • GEOL 151 • GEOL 152 • GEOL 190 • GEOL 210 • GEOL 230 • GEOL 289 • GEOL 290

		• BIOL 113 • BIOL 250 • Lab Science Elective • Soc. Sci./Humanities Elective

General Education Competencies Results

This section presents the general education competencies results. The Mesalands Community College created rubrics were used as the measurement tool each time the specific competency was evaluated during the program.

Measurement Tool: GEA College Rubric
General Education Objective(s): 1, 2, 3
80% "excellent (4)" or "proficient (3)"

Reporting Period	# of students attempting	# passing	% passing
2010-2011			
• 1	1	1	100%(mean=2.50)
• 2	1	1	100%(mean=3.20)
• 3	1	1	100%(mean=4.00)*
2009-2010			
• 1	1	1	100%(mean=3.0)
• 2	1	1	100%(mean=3.6)
• 3	1	1	100%(mean=4.25)*

1 Present ideas in writing.
2 Present ideas orally according to standard usage.
3 Demonstrate application of information technology.

Measurement Tool: Oral Presentation College Rubric
General Education Objective(s): 2
90% "Excellent(4)"/"Proficient(3)"/ "Adequate(2)"
COMM 102(No COMM 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2010-2011				
• 2.1.1		2 (1)		
• 2.1.2	2		(1)	
• 2.1.3	1	1 (1)		
• 2.2.1	2	(1)		
• 2.2.2		1 (1)	1	
• 2.2.3	1 (1)	1		
• 2.3.1		2 (1)		

• 2.3.2	1	(1)	1	
• 2.3.3	N/A	N/A	N/A	N/A
• 2.4.1	1 (1)		1	
• 2.4.2	1 (1)	1		
• 2.4.3	2 (1)			
• 2.5.1	N/A	N/A	N/A	N/A
• 2.5.2	2 (1)			
• 2.5.3	N/A	N/A	N/A	N/A

Measurement Tool: Oral Presentation College Rubric
GEOL 289, Spring 2012, "Oral synopsis of a scientific article"

General Education Objective(s): 2

90% "Excellent(4)"/"Proficient(3)"/ "Adequate(2)"

COMM 102(No COMM 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2010-2011				
• 2.1.1	(2)	(1)		
• 2.1.2	n/a	n/a	n/a	n/a
• 2.1.3	n/a	n/a	n/a	n/a
• 2.2.1	n/a	n/a	n/a	n/a
• 2.2.2	(1)	(2)		
• 2.2.3	(3)			
• 2.3.1			(3)	
• 2.3.2		(2)	(1)	
• 2.3.3	n/a	n/a	n/a	n/a
• 2.4.1	(2)	(1)		
• 2.4.2	(3)			
• 2.4.3	(3)			
• 2.5.1	n/a	n/a	n/a	n/a
• 2.5.2	n/a	n/a	n/a	n/a
• 2.5.3	n/a	n/a	n/a	n/a

Measurement Tool: GEA College Rubric
General Education Objective(s): 4, 5, 6
90% “excellent (5)” or “proficient (4)”

Reporting Period	# of students attempting	# passing	% passing
2010-2011 • 4 • 5 • 6	1	0	0%(mean=2.00)
2009-2010 • 4 • 5 • 6	1 1 1	0 1 1	0% (mean = 2.5) 100%(mean=4.5) 100%(mean=5.0)

4 Demonstrate mathematical principles.
5 Demonstrate scientific reasoning.
6 Apply scientific methods to the inquiry process.

Measurement Tool: GEA College Rubric
General Education Objective(s): 7, 8, 9
80% “excellent (5)” or “proficient (4)”

Reporting Period	# of students attempting	# passing	% passing
2009-2010 • 7 • 8 • 9	1 1 1	1 0 0	100%(mean=4.75) 0%(mean=3.0) 0%(mean=2.5)

7. Read and analyze complex ideas.
8. Locate, evaluate and apply research information.
9. Evaluate and present well-reasoned arguments

Measurement Tool: GEA College Rubric
General Education Objective(s): Critical Thinking-English Eval.
100% “excellent (4)”, “proficient (3)” or “acceptable (2)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011 • 7 • 8 • 9	1 1 1	1 1 1	100%(mean=3.00) 100%(mean=3.00) 100%(mean=3.00)

7. Identify and gather information.
8. Analyze and evaluate information.
9. Synthesize and formulate conclusions.

Measurement Tool: ACT Collegiate Assessment of Academic Proficiency (CAAP)

General Education Objective(s): 1, 4-9

Goal Results: 50%

Legend: n (Mean Score)

Year	Writing	Math	Reading	Critical Thinking	Science
2012-13	1(59)	1(59)	1(69)	1(62)	1(63)
2010-11	2(80%)	2(85%)	2(72%)	2(84.5%)	2(78%)
2009-10	1(80%)	1(30%)	1(94%)	1(83%)	1(79%)

PDSA CYCLE 2009-2010 ANALYSIS
OPPORTUNITIES FOR IMPROVEMENT

Problem Areas

Objective 5: Research Methods
Scientific Writing

Students have few opportunities to learn how to undertake the step-by-step procedure in scientific research, and how to produce a scientific paper, other than during a capstone project in their last term. Research and scientific writing skills are acquired by continuing practice. Due to time constraints, individual supervision by the faculty proved difficult to achieve.

Goal

Each program student will at the end of the fall semester 2010 produce one scientific paper which presents his original research, written and formatted according to the standards of an established scientific journal.

Action Plan

Initially, the program faculty determined a 2 hour period per week during which he and all program students meet in the lab. This time will be dedicated to research and writing under guidance of the faculty.
Practically, due to severe time constraints of the program instructor, the implementation of the action plan was postponed into spring semester 2011. However, only one program student actually participated in the framework of an independent research project (GEOL 289), while the other two program students could not because of time restrictions by non-academic jobs, in parts also because of other personal commitments.

Results (Spring 2011)

1. An action plan on voluntary basis seems not practicable. In the future, I have to consider to implement the action plan in form of a class (GEOL 289), perhaps even mandatory for obtaining the degree.
2. The time frame of 2 hours per week is not enough to achieve the goals set within one semester. Either the time allocated must be extended, or the scope of the research project or the amount of writing has to be strictly cut down and adapted to the time available. In the student project, even double the amount of time as originally intended was not enough to bring the project to a complete finish.
3. The student, although having years of practical experience and skills and a well-above average knowledge in the field, needed much more guidance as

anticipated. Without explicit cooperative work, rather than only giving instructions (research method) and intensive revisions of the writing (frequently up to two or three consecutive rewriting and corrections of the same paragraph or whole part), the student feels easily lost and becomes demotivated. Essentially, the instructor must be present and active all the time.

4. It is essential to explain the structure of a scientific paper in detail with examples.
5. The student was able to develop the overall structure and single steps of the project satisfactorily on his own account. However, the practical execution of each step needed intensive guidance. Once accomplished, the student was well able to apply (reproduce) the same step to a related question without the supervision of the instructor.
6. Writing proved the most time-consuming part for both student and instructor. Significant improvement took place only after (1) one week of explicit and detailed recapitulation of the anatomical terms and discipline-specific jargon, (2) discussion of examples from the literature, and (3) extensive practicing and revisions.

PDSA CYCLE 2010-2011 ANALYSIS
OPPORTUNITIES FOR IMPROVEMENT

Problem Areas

Objective 5: Research Methods (continued)
Scientific Writing (continued)

Action Plan (Fall 2011)

In Fall 2011, a class GEOL 289 Special Topics in Geosciences (2 credit hours) for students of the paleontology and geology option was designed and implemented to specificially address the problems identified with research methods and scientific writing. It includes structure and analysis of scientific literature, scientific method and research methodology, practical research projects that include scientific writing and illustration assignments, and presentation techniques. The class is planned to be continued each semester.

Results (Fall 2011 to Spring 2012)

The first positive results are reported above (measurement tools “Scientific article summary” and “Scientific illustrations”). However, other important (and unexpected) deficiencies were detected during course assessment. These have to be taken into account and addressed in the future curriculum of GEOL 289, but will cost further time in an already time-constrained class:

1. Student have low skills and cannot work without assistance in Powerpoint and any graphic software, although most had before or were taking concurrently CIS 101.
2. Students have no concept of the metric system when it comes to illustration scales and rescaling.
3. In summarizing the content of scientific articles it came frequently to (unintentional) plagiarism because students have difficulties to reword or condense passages, but rather copy them word by word.
4. Students have problems with proper citations, even after having taken ENG 102 before.

PDSA CYCLE 2011-2012 ANALYSIS
OPPORTUNITIES FOR IMPROVEMENT

Problem Area

Objective 1 Plate Tectonics (s. measurement tools: Laboratory Exercises "Seafloor Spreading" and "Plate Tectonics and the Origin of Magma")

Unsatisfactory assessment outcomes in this objective result predominantly from two reasons:

- Unfamiliarity of students with conversions between the imperial and the metric system (e.g., inches to cm), within the metric systems (e.g., km to m), and from map scales to real distances. This is not a program-specific problem, but the same observations applies to almost all students in science classes.
- Failure of the students to realize the genetic connections between processes at plate boundaries and type of volcanism (= volcanic rocks associated with such boundaries).

Goal

At the end of the spring semester 2013, the passing rate in all measurement tools used for objective 1 will be 100%.

Action Plan (Spring 2012)

The metric system will be the exclusive unit in activities in all class exercises. Throughout all exercises in program classes, a focus point will be have metrics (and conversions) in measurements of distance, surfaces, and volumes, and such components will be included in exercises where they not exist yet. Only metric units will be allowed even in class conversations.
Teaching the causal relationships between plate boundaries and volcanisms will be repeated and elaborated on in a different exercise in the plate tectonic section of GEOL 152 Historical Geology.

Results (Fall 2012)

The goals set in the cycle were not achieved (see Laboratory Exercise “Plate Boundaries of an Unknown Ocean and Continent” above). In addition, the results of the assessment of non-program students, as evidenced by the weak mean values in the measuring tools and by classroom assessment are not satisfactory. Further action is required.

PDSA CYCLE 2012-2013 ANALYSIS

Problem Area

Objective 1: Plate Tectonics (continued)

The goal set in the 2011-2012 PDSA cycle was not achieved.

Action Plan (Spring 2013)

The number of plate tectonic exercises in GEOL 151 Physical Geology will be increased to 7 shorter activities, each addressing a different aspect of the theory (plate boundaries, geographic features and geologic processes correlated with plate boundaries), plus a revised capstone exercise (plate tectonic processes and magmatic activity) will be introduced.

The familiarity of students of GEOL 151 Physical Geology with the metric system and conversions within the metric system will be evaluated by administrating a test in the first week of class. As it is mandatory for students of GEOL 141 Introduction to Environmental Science, students failing all or sections of the test will be required to attend and pass tutoring sessions at the Math-Science Learning Center.

Problem Areas

Objective 5: Research Methods (continued)
Scientific Writing (continued)

Action Plan (Fall 2012 to Spring 2013)

Over the academic year 2012-2013, two Natural Science Program students and one dual enrollment high school student who will enter the program in fall 2013 were enrolled in the research class GEOL 289, Independent Study in Geoscience. A research project was designed and conducted during fall 2012 into spring 2013, with the goal of the students compiling and presenting their research in form of a poster presentation at the end of the semester. In addition to research methods, the instructors also addressed in class theoretical aspects on how to construct a scientific presentation (selecting information and illustrative

material to present, outline of a poster, ways of presentation). The students rehearsed their presentation as a centerpiece during a public evening event at the Dinosaur Museum. Finally, the students presented their poster and explained their research at the National Conference held by Community College Undergraduate Research Initiative (CCURI) at Bethesda, MD, March 21-24, 2013 to participating students and faculty.

Results (Spring 2013)

The execution of the action plan was an unprecedented success. Students experienced “deep learning” (in subjects like vertebrate anatomy or systematics which are not part of the undergraduate curriculum) by doing research and became highly motivated, in particular when they realized during their presentations that the audience was really interested and excited by what they were doing. However, the students needed more guidance than expected from their academic background and experience from previous research classes. There were still substantial deficiencies in the use of PowerPoint and Photoshop as tools for writing up and assembling the poster, which necessitated three hours of practical teaching the basics of PowerPoint (use of text boxes, figure preparation and scaling). Students seriously underestimated the time required to transfer research results into a presentable form. In particular, the scientific text had to be rewritten and intensely modified several times to be clear, precise, and presentable. Initial problems became evident with scientific citations (format) and when a reference is required.

STUDENT LEARNING ASSESSMENT PROGRAM REPORT
PRE-NURSING
2012-2013

The pre-nursing certificate enables students to fulfill the transfer requirements to enter two or four-year nursing programs at other institutions. Students take non-nursing academic courses in science, mathematics, and the humanities for possible matriculation into a professional nursing program. The courses taken will allow the student to build a foundation for nursing courses that will be completed after transfer to a professional nursing program.

General Education Competencies

Upon completion of the Pre-Nursing Certificate:

1. Students will read, write, listen and use verbal skills to organize and communicate information and ideas in personal and group settings (Communication).

2. Students will demonstrate mathematical principles and scientific reasoning by applying appropriate methods to the inquiry process (Quantitative and Scientific Reasoning).

3. Students will identify, evaluate and analyze evidence to guide decision making and communicate his/her beliefs clearly and accurately (Critical Thinking).

Overview

The pre-nursing assessment plan is in its third year and is addressed via a plan→do→study→adjust cycle that begins every fall term and follows one pre-nursing cohort from first term through graduation.

General Education Competencies Assessment Plan

General education competencies are measured with multiple tools.
The following **Curriculum Map** outlines those measurement tools and courses in which the program objectives are presented and/or measured:

General Education Competencies	Measurement Tools	Courses In Which Program Objectives Are Presented and/or Measured
Communication 1. Present ideas in writing. 2. Present ideas orally according to standard usage. 3. Demonstrate application of information technology.	• College Rubrics • CAAP • ENG 299	• ACS 100 • AHS 103 • AHS 110 • BIOL 211 • BIOL 212 • BIOL 222 • COM 101 • COM 102 • CIS 101 • ENG 102 • Lab Science Elective • Social Sciences/ Humanities Elective
Quantitative and Scientific Reasoning 4. Demonstrate mathematical principles. 5. Demonstrate scientific reasoning. 6. Apply scientific methods to the inquiry process.	• College Rubrics • CAAP • ENG 299	• BIOL 211 • BIOL 212 • BIOL 222 • Lab Science Elective • MATH 101 • PSY 101 • PSY104
Critical Thinking 7. Read and analyze complex ideas. 8. Locate, evaluate and apply research information. 9. Evaluate and present well-reasoned arguments.	• College Rubrics • CAAP • ENG 299	• BIOL 211 • BIOL 212 • BIOL 222 • Lab Science Elective • PSY 101 • PSY104 • Social Sciences/ Humanities Elective

General Education Competencies Results

This section presents the general education competencies results. The Mesalands Community College created rubrics were used as the measurement tool each time the specific competency was evaluated during the program.

Measurement Tool: GEA College Rubric
General Education Objective(s): 1, 2, 3
Goal Results: 80% "excellent (4)" or "proficient (3)" or "acceptable (2)"

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 1	1	1	100%(mean=2.75)
• 2	1	1	100%(mean=2.4)
• 3	1	1	100%(mean=5.0)*

1 Present ideas in writing.
2 Present ideas orally according to standard usage.
3 Demonstrate application of information technology.
*Based on 5 point scale.

Measurement Tool: GEA College Rubric
General Education Objective(s): 4, 5, 6
Goal Results: 90% "excellent (5)" or "proficient (4)" or "acceptable (3)"

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 4	1	1	100% (mean = 3.0)
• 5	1	1	100%(mean=3.5)
• 6	1	1	100%(mean=3.5)

4 Demonstrate mathematical principles.
5 Demonstrate scientific reasoning.
6 Apply scientific methods to the inquiry process.

Measurement Tool: GEA College Rubric
General Education Objective(s): Critical Thinking-Science Eval.
Goal Results: 100% "excellent (4)", "proficient (3)" or "acceptable (2)"

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 7	1	1	100%(mean=3.0)
• 8	1	1	100%(mean=3.0)
• 9	1	1	100%(mean=3.0)

7. Identify and gather information.
8. Analyze and evaluate information.
9. Synthesize and formulate conclusions.

Measurement Tool: GEA College Rubric
General Education Objective(s): Critical Thinking-English Eval.
Goal Results: 100% “excellent (4)”, “proficient (3)” or “acceptable (2)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 7	1	1	100%(mean=3.00)
• 8	1	1	100%(mean=2.00)
• 9	1	1	100%(mean=3.00)

7. Identify and gather information.
8. Analyze and evaluate information.
9. Synthesize and formulate conclusions.

Measurement Tool: ACT Collegiate Assessment of Academic Proficiency (CAAP)
General Education Objective(s): 1, 4-9
Goal Results: 50%
Legend: n (Mean Score)

Year	Writing	Math	Reading	Critical Thinking	Science
2012-2013	4(56.3%)	4(51.8%)	4(57%)	4(57.5%)	4(54.5%)
2011-2012	2(38%)	2(41.5%)	2(49%)	2(49.5%)	2(45.5%)
2010-2011	1(6%)	1(31%)	1(39%)	1(19%)	1(21%)

Measurement Tool: Writing Across the Curriculum College Rubric
General Education Objective(s): 1
Goal Results: 90% “Excellent”/”Proficient”/ “Adequate”
Legend: ENG 102(No ENG 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 1.1.1		1		
• 1.1.2		1		
• 1.1.3		1		
• 1.2.1		1		
• 1.2.2		1		
• 1.2.3			1	
• 1.3.1	1			
• 1.3.2	1			
• 1.4.1		1		
• 1.4.2		1		

General Education Objective(s): 1-6
Goal Results: 90% “Excellent(4)”/”Proficient(3)”/ ”Adequate(2)”

General Education Competency: Writing

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 1.1.1		4		
• 1.1.2		4		
• 1.1.3		4		
• 1.2.1		4		
• 1.2.2		4		
• 1.2.3		4		
• 1.3.1		2	2	
• 1.3.2		3	1	
• 1.4.1		2	2	
• 1.4.2		4		

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2011-2012				
• 1.1.1			1	
• 1.1.2			1	
• 1.1.3			1	
• 1.2.1			1	
• 1.2.2			1	
• 1.2.3			1	
• 1.3.1			1	
• 1.3.2			1	
• 1.4.1		1		
• 1.4.2		1		

General Education Competency: Oral Presentation

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 2.1.1		1	1	1
• 2.1.2		1	1	1
• 2.1.3		1	1	1
• 2.2.1		1	1	1
• 2.2.2		1	1	1
• 2.2.3		1	1	1
• 2.3.1			2	1
• 2.3.2			2	1
• 2.3.3		1	1	1
• 2.4.1		1	1	1
• 2.4.2		1	1	1
• 2.4.3		2		1
• 2.5.1			1	2
• 2.5.2			1	2
• 2.5.3				
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2011-2012				
• 2.1.1		1		
• 2.1.2		1		
• 2.1.3		1		
• 2.2.1	1			
• 2.2.2	1			
• 2.2.3	1			
• 2.3.1	1			
• 2.3.2	1			
• 2.3.3	1			
• 2.4.1	1			
• 2.4.2	1			
• 2.4.3	1			
• 2.5.1				1
• 2.5.2				1
• 2.5.3				

General Education Competency: Information Technology

Year	Pass (4)	Fail (1)
2012-2013		
• 3.1.1	1	3
• 3.1.2	1	3
• 3.1.3	3	1
• 3.1.4	4	
• 3.1.5	2	2
• 3.2.1	4	
• 3.2.2	2	2
• 3.2.3	4	
• 3.2.4	4	
• 3.2.5	1	3
• 3.3.1	2	2
• 3.3.2		4
• 3.3.3		4
• 3.4.1	2	2
• 3.4.2	2	2
Year	**Pass (4)**	**Fail (1)**
2011-2012		
• 3.1.1		
• 3.1.2		
• 3.1.3		
• 3.1.4	1	
• 3.1.5		
• 3.2.1	1	
• 3.2.2		1
• 3.2.3	1	
• 3.2.4	1	1
• 3.2.5		1
• 3.3.1		1
• 3.3.2		
• 3.3.3		1
• 3.4.1		1
• 3.4.2		1

General Education Competency: Mathematical Reasoning

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 4.1.1		1	3	
• 4.1.2		1	3	
• 4.2.1		1	3	
• 4.2.2		1	3	
• 4.2.3				
• 4.3.1			4	
• 4.3.2		1	3	
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2011-2012				
• 4.1.1	1			1
• 4.1.2	1			1
• 4.2.1		1		1
• 4.2.2		1		1
• 4.2.3				
• 4.3.1	1			
• 4.3.2	1			

General Education Competency: Scientific Reasoning

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 5.1.1			3	1
• 5.1.2		1	1	2
• 5.2.1			2	2
• 5.3.1			2	2
• 5.4.1			3	1
• 5.5.1		1	1	2
• 5.5.2		1	1	2
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2011-2012				
• 5.1.1				1
• 5.1.2				1
• 5.2.1				1
• 5.3.1				1
• 5.4.1				1
• 5.5.1				1
• 5.5.2				1

PDSA CYCLE 2010-2011
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

Lack of data (other than end of program data) to support whether or not general education competencies are being accomplished.

Goal

Collect data based on *General Education Competency Reporting Schedule*.

Action Plan

1) Lead faculty member will identify students enrolled in Pre-Nursing Program.
2) Lead faculty member will identify courses that those students are enrolled in.
3) Lead faculty will contact instructors of those courses in order to collect data based on *General Education Competency Reporting Schedule.*

Results

A small amount of data was collected and reported on as it relates to the assessment of learning of students enrolled in the Pre-Nursing program. That data is presented in this report.

The lead faculty member for the Pre-Nursing program was reassigned to other duties at the College; therefore, formative and summative data was not collected in time for this Program Report.

PDSA CYCLE 2011-2012
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

A continual lack of data (other than end of program data) to support whether or not general education competencies are being accomplished.

Goal

Identify a more effective process of collecting both formative and summative assessment data on students enrolled in the Pre-Nursing program.

Action Plan

1) Discuss possible solutions to the process of collecting both formative and summative assessment data on students enrolled in Pre-Nursing program with the Student Learning Assessment Committee.

Results

Summative data was successfully collected for students graduating from the Pre-Nursing certificate program (see General Education Competencies Results section of this Report). There continues to be difficulty collecting formative data for students enrolled in this program of study.

PDSA CYCLE 2012-2013
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

There is a total lack of formative data being collected for students enrolled in this program of study.

Goal

Identify processes for collecting formative assessment data on students enrolled in the Pre-Nursing certificate program.

Action Plan

1) Discuss possible processes for collecting formative assessment data on students enrolled in the Pre-Nursing program with the following stakeholders:
   - Student Learning Assessment Committee
   - Director of Enrollment Services (on how to best identify students presently enrolled in this program of study using Jenzabar (other than their last semester))
   - Vice-President of Academic Affairs (regarding how to identify and effectively staff a position responsible for overseeing the plan-do-study-adjust cycle of assessment for this program of study).

Results

To be identified in the 2013-2014 Report.

Student Learning Assessment Program Report
Technical and Professional Writing
2012-2013

The Technical and Professional Writing Occupational Certificate program provides students with a selection of courses designed to enhance professional opportunities in a variety of communication fields. The program is intended to develop written, verbal, and digital communication skills to advance students in their fields of study. Taken alone, the Certificate serves as a basis for entry level positions in administrative or communication industries. Students will participate in a capstone project to create a deliverable product to illustrate their technical and professional communication skills.

Program Objectives

Upon completion of the Technical and Professional Writing Occupational Certificate program:

1) The student will write in an academic style (MLA, APA, Chicago) that can be utilized across the curriculum.
2) The student will create a comprehensive technical communication project that is measurable by current technical communication standards.
3) The student will utilize computer and emerging technology to produce technical communication products that are measurable by current standards.

Overview

The Technical and Professional Writing assessment plan is in its fourth year and is addressed via the plan→do→study→adjust cycle that begins every fall term and follows one Technical and Professional Writing cohort from first term through graduation.

Program Objectives Assessment Plan

All program objectives are measured with multiple tools. The following **Curriculum Map** outlines those measurement tools and courses in which the program objectives are presented and/or measured:

PROGRAM OBJECTIVE	MEASUREMENT TOOLS	COURSES IN WHICH PROGRAM OBJECTIVES ARE PRESENTED &/OR MEASURED.
1. The student will write in an academic style (MLA, APA, Chicago) that can be utilized across the curriculum.	• Formal essays • Grant proposals • Technical communication projects • Pre/Post-Test	• ENG 102 • ENG 104 • ENG 268 • ENG 293 • ENG 299
2. The student will create a comprehensive technical communication project that is measurable by current technical communication standards.	• Technical communication projects • Capstone project • Grant proposal • Formal essays	• ENG 168 • ENG 233 • ENG 268 • ENG 293
3. The student will utilize computer and emerging technology to produce technical communication products that are measurable by current standards.	• Technical communication projects • Capstone project • Formal essays	• ENG 168 • ENG 233 • ENG 293 • ENG 299

Program Objective Results

This section presents the results of those measurement tools identified in the second column above.

Measurement Tool: Research Project
Program Objective(s): 1, 2, 3,
Goal Results: 70% pass rate

Reporting Period	# of students attempting*	# passing	% passing
2009-2010	1	1	100% (mean=95%)
2010-2011	1	1	100% (mean=95%)
2011-2012	24	21	87.5%(mean=81%)
2012-2013	17 (fall 2012)	14	82% (mean=73.5%)

- 2009-2010 and 2010-2011 numbers reflect declared majors.
- 2011-2012 numbers reflects all students enrolled in ENG 104 regardless of declared major.
- 2010-2011: Student scores are due to strong writing skills. Only having one student presents difficulty in providing statistically significant data.
- 2011-2012: Most students passed the research project with a 70% or better if they attempted the project. I am very happy with their projects, and I don't know if the results are because I am a better teacher, or I have a different group of students.
- 2012-2013: Most students who attempted the research project received a 70% or better. We spend at least eight weeks on the project, so students have plenty of time to revise if necessary.

Measurement Tool: Four Technical Communication Projects
Program Objective(s): 1, 2, 3
Goal Results: 70% pass rate

Reporting Period	# students attempting*	# passing	% passing
2009-2010	1	1	100% (mean=92%)
2010-2011	1	1	100% (mean=95%)
2011-2012	25	24	96% (mean=91%)
2012-2013	24	18	75% (mean=70.7%)

- 2009-2010 and 2010-2011 numbers reflect declared majors.
- 2011-2012 numbers reflects all students enrolled in ENG 233 regardless of declared major.
- 2010-2011: Student scores are due to strong writing and communications skills. Only having one student presents difficulty in providing statistically significant data.
- 2011-2012: Students who attempted the technical communication projects in ENG 233 did well. The students claim that they enjoy the variety of projects and the practical nature of the assignments.
- 2012-2013: Students who actually completed the projects did very well in the course. Almost all completing students received a 70% or better.

Measurement Tool: Grant Proposal
Program Objective(s): 1, 2
Goal Results: 90% "Average" or "Above Average"**

Reporting Period	# students attempting	# passing	% passing
2009-2010	1	1	100% (mean=90%)
2010-2011	N/A		
2011-2012	1	1	100% (mean=95%)
2012-2013	1	1	100% (mean=90%)

- 2011-2012: The student wrote an excellent grant for HUD. Between reading and responding to the text and writing the grant, I believe the student is now a proficient grant writer.
- 2012-2013: The student wrote two grants for the course. She used a new text for the class, and I think the grants were improved compared with previous semesters.

Measurement Tool: Capstone Project
Program Objective(s): 2, 3
Goal Results: 90% "Average" or "Above Average"**

Reporting Period	# students attempting	# passing	% passing
2012-2013	2	2	100% (mean=90%)

- 2012-2013: I was not pleased with the capstone projects this semester. Students present me with the projects at the end of the semester when there is no time for revision. I would like to add a capstone proposal to the course, in which students propose the project before beginning.

Measurement Tool: Writing Across the Curriculum College Rubric
Program Objective(s): 1, 2, 3
Goal Results: 90% “Excellent”/”Proficient”/ ”Adequate”
Legend: ENG 102(No ENG 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2009-2010				
• 1.1.1	8	6	5	
• 1.1.2	8	6	5	
• 1.1.3	8	6	5	
• 1.2.1	7	8	4	
• 1.2.2	7	8	4	
• 1.2.3	7	8	4	
• 1.3.1	8	9		2
• 1.3.2	8	8		
• 1.4.1	5	11	2	1
• 1.4.2	6	10	3	
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2010-2011				
• 1.1.1	6	9	1	
• 1.1.2	6	9	1	
• 1.1.3	6	9		
• 1.2.1	8	7	1	
• 1.2.2	8	7	1	
• 1.2.3	8	7	1	
• 1.3.1	6	9	1	
• 1.3.2	6	9	1	
• 1.4.1	5	9		2
• 1.4.2	9	9		2
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2011-2012				
• 1.1.1	3	1	7	
• 1.1.2	3	1	7	
• 1.1.3	3	1	7	
• 1.2.1	3	1	7	
• 1.2.2	3	1	7	
• 1.2.3	3	1	7	
• 1.3.1	3	1	6	1
• 1.3.2	3	1	6	1
• 1.4.1	2	8	1	

• 1.4.2	2	8	1	
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2012-2013 • 1.1.1 • 1.1.2 • 1.1.3	 23(4) 23(4) 23(4)	 67(20) 67(20) 67(20)	 16 16 16	
• 1.2.1 • 1.2.2 • 1.2.3	23(4) 23(4) 23(4)	67(20) 67(20) 67(20)	16 16 16	
• 1.3.1 • 1.3.2	23(4) 23(4)	32(5) 32(5)	15 15	
• 1.4.1 • 1.4.2	23(4) 23(4)	67(20) 67(20)	16 16	

Measurement Tool: Critical Thinking College Rubric
General Education Objective(s): 6
Goal Results: 90% “Excellent(4)”/”Proficient(3)”/ ”Adequate(2)”
Legend: Laboratory Science (No Lab Sci)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2010-2011 • 6.1.1 • 6.1.2 • 6.1.3	 8 8 8	 3 3 3	 5 5 5	
• 6.2.1 • 6.2.2 • 6.2.3	8 8 8	3 3 3	5 5 5	
• 6.3.1 • 6.3.2 • 6.3.3	8 8 8	3 3 3	5 5 5	

Measurement Tool: ACT Collegiate Assessment of Academic Proficiency (CAAP)
General Education Objective(s): 1, 4-9
Goal Results: 50%
Legend: n (Mean Score)

Year	Writing	Math	Reading	Critical Thinking	Science
2012-2013	1(55%)	1(53%)	1(61%)	1(62%)	1(54%)

PDSA CYCLE 2009-2010
OPPORTUNITY FOR IMPROVEMENT

Analysis

Problem Area

This program needs more marketing efforts to improve enrollment. I would like to see the program advertised through the state of New Mexico because it is unique to the state.

Goal

The goal is to market the program in at least three paper or electronic sources in the next year.

Action Plan

The English Instructor will meet with the Public Relations Director to plan marketing strategies after Cabinet has approved.

Results

The English Instructor met with the Public Relations Director and a flyer for the technical writing certificate was planned and completed. The flyer was posted around the Campus and also distributed to ENG 102, ENG 104, and COM 102 classes. The technical writing certificate was also placed on the Student Information System so that students were made aware of the certificate. Radio announcements concerning the certificate are pending.

PDSA CYCLE 2010-2011
OPPORTUNITY FOR IMPROVEMENT

Analysis

Problem Area

Results of the marketing need to be assessed during the 2011-2012 academic year. The English Instructor would like the certificate to be included in two publications for additional marketing efforts.

Goal

Additional recruiting through advertising in publications is desirable. The Instructor will also track student enrollment in the certificate.

Action Plan

The English Instructor will meet with the Public Relations Director to plan additional marketing strategies after Cabinet has approved. The Instructor will also track student enrollment in the certificate.

Results

The English Instructor did not meet with Public Relations Director because after tracking enrollment for the Certificate program, it appeared that the program might not be healthy enough to continue advertising in the Catalog. If the College could offer all online programs, the Certificate would probably be worth pursuing on a marketing level.

PDSA CYCLE 2011-2012
OPPORTUNITY FOR IMPROVEMENT

Analysis

Problem Area

The enrollment in the Certificate is not enough to continue advertising in the Catalog. After internal marketing efforts, the Certificate still lacks enrollment. External marketing efforts were not pursued due to the inability of the Certificate to be offered solely online.

Goal

Assess whether the Certificate should be continued in the College Catalog or if the program should be suspended until further investigation.

Action Plan

The English Instructor will discuss the Certificate program's viability with the Chair of the Assessment Committee and the Dean of Academic Affairs. A decision will be made whether to continue with the program or not. For the fall 2012 semester, it appears that only one student will be enrolled in the program.

Results

The lead instructor consulted with Ms. Natalie Gillard, Vice President of Academic Affairs. Since the program graduated two students this year, she encouraged me to continue the program, citing that there is interest from other students.

PDSA CYCLE 2012-2013
OPPORTUNITY FOR IMPROVEMENT

Analysis

Problem Area

The Professional and Technical Writing certificate program needs to be developed more fully in Moodle. Further, the program needs to be offered in the fall and spring schedules so that students are aware of the certificate.

Goal

Develop online courses for the certificate. Consult with the Vice President of Academic Affairs to assure the courses are in upcoming schedules.

Action Plan

Meet with the new English instructor to discuss certificate strategies and goals, so that there is no program attrition.

Results

The results of these goals will be reported in the 2013-2014 report.

STUDENT LEARNING ASSESSMENT PROGRAM REPORT
Social Work
2012-2013

The Social Work Program provides the student with an introduction to the field of social work and the social welfare system, the human behavior content required of human services workers and social welfare policy analysis skills. The curriculum may serve as a preparatory foundation for those interested in continuing their study at the Bachelor of Social Work level.

Program Objectives/Competencies

Upon completion of the Social Work Associate Degree Program:

1. Students will summarize knowledge of the history of social welfare, past and present.

2. Students will recognize the National Association of Social Workers Code of Ethics and Preamble and discuss steps involved in becoming a member of the national organization.

3 Students will demonstrate written and oral communication skills necessary in the field for effective social work practice.

General Education Competencies

Upon completion of the Social Work Associate Degree Program and in addition to the above mentioned program objectives/competencies:

1. Students will read, write, listen and use verbal skills to organize and communicate information and ideas in personal and group settings (Communication).

2. Students will demonstrate mathematical principles and scientific reasoning by applying appropriate methods to the inquiry process (Mathematical and Scientific Reasoning).

3. Students will identify, evaluate and analyze evidence to guide decision making and communicate his/her beliefs clearly and accurately (Critical Thinking).

Overview

The Social Work assessment plan is in its third year and is addressed via a plan-do-study-adjust cycle that begins every fall term and follows one Social Work cohort from first term through graduation.

Program Objectives Assessment Plan

All program objectives are measured with multiple tools.
The following **Curriculum Map** outlines those measurement tools and courses in which the program objectives are presented and/or measured:

Program Objective	Measurement Tools	Courses In Which Program Objectives Are Presented and/or Measured
1. Students will summarize the history of social welfare, past and present.	• Tests • CAT • Guest speakers • Research project	• SW 218 • SW 290 • SOC 215 • PSCI 202 • ECE 104
2. Students will recognize the National Association of Social Workers Code of Ethics and Preamble and discuss steps involved in becoming a member of the national organization.	• Tests • CAT • Guest speakers • Research project	• SW 218 • SW 290 • SOC 215 • PSCI 202 • ECE 104
3. Students will demonstrate effective written and oral communication skills necessary in the field for effective social work practice.	• Tests • Capstone Portfolio • CAT • Guest speakers • Research project	• SW 218 • SW 290 • SOC 215 • PSCI 202 • ECE 104 • ENG 299

Program Objective Results

This section presents the results of those measurement tools identified in the second column above.

Measurement Tool: Written Exam – SW 218
Program Objective(s): 1, 2, 3
Goal Results: 70% pass rate/ cut score

Reporting Period	# of Students Attempting	# Passing	% Passing
2011-2012	2	2	100%
2010-2011	6	6	100%

Measurement Tool: CAT- SW 218
Program Objective(s): 1, 2, 3
Goal Results: 100% pass rate;

All students were required to complete the CAT on lectures using Muddiest Point in order to identify students lecture topics that were not quite clear to them. We used as a wrap up at the end of the class period to help them understand better.

Measurement Tool: CAT- Guest speaker SW 218
Program Objective(s): 1, 2, 3
Goal Results: 100% pass rate;

The guest speaker paper was graded as an essay paper with one hundred points possible. It was based on the agency and work done at that agency.

Reporting Period	# of Students Attempting	# Passing	% Passing
2011-2012	2	1	50%
2010-2011	6	5	83%

Measurement Tool: Research Project-SW 218 topics varied and were open as long as it was within the discipline of social work.
Program Objective(s): 1, 2, 3
Goal Results: 100% pass rate;

Reporting Period	# of Students Attempting	# Passing	% Passing
2011-2012	2	2	100%
2010-2011	6	6	100%

General Education Competencies Assessment Plan

General education competencies are measured with multiple tools.
The following **Curriculum Map** outlines those measurement tools and courses in which the general education competencies are presented and/or measured:

General Education Competencies	Measurement Tools	Courses In Which Program Objectives Are Presented and/or Measured
Communication 1. Present ideas in writing. 2. Present ideas orally according to standard usage. 3. Demonstrate application of information technology.	• GEA College Rubric • CAAP • Capstone Portfolio • CAT • Class Presentation • Class Writing Assignment	• ACS 100 • COM 102 • CIS 101 • ENG 104 • ENG 299 • Lab Sciences • STAT 213 • SW 218 • SW 290 • SOC 215 • PSCI 202 • ECE 104
Mathematical and Scientific Reasoning 4. Demonstrate mathematical principles. 5. Demonstrate scientific reasoning. 6. Apply scientific methods to the inquiry process.	• GEA College Rubric • CAAP • Capstone Portfolio • Class Exercises • Class Examinations	• ACS 100 • COM 102 • CIS 101 • ENG 104 • ENG 299 • Lab Sciences • STAT 213 • SW 218 • SW 290 • SOC 215 • PSCI 202 • ECE 104
Critical Thinking 7. Read and analyze complex ideas. 8. Locate, evaluate and apply research information. 9. Evaluate and present well-reasoned arguments.	• GEA College Rubric • CAAP • Capstone Portfolio • Class Exercises • Class Examinations	• ACS 100 • COM 102 • CIS 101 • ENG 104 • ENG 299 • Lab Sciences • STAT 213 • MATH 110 • SW 218 • SW 290

		• SOC 215 • PSCI 202 • ECE 104

General Education Competencies Results

This section presents the general education competencies results. The Mesalands Community College created rubrics were used as the measurement tool each time the specific competency was evaluated during the program.

Measurement Tool: Writing Across the Curriculum College Rubric

General Education Objective(s): 1

Goal Results: 90% "Excellent (4)", "Proficient (3)", or "Adequate (2)"

Legend: ENG 102(No ENG 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013 • 1.1.1 • 1.1.2 • 1.1.3	 2 2 2			
• 1.2.1 • 1.2.2 • 1.2.3	2 2 2			
• 1.3.1 • 1.3.2	2 2			
• 1.4.1 • 1.4.2		2 2		
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2011-2012 • 1.1.1 • 1.1.2 • 1.1.3	 1 1 1	 1 1 1		
• 1.2.1 • 1.2.2 • 1.2.3	1 1 1	1 1 1		
• 1.3.1 • 1.3.2	1 1		1 1	
• 1.4.1 • 1.4.2	2 2			

Measurement Tool: GEA College Rubric
General Education Objective(s): 1, 2, 3
Goal Results: 100% “excellent (4)”, “proficient (3)” or “adequate (2)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 1	2	2	100%(mean=2.20)
• 2	2	2	100%(mean=2.80)
• 3	2	2	100%(mean=5.00)*

1 Present ideas in writing.
2 Present ideas orally according to standard usage.
3 Demonstrate application of information technology.
*Based on 5 point scale.

Measurement Tool: GEA College Rubric
General Education Objective(s): 4, 5, 6
Goal Results: 100% “excellent (5)”, “proficient (4)” or “acceptable (3)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 4	2	0	0%(mean=1.50)
• 5	2	2	100%(mean=3.87)
• 6	2	2	100%(mean=3.75)

4 Demonstrate mathematical principles.
5 Demonstrate scientific reasoning.
6 Apply scientific methods to the inquiry process.

Measurement Tool: GEA College Rubric
General Education Objective(s): Critical Thinking-Science Eval.
Goal Results: 100% “excellent (4)”, “proficient (3)” or “acceptable (2)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 7	2	2	100%(mean=3.50)
• 8	2	2	100%(mean=3.50)
• 9	2	2	100%(mean=3.00)

7. Identify and gather information.
8. Analyze and evaluate information.
9. Synthesize and formulate conclusions.

Measurement Tool: GEA College Rubric
General Education Objective(s): Critical Thinking-English Eval.
Goal Results: 100% “excellent (4)”, “proficient (3)” or “acceptable (2)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 7	2	2	100%(mean=3.00)
• 8	2	2	100%(mean=2.50)
• 9	2	2	100%(mean=3.00)

7. Identify and gather information.
8. Analyze and evaluate information.
9. Synthesize and formulate conclusions.

Measurement Tool: ACT Collegiate Assessment of Academic Proficiency (CAAP)
General Education Objective(s): 1, 4-9
Goal Results: 50%
Legend: n (Mean Score)

Year	Writing	Math	Reading	Critical Thinking	Science
2012-2013	1(61%)	1(59%)	1(66%)	1(63%)	1(59%)
2010-2011	1(14%)	N/A	1(12%)	1(6%)	1(21%)

PDSA CYCLE 2010-2011
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

Students need more work in writing in the appropriate style according to their discipline. Students should be able to go on to the university level prepared to write at an accelerated pace and level according to their discipline and with an understanding in research.

Goal

I want to make sure students can write properly in a social work class and a social work employment environment.

Action Plan

We will bring in documentation templates from different social work agencies to practice the APA (America Psychological Association) style. We will also have writing assignments with APA (America Psychological Association) style requirements.

Results

Students worked with several websites on citation and with Ms. Gaskill and me to help learn proper citing in APA (American Psychological Association) style. Both students for the year completed research papers in the proper style with the proper formatting. Both students came away with better comprehension of APA (America Psychological Association) style writing.

PDSA CYCLE 2011-2012
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

1) There is an issue in receiving assessment data from off-campus programs in order to have a more complete overview and for reporting purposes.

2) We also need to implement appropriate practicum settings for SW 290 Internship. Students need to have true hands-on experience in the field to better prepare and make sure this is truly the avenue they wish to pursue in their college and career choice.

Goal

1) I want to make sure I receive data on all students at all campuses taking social work courses.

2) Meet with and establish relationships with different social work agencies that will sponsor students for their internship/practicum.

Action Plan

1) During visits to all sites, the chair of the Student Learning Assessment Committee and I will do thorough assessment training with instructors stressing the importance of sending data to all program instructors for the purposes of reporting outcomes in the program.

   I will contact all Social Work Instructors letting them know I will need information on students enrolled in their social work courses.

2) I have and will continue to contact agencies in the field of social work to build a working relationship for practicum for students in the Social Work program so that their internships will be true social work experience with the hours required at this level for completion of course and program.

Results

1) The Student Learning Assessment Committee Chair and I made visits to facilities and met with the Education Directors and Instructors. At that time the importance of their reporting outcomes was stressed. And they were given full instruction on the process of reporting. I would like to note that the instructor for the Social Work courses was not present at the meeting.

2) I have been working with several mental health agencies coordinating practicum/intern settings. I have also had many problems with students adhering to procedure and hours required for the course. This is also a concern not being a full-time faculty member, if students do not agree with the course time-frame/setting they then meet with the Vice President and have had this changed not meeting Social Work standards for practicum. I believe at this level, practicum is not as rigorous or in-depth; however, I have tried to put in place a course that would mirror at a lesser level, a practicum course at a major university in order to help the student acquire the basic skill level and knowledge of what will be expected at the next level. If not being the faculty in place for this course means that it can be amended at any given time without my knowledge then the standard requirements will never be met and students will leave here without the knowledge base we have guaranteed.

PDSA CYCLE 2012-2013
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

This program does not have a full-time faculty member assigned and even given changes made to the program structure students continue to get permission to change program requirements as they see fit disregarding the process in place. If a full-time faculty was in place students would not be able to bypass structure changes.

Goal

I want a procedure in place so that students taking the Social Work tract must meet and get all permission to changes from the appropriate faculty assigned and that the same rules apply for this position like full-time faculty regarding permissions to class/assignment changes.

Action Plan

I will meet with the Vice President to put in place a procedure regarding student enrollment for this discipline.

Results

To be reported in the 13-14 Report.

STUDENT LEARNING ASSESSMENT PROGRAM REPORT
ASSOCIATE OF ARTS - UNIVERSITY STUDIES
2012-13

The University Studies option provides opportunities for students to explore areas of student interest while developing proficiencies in the liberal arts and selected areas of interest. Graduates of the program will have completed coursework that explores a variety of academic disciplines. Students intending to use the University Studies option as a basis for transfer should make certain that their course selections meet the requirements of the applicable degree at the college or university to which they plan to transfer.

General Education Competencies

Upon completion of the University Studies Degree Program:

1. Students will read, write, listen and use verbal skills to organize and communicate information and ideas in personal and group settings (Communication).

2. Students will demonstrate mathematical principles and scientific reasoning by applying appropriate methods to the inquiry process (Quantitative and Scientific Reasoning).

3. Students will identify, evaluate and analyze evidence to guide decision making and communicate his/her beliefs clearly and accurately (Critical Thinking).

Overview

The University Studies assessment plan is in its fourth year and is addressed via the plan→do→study→adjust (PDSA) cycle that follows students from their first term through graduation.

General Education Competencies Assessment Plan

General education competencies are measured with multiple tools.
The following **Curriculum Map** outlines those measurement tools and courses in which the program objectives are presented and/or measured:

General Education Competencies	Measurement Tools	Courses In Which Program Objectives Are Presented and/or Measured
Communication 1. Present ideas in writing. 2. Present ideas orally according to standard usage. 3. Demonstrate application of information technology.	• GEA College Rubric • CAAP • ENG 299 Capstone Course	• ACS 100 • COM 102 • CIS 101 • ENG 102 • ENG 104 • ENG 299 • Lab Science Elective • Social/Behavioral Science Elective • Fine Arts/Humanities Elective
Quantitative and Scientific Reasoning 4. Demonstrate mathematical principles. 5. Demonstrate scientific reasoning. 6. Apply scientific methods to the inquiry process.	• GEA College Rubric • CAAP • ENG 299 Capstone Course	• ENG 299 • MATH 110 • Lab Science Elective
Critical Thinking 7. Read and analyze complex ideas. 8. Locate, evaluate and apply research information. 9. Evaluate and present well-reasoned arguments.	• GEA College Rubric • CAAP • ENG 299 Capstone Course	• ACS 100 • ENG 299 • Lab Science Elective • Social/Behavioral Science Elective • Fine Arts/Humanities Elective

General Education Competencies Results

This section presents the general education competencies results. The Mesalands Community College created rubrics were used as the measurement tool each time the specific competency was evaluated during the program.

Measurement Tool: GEA College Rubric
General Education Objective(s): 1, 2, 3
Goal Results: 100% “excellent (4)”, “proficient (3)” or “adequate (2)’

Reporting Period	# of Students Attempting	# Passing	% Passing
2011-2012			
• 1	1	1	100%(mean=2.75)
• 2	1	1	100%(mean=2.50)
• 3	1	1	100%(mean=5.00)*
2010-2011			
• 1	5	4	80%(mean=2.75)
• 2	5	5	100%(mean=3.85)
• 3	5	5	100%(mean=4.55)*
2009-2010			
• 1	3	3	100%(mean=2.17)
• 2	3	3	100%(mean=2.73)
• 3	3	2	67%(mean=2.31)*

1 Present ideas in writing.
2 Present ideas orally according to standard usage.
3 Demonstrate application of information technology.
*Based on 5 point scale.

Measurement Tool: GEA College Rubric
General Education Objective(s): 4, 5, 6
Goal Results: 100% “excellent (5)”,“proficient (4)” or “acceptable (3)’

Reporting Period	# of Students Attempting	# Passing	% Passing
2011-2012			
• 4	1	0	0%(mean=1.00)
• 5	1	1	100%(mean=2.50)
• 6	1	0	0%(mean=2.25)
2010-2011			
• 4	5	2	40%(mean=2.50)
• 5	5	3	60%(mean=3.40)
• 6	5	4	80%(mean=3.55)
2009-2010			
• 4	3	1	33% (mean=2.17)
• 5	3	3	100%(mean=4.08)
• 6	3	1	33%(mean=2.58)

4 Demonstrate mathematical principles.
5 Demonstrate scientific reasoning.
6 Apply scientific methods to the inquiry process.

Measurement Tool: GEA College Rubric
General Education Objective(s): Critical Thinking-Science Eval.
Goal Results: 100% “excellent (4)”, “proficient (3)” or “acceptable (2)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2011-2012			
• 7	1	1	100%(mean=2.33)
• 8	N/A	N/A	N/A
• 9	1	1	100%(mean=3.00)
2010-2011			
• 7	5	5	100%(mean=2.80)
• 8	5	5	100%(mean=2.80)
• 9	5	4	80%(mean=2.20)

7. Identify and gather information.
8. Analyze and evaluate information.
9. Synthesize and formulate conclusions.

Measurement Tool: GEA College Rubric
General Education Objective(s): Critical Thinking-English Eval.
Goal Results: 100% “excellent (4)”, “proficient (3)” or “acceptable (2)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 7	5	5	100%(mean=3.00)
• 8	5	5	100%(mean=3.40)
• 9	5	5	100%(mean=3.00)

7. Identify and gather information.
8. Analyze and evaluate information.
9. Synthesize and formulate conclusions.

Measurement Tool: GEA College Rubric
General Education Objective(s): 7, 8, 9
Goal Results: 100% “excellent (5)”, “proficient (4)” or “acceptable (3)’

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010			
• 7	3	3	100%(mean=3.92)
• 8	3	1	33%(mean=2.67)
• 9	3	2	66%(mean=3.67)

7. Read and analyze complex ideas.
8. Locate, evaluate and apply research information.
9. Evaluate and present well-reasoned arguments

Measurement Tool: ACT Collegiate Assessment of Academic Proficiency (CAAP)
General Education Objective(s): 1, 4-9
Goal Results: 50%
Legend: n (Mean Score)

Year	Writing	Math	Reading	Critical Thinking	Science
2012-13	2(55%)	2(52%)	2(58.5%)	2(52.5%)	2(56.5%)
2011-12	2(74%)	2(52%)	2(70.5%)	2(76%)	2(70.5%)
2010-11	6(51.8%)	5(66.8%)	6(56%)	6(54.2%)	6(61%)
2009-10	3(29%)	2(85%)	3(26%)	3(27%)	3(31%)

General Education Objective(s): 1-6
Goal Results: 90% “Excellent(4)”/”Proficient(3)”/ ”Adequate(2)”

General Education Competency: Writing

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2011-2012				
• 1.1.1		1		
• 1.1.2		1		
• 1.1.3		1		
• 1.2.1		1		
• 1.2.2		1		
• 1.2.3		1		
• 1.3.1		1		
• 1.3.2		1		
• 1.4.1		1		
• 1.4.2		1		

General Education Competency: Oral Presentation

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2011-2012				
• 2.1.1			1	
• 2.1.2			1	
• 2.1.3		1		
• 2.2.1			1	
• 2.2.2			1	
• 2.2.3		1		
• 2.3.1			1	
• 2.3.2		1		
• 2.3.3		1		
• 2.4.1		1		1
• 2.4.2		1		1
• 2.4.3	1			1
• 2.5.1				1
• 2.5.2				1
• 2.5.3				

General Education Competency: Information Technology

Year	Pass (4)	Fail (1)
2011-2012		
• 3.1.1		
• 3.1.2		
• 3.1.3		
• 3.1.4	1	
• 3.1.5		
• 3.2.1		1
• 3.2.2		1
• 3.2.3		1
• 3.2.4		1
• 3.2.5		1
• 3.3.1		1
• 3.3.2		
• 3.3.3		1
• 3.4.1		1
• 3.4.2		1

General Education Competency: Mathematical Reasoning

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2011-2012				
• 4.1.1			1	
• 4.1.2			1	
• 4.2.1	1			
• 4.2.2	1			
• 4.2.3				
• 4.3.1		1		
• 4.3.2	1			

General Education Competency: Scientific Reasoning

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2011-2012				
• 5.1.1			1	
• 5.1.2			1	
• 5.2.1			1	
• 5.3.1			1	
• 5.4.1			1	
• 5.5.1		1		
• 5.5.2			1	

PDSA CYCLE 2009-2010
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

Lack of data (other than end of program data) to support whether or not general education competencies are being accomplished.

Goal

More and a greater variety of data needs to be collected other than during their last semester prior to graduation.

Action Plan

Problem Area and Goal will be discussed with Student Learning Assessment Committee (SLAC) who is charged with designing more meaningful and comprehensive collection of assessment data.

Results

No results reported. Action plan was not implemented.

PDSA CYCLE 2010-2011
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

Lack of data (other than end of program data) to support whether or not general education competencies are being accomplished.

Goal

Collect data based on *General Education Competency Reporting Schedule*.

Action Plan

1) Lead faculty member will identify students enrolled in University Studies Program.
2) Lead faculty member will identify courses that those students are enrolled in.
3) Lead faculty will contact instructors of those courses in order to collect data based on *General Education Competency Reporting Schedule.*

Results

A small amount of data was collected and reported on as it relates to the assessment of learning of students enrolled in the AA-University Studies degree program. That data is presented in this report.

PDSA CYCLE 2011-2012
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

A continual lack of formative and summative assessment data to support whether or not general education competencies are being accomplished.

Goal

Identify a more effective process of collecting both formative and summative assessment data on students enrolled in the AA-University Studies degree program.

Action Plan

1) Discuss possible solutions to the process of collecting both formative and summative assessment data on students enrolled in the AA-University Studies degree program with the Student Learning Assessment Committee.

Results

Little summative data was collected for students graduating from the AA-University Studies degree program despite a number of reported graduates in that program. There also continues to be difficulty collecting formative data for students enrolled in this program of study.

PDSA CYCLE 2012-2013
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

There is a total lack of any assessment data being collected for students enrolled in this program of study.

Goal

Identify processes for collecting assessment data on students enrolled in the AA-University Studies degree program.

Action Plan

1) Discuss possible processes for collecting assessment data on students enrolled in the AA-University Studies degree program with the following stakeholders:
   - Student Learning Assessment Committee
   - Director of Enrollment Services (on how to best identify students presently enrolled in this program of study using Jenzabar (other than their last semester))
   - Vice-President of Academic Affairs (regarding how to identify and effectively staff a position responsible for overseeing the plan-do-study-adjust cycle of assessment for this program of study).

Results

To be discussed in the 2013-14 cycle Report.

STUDENT LEARNING ASSESSMENT PROGRAM REPORT
WIND ENERGY TECHNOLOGY
2012-2013

The Wind Energy Technology program at Mesalands Community College offers an educational program to meet the growing demand for trained and qualified wind energy technicians that provide maintenance on the turbines. The Occupational Certificate in Wind Energy Technology provides instruction in electrical theory and application, hydraulics theory and application, mechanical theory and application, wind energy theory, field safety theory and application, and turbine climbing and application. The Associate of Applied Science Degree in Wind Energy Technology provides instruction in wind turbine technology, turbine placement and construction, turbine operations and maintenance, monitoring and communications technology, tower safety, mechanical systems, electrical theory, power generation and distribution, hydraulics, and digital electronics in addition to those found in the Occupational Certificate. Students in these programs will be prepared for rewarding and profitable careers in this growing field.

Program Objectives

Upon completion of the Wind Energy Technology Associate of Applied Science Degree Program:

1. The student will identify electrical, mechanical, and hydraulic components found within various styles and vintages of wind machines, and demonstrate an understanding of their functions and maintenance requirements.
2. The student will differentiate between the various workplace positions of wind power facility team members, and describe the duties and responsibilities of each, including those relating to site construction and continuous operation.
3. The student will authoritatively discuss the market realities and future potential of wind energy technology and the employment opportunities it represents.
4. The student will discuss the basic advantages and disadvantages of modern renewable energy technologies, and compare them to extant non-renewable methods of energy production and conservation.
5. The student will demonstrate a functional understanding of numerous electrical concepts and components, including AC/DC theory and its application within electronic subsystems and power generation technologies.

6. The student will thoroughly demonstrate a complete understanding of workplace safety concepts and practices within the wind industry, including electrical safety, tool safety, Lock-Out/Tag Out, Personal Protective Equipment selection and use, Adult CPR, and Basic First Aid.

General Education Competencies

Upon completion of the Wind Energy Technology Associate of Applied Science Degree Program and in addition to the above mentioned program objectives:

1. Students will read, write, listen and use verbal skills to organize and communicate information and ideas in personal and group settings (Communication).
2. Students will demonstrate mathematical principles and scientific reasoning by applying appropriate methods to the inquiry process (Mathematical and Scientific Reasoning).
3. Students will identify, evaluate and analyze evidence to guide decision making and communicate his/her beliefs clearly and accurately (Critical Thinking).

Overview

The Wind Energy Technology assessment plan is in its fourth year and is addressed via a plan→do→study→adjust assessment cycle that begins every fall semester and follows one Wind Energy Technology cohort from first semester through graduation.

Program Objectives Assessment Plan

All program objectives are measured with multiple tools. The following **Curriculum Map** outlines those measurement tools and courses in which the program objectives are presented and/or measured:

Program Objective	Measurement Tools	Courses In Which Program Objectives are Presented and/or Measured
1. The student will identify electrical, mechanical, and hydraulic components found within various styles and vintages of wind machines, and demonstrate an	• Curriculum Written Tests • Curriculum Performance Tests • CAT • Pre/Post-Test • Oral Tests • Research Papers	• WET 105 • WET 204 • WET 121 • WET 205 • WET 116

understanding of their functions and maintenance requirements.		
2. The student will differentiate between the various workplace positions of wind power facility team members, and describe the duties and responsibilities of each, including those relating to site construction and continuous operation.	• Project • Curriculum Written Tests • Curriculum Performance Tests • CAT • Pre/Post-Test • Oral Tests • Research Papers	• WET 101 • WET 217
3. The student will authoritatively discuss the market realities and future potential of wind energy technology and the employment opportunities it represents.	• Curriculum Written Tests • Curriculum Performance Tests • CAT • Pre/Post-Test • Oral Tests • Research Papers	• WET 101 • WET 217
4. The student will discuss the basic advantages and disadvantages of modern renewable energy technologies, and compare them to extant non-renewable methods of energy production and conservation.	• Performance Profile • Curriculum Written Tests • Curriculum Performance Tests • CAT • Pre/Post-Test • Oral Tests • Research Papers	• WET 101 • WET 217
5. The student will demonstrate a functional understanding of numerous electrical concepts and	• Curriculum Written Tests • Curriculum Performance Tests • CAT • Pre/Post-Test	• WET 105 • WET 115 • WET 205 • WET 116 • WET 219 • WET 218

components, including AC/DC theory and its application within electronic subsystems and power generation technologies.	• Oral Tests • Research Papers	• WET 217
6. The student will thoroughly demonstrate a complete understanding of workplace safety concepts and practices within the wind industry, including electrical safety, tool safety, Lock-Out/Tag Out, Personal Protective Equipment selection and use, Adult CPR, and Basic First Aid.	• Curriculum Written Tests • Curriculum Performance Tests • CAT • Pre/Post-Test • Oral Tests • Research Papers	• AHS 118R • WET 105 • WET 115 • WET 204 • WET 121 • WET 205 • WET 218 • WET 116 • WET 219 • WET 140 • WET 141 • WET 240 • WET 241

Program Objective Results

This section presents the raw data results of those measurement tools identified in the second column above.

Measurement Tool: Pre/Post Test
Program Objective(s): 1-6
Goal Results: 50% Improvement
Legend: Score(n)

Reporting Period/Topic	Pre-Test	Post-Test
2009-2010 • Introduction To Hydraulics • Wind Turbine Mechanical Systems • Introduction To Wind Energy • Electrical Theory I • Electrical Theory II • Field Safety And Experience • Wind Turbine Operation And Maintenance	54%(36) 63%(36)	83%(34) 85%(34)

• Introduction to Motors and Generators • Power Generation And Distribution • Wind Turbine Siting And Construction • Monitoring And Communication Technology • Wind Turbine Diagnosis And Repair • Digital Electronics		
Reporting Period/Topic	**Pre-Test**	**Post-Test**
2010-2011 • Introduction To Hydraulics • Wind Turbine Mechanical Systems • Introduction To Wind Energy • Electrical Theory I • Electrical Theory II • Field Safety And Experience • Wind Turbine Operation And Maintenance • Introduction to Motors and Generators • Power Generation And Distribution • Wind Turbine Siting And Construction • Monitoring And Communication Technology • Wind Turbine Diagnosis And Repair • Digital Electronics	36%(24) 23%(25)	85%(24) 77%(25)
Reporting Period/Topic	**Pre-Test**	**Post-Test**
2011-2012 • Introduction To Hydraulics • Wind Turbine Mechanical Systems • Introduction To Wind Energy • Electrical Theory I • Electrical Theory II • Field Safety And Experience • Wind Turbine Operation And Maintenance • Introduction to Motors and Generators • Power Generation And Distribution • Wind Turbine Siting And Construction • Monitoring And Communication Technology • Wind Turbine Diagnosis And Repair • Digital Electronics	N/A N/A 77.3%(8) 36%(24) N/ A N/A	79.1%(9) 85.8%(9) 90%(8) 85%(24) 91%(19) N/A
Reporting Period/Topic	**Pre-Test**	**Post-Test**
2012-2013 • Introduction To Hydraulics • Wind Turbine Mechanical Systems • Introduction To Wind Energy • Electrical Theory I	30.6%(38) 29.7%(38) 47.5%(31) 42.9%(28)	64.8%(36) 75.1%(36) 74.5%(27) 74.3%(27)

• Electrical Theory II • Field Safety And Experience • Wind Turbine Operation And Maintenance • Introduction to Motors and Generators • Power Generation And Distribution • Wind Turbine Siting And Construction • Monitoring And Communication Technology	50%(39)	76.4%(38)
• Wind Turbine Diagnosis And Repair • Digital Electronics	35.3%(8)	94.3%(8)

Measurement Tool: Research Paper
Program Objective(s): 1, 2, 5, 6
Goal Results: 70%
Legend: %passing (group mean)

Reporting Period/Topic	# of Students Attempting	# Passing	% Passing
2012-2013			
• Introduction To Hydraulics	37	35	95%(Mean=82%)
• Wind Turbine Mechanical Systems	37	35	95%(Mean=82%)
• Introduction To Wind Energy	22	22	100%(Mean=80%)
• Electrical Theory I	24	24	100%(Mean=86%)
• Electrical Theory II	32	32	100%(Mean=81%)
• Field Safety And Experience	27	27	100%(Mean=77%)
• Wind Turbine Operation And Maintenance • Introduction to Motors and Generators • Power Generation And Distribution • Wind Turbine Siting And Construction	8	8	100%(Mean=85%)
• Monitoring And Communication Technology	8	8	100% (Mean=100%)
• Wind Turbine Diagnosis And Repair	8	8	100%(Mean=82%)
• Digital Electronics			

Reporting Period/Topic	# of Students Attempting	# Passing	% Passing
2011-2012			
• Introduction To Hydraulics	9	9	100% (Mean=85%)
• Wind Turbine Mechanical Systems	9	9	100% (Mean=85%)
• Introduction To Wind Energy			
• Electrical Theory I			
• Electrical Theory II	26	20	100% (Mean=84%)
• Field Safety And Experience			
• Wind Turbine Operation And Maintenance			
• Introduction to Motors and Generators	26	23	88% (Mean=83%)
• Power Generation And Distribution			
• Wind Turbine Siting And Construction			
• Monitoring And Communication Technology			
• Wind Turbine Diagnosis And Repair	19	13	68% (Mean=69%)
• Digital Electronics	19	18	95%(Mean=90%)

Reporting Period/Topic	# of Students Attempting	# Passing	% Passing
2010-2011			
• Introduction To Hydraulics	26	26	100% (Mean=96%)
• Wind Turbine Mechanical Systems	24	24	100% (Mean= 97%)
• Introduction To Wind Energy			
• Electrical Theory I	26	24	92% (Mean=78%)
• Electrical Theory II	26	20	77% (Mean=71%)
• Field Safety And Experience			
• Wind Turbine Operation And Maintenance			
• Introduction to Motors and Generators	26	23	88% (Mean=83%)
• Power Generation And			

Distribution • Wind Turbine Siting And Construction • Monitoring And Communication Technology • Wind Turbine Diagnosis And Repair • Digital Electronics	24	22	92% (Mean=86%)

Measurement Tool: Curriculum Performance Tests
Program Objective(s): 1-6
Goal Results: 90% pass rate, 70% cut score
Legend: %passing (group mean)

Reporting Period/Topic	# of Students Attempting	# Passing	% Passing
2010-2011			
• Introduction To Hydraulics	26	26	100%(Mean=94%)
• Wind Turbine Mechanical Systems	26	26	100%(Mean=95%)
• Introduction To Wind Energy • Electrical Theory I • Electrical Theory II • Field Safety And Experience • Wind Turbine Operation And Maintenance • Introduction to Motors and Generators • Power Generation And Distribution	26	26	100%(Mean=97%)
• Wind Turbine Siting And Construction • Monitoring And Communication Technology	24	24	100%(Mean=98%)
• Wind Turbine Diagnosis And Repair • Digital Electronics	24	24	100%(Mean=99%)

Reporting Period/Topic	# of Students Attempting	# Passing	% Passing
2011-2012			
• Introduction To Hydraulics	9	9	100% (Mean=94%)
• Wind Turbine Mechanical Systems	9	9	100% (Mean=91%)
• Introduction To Wind Energy	26	26	100%(Mean=78%)
• Electrical Theory I • Electrical Theory II • Field Safety And Experience • Wind Turbine Operation And Maintenance • Introduction to Motors and Generators • Power Generation And Distribution • Wind Turbine Siting And Construction • Monitoring And Communication Technology	8	8	100% (Mean=90%)
• Wind Turbine Diagnosis And Repair	19	19	NA
• Digital Electronics	18	16	89% (Mean=85%)

General Education Competencies Assessment Plan

General education competencies are measured with multiple tools.
The following **Curriculum Map** outlines those measurement tools and courses in which the general education competencies are presented and/or measured:

General Education Competencies	Measurement Tools	Courses In Which General Education Competencies Are Presented and/or Measured
Communication 1. Writing 2. Oral Presentation 3. Information Technology	• ENG 299 • CAAP • CAT • Class Presentation • Writing Across The	• ACS 100 • COM 102 • CIS 101 • ENG 102 • ENG 233

	Curriculum Rubric • Oral Presentation Rubric • Critical Thinking Rubric	• ENG 299 • GEOL 141
Mathematical and Scientific Reasoning 4. Demonstrate mathematical principles. 5. Demonstrate scientific reasoning. 6. Apply scientific methods to the inquiry process	• ENG 299 • CAAP • Capstone Project • Laboratory Exercise • Laboratory Report • Writing Across The Curriculum Rubric • Oral Presentation Rubric • Critical Thinking Rubric	• GEOL 141 • MATH 107 • ENG 299
Critical Thinking 7. Read and analyze complex ideas. 8. Locate, evaluate and apply research information. 9. Evaluate and present well-reasoned	• ENG 299 • CAAP • Capstone Project • Laboratory Exercise • Writing Across The Curriculum Rubric • Oral Presentation Rubric • Critical Thinking Rubric	• ACS 100 • ENG 102 • ENG 233 • ENG 299 • GEOL 141

General Education Competencies Results

This section presents the general education competencies results. The Mesalands Community College created rubrics were used as the measurement tool each time the specific competency was evaluated during the program.

Measurement Tool:	Writing Across the Curriculum College Rubric-Research Paper: WET 121 Wind Turbine Mechanical Systems
General Education Objective(s):	1
Goal Results:	90% “Excellent(4)”/”Proficient(3)”/ ”Adequate(2)”
Legend:	ENG 102(No ENG 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 1.1.1	4(1)	10(5)	5(6)	3(3)
• 1.1.2	4(1)	10(5)	5(6)	3(3)
• 1.1.3	4(1)	10(5)	5(6)	3(3)
• 1.2.1	4(3)	9(3)	6(6)	3(3)
• 1.2.2	4(3)	9(3)	6(6)	3(3)
• 1.2.3	4(3)	9(3)	6(6)	3(3)
• 1.3.1	5(2)	8(5)	3(5)	6(3)
• 1.3.2	5(2)	8(5)	3(5)	6(3)
• 1.4.1	4(0)	2(3)	4(4)	12(8)
• 1.4.2	4(0)	2(3)	4(4)	12(8)
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2011-2012				
• 1.1.1	4(9)	2(9)	2(9)	1(9)
• 1.1.2	4(9)	2(9)	2(9)	1(9)
• 1.1.3	4(9)	2(9)	2(9)	1(9)
• 1.2.1	5(9)	1(9)	3(9)	
• 1.2.2	5(9)	1(9)	3(9)	
• 1.2.3	5(9)	1(9)	3(9)	
• 1.3.1	5(9)	1(9)	2(9)	1(9)
• 1.3.2	5(9)	1(9)	2(9)	1(9)
• 1.4.1	3(9)	2(9)	1(9)	3(9)
• 1.4.2	3(9)	2(9)	1(9)	3(9)
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2009-2010				
• 1.1.1	18(10)			
• 1.1.2	18(10)			
• 1.1.3	18(10)			
• 1.2.1	18(10)			
• 1.2.2	18(10)			
• 1.2.3	18(10)			
• 1.3.1	14(9)			4(1)
• 1.3.2	14(9)			
• 1.4.1	18(10)			
• 1.4.2	18(10)			

Measurement Tool: Writing Across the Curriculum College Rubric: Research Paper WET 101 Introduction to Wind Energy

General Education Objective(s): 1

Goal Results: 90% “Excellent”/”Proficient”/ ”Adequate”

Legend: ENG 102(No ENG 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 1.1.1	2(0)	7(1)	3(7)	0(2)
• 1.1.2	1(0)	5(3)	5(6)	1(1)
• 1.1.3	1(0)	6(3)	4(6)	1(1)
• 1.2.1	2(0)	6(2)	3(4)	0(2)
• 1.2.2				
• 1.2.3	2(0)	4(2)	5(4)	1(1)
	2(0)	4(2)	4(5)	1(1)
• 1.3.1	2(0)	7(3)	3(6)	0(1)
• 1.3.2	2(0)	8(3)	2(6)	0(1)
• 1.4.1	1(0)	4(1)	6(8)	1(1)
• 1.4.2	1(0)	5(0)	6(9)	0(1)

Measurement Tool: Writing Across the Curriculum College Rubric: Research Paper WET 204 Introduction to Hydraulics

General Education Objective(s): 1

Goal Results: 90% “Excellent”/”Proficient”/ ”Adequate”

Legend: ENG 102(No ENG 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 1.1.1	4(1)	10(5)	5(6)	3(3)
• 1.1.2	4(1)	10(5)	5(6)	3(3)
• 1.1.3	4(1)	10(5)	5(6)	3(3)
• 1.2.1	4(3)	9(3)	6(6)	3(3)
• 1.2.2	4(3)	9(3)	6(6)	3(3)
• 1.2.3	4(3)	9(3)	6(6)	3(3)
• 1.3.1	5(2)	8(5)	3(5)	6(3)
• 1.3.2	5(2)	8(5)	3(5)	6(3)
• 1.4.1	4(0)	2(3)	4(4)	12(8)
• 1.4.2	4(0)	2(3)	4(4)	12(8)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2011-2012				
• 1.1.1	4(9)	2(9)	2(9)	1(9)
• 1.1.2	4(9)	2(9)	2(9)	1(9)
• 1.1.3	4(9)	2(9)	2(9)	1(9)
• 1.2.1	5(9)	1(9)	3(9)	
• 1.2.2	5(9)	1(9)	3(9)	
• 1.2.3	5(9)	1(9)	3(9)	
• 1.3.1	5(9)	1(9)	2(9)	1(9)
• 1.3.2	5(9)	1(9)	2(9)	1(9)
• 1.4.1	3(9)	2(9)	1(9)	3(9)
• 1.4.2	3(9)	2(9)	1(9)	3(9)
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2010-2011				
• 1.1.1	10(16)			
• 1.1.2	10(16)			
• 1.1.3	10(16)			
• 1.2.1	10(16)			
• 1.2.2	10(16)			
• 1.2.3	10(16)			
• 1.3.1	6(10)	3(2)	1(1)	(3)
• 1.3.2	10(13)			(3)
• 1.4.1	9(15)	1		(1)
• 1.4.2	10(16)			
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2009-2010				
• 1.1.1	19(9)	(1)	(1)	
• 1.1.2	19(8)	(1)	(1)	
• 1.1.3	19(8)		(1)	
• 1.2.1	19(8)	(1)	(1)	
• 1.2.2	19(10)			
• 1.2.3	19(9)	(1)		
• 1.3.1	16(9)	(1)		
• 1.3.2	16(9)	(1)		
• 1.4.1	17(8)	2(2)		
• 1.4.2	19(9)	(1)		

Measurement Tool: Writing Across the Curriculum College Rubric-Research Paper: WET 105 Electrical Theory l

General Education Objective(s): 1

Goal Results: 90% “Excellent(4)”/”Proficient(3)”/ ”Adequate(2)”

Legend: ENG 102(No ENG 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 1.1.1	2(1)	6(3)	3(6)	1(1)
• 1.1.2	2(2)	7(3)	3(5)	0(1)
• 1.1.3	2(1)	6(1)	4(7)	0(2)
• 1.2.1	3(1)	4(4)	4(6)	1(0)
• 1.2.2	3(1)	6(1)	3(7)	0(2)
• 1.2.3	2(1)	6(2)	4(6)	0(2)
• 1.3.1	4(1)	4(6)	3(4)	1(0)
• 1.3.2	4(1)	5(6)	2(3)	1(1)
• 1.4.1	2(0)	6(4)	3(7)	1(0)
• 1.4.2	2(1)	6(4)	4(5)	0(1)

Measurement Tool: Writing Across the Curriculum College Rubric-Research Paper: WET 115 Field Safety and Experience

General Education Objective(s): 6

Goal Results: 90% “Excellent(4)”/”Proficient(3)”/ ”Adequate(2)”

Legend: ENG 102(No ENG 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 1.1.1	4(3)	7(6)	2(5)	0(0)
• 1.1.2	4(3)	7(6)	2(5)	0(0)
• 1.1.3	4(3)	7(6)	2(5)	0(0)
• 1.2.1	4(3)	7(6)	2(5)	0(0)
• 1.2.2	4(3)	7(6)	2(5)	0(0)
• 1.2.3	4(3)	7(6)	2(5)	0(0)
• 1.3.1	4(3)	7(6)	2(5)	0(0)
• 1.3.2	4(3)	7(6)	2(5)	0(0)
• 1.4.1	4(3)	7(6)	2(5)	0(0)
• 1.4.2	4(3)	7(6)	2(5)	0(0)

Measurement Tool: Writing Across the Curriculum College Rubric-Research Paper: WET 205 Electrical Theory ll

General Education Objective(s): 1

Goal Results: 90% “Excellent(4)”/”Proficient(3)”/ ”Adequate(2)”

Legend: ENG 102(No ENG 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 1.1.1	5(1)	9(2)	7(7)	0(2)
• 1.1.2	6(0)	9(3)	6(8)	0(1)
• 1.1.3	5(1)	9(2)	5(8)	1(1)
• 1.2.1	5(1)	8(0)	6(9)	2(2)
• 1.2.2	5(0)	10(1)	5(10)	1(1)
• 1.2.3	5(1)	10(3)	5(7)	1(1)
• 1.3.1	6(1)	10(2)	3(8)	2(1)
• 1.3.2	5(1)	10(3)	6(6)	0(2)
• 1.4.1	4(0)	5(2)	10(9)	2(1)
• 1.4.2	5(0)	7(2)	9(8)	0(2)
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2011-2012				
• 1.1.1	3(8)	2(8)	2(8)	1(8)
• 1.1.2	3(8)	2(8)	2(8)	1(8)
• 1.1.3	3(8)	2(8)	2(8)	1(8)
• 1.2.1	4(8)	1(8)	3(8)	
• 1.2.2	4(8)	1(8)	3(8)	
• 1.2.3	4(8)	1(8)	3(8)	
• 1.3.1	4(8)	1(8)	2(8)	1(8)
• 1.3.2	4(8)	1(8)	2(8)	1(8)
• 1.4.1	3(8)	1(8)	1(8)	3(8)
• 1.4.2	3(8)	1(8)	1(8)	3(8)
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2010-2011				
• 1.1.1	8(14)	(2)	1	
• 1.1.2	8(9)	(7)	1	
• 1.1.3	3(9)	4(3)	2(3)	(1)
• 1.2.1	6(9)	2(5)	1(2)	
• 1.2.2	7(15)	2	(1)	
• 1.2.3	4(7)	4(6)	1(3)	
• 1.3.1	6(10)	2(1)	(2)	1(3)

• 1.3.2	5(8)	3(4)	(1)	1(3)
• 1.4.1	2(8)	4(8)	3	
• 1.4.2	2(6)	5(10)	2	

Measurement Tool: Writing Across the Curriculum College Rubric: Research Paper WET 210 Wind Turbine Siting and Construction

General Education Objective(s): 1

Goal Results: 90% “Excellent”/”Proficient”/ ”Adequate”

Legend: ENG 102(No ENG 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 1.1.1	4(0)	2(0)	2(0)	0(0)
• 1.1.2	4(0)	2(0)	2(0)	0(0)
• 1.1.3	4(0)	2(0)	2(0)	0(0)
• 1.2.1	4(0)	3(0)	1(0)	0(0)
• 1.2.2	4(0)	3(0)	1(0)	0(0)
• 1.2.3	4(0)	3(0)	1(0)	0(0)
• 1.3.1	5(0)	0(0)	2(0)	1(0)
• 1.3.2	5(0)	0(0)	2(0)	1(0)
• 1.4.1	2(0)	3(0)	0(0)	3(0)
• 1.4.2	2(0)	3(0)	0(0)	3(0)
Year	**Excellent (4)**	**Proficient (3)**	**Adequate (2)**	**Inadequate (1)**
2010-2011				
• 1.1.1	20(3)		1	
• 1.1.2	20(3)		1	
• 1.1.3	20(3)		1	
• 1.2.1	20(3)		1	
• 1.2.2	20(3)		1	
• 1.2.3	20(3)		1	
• 1.3.1	16(2)		1	4(1)
• 1.3.2	17(2)			4(1)
• 1.4.1	17(3)	2	1	1
• 1.4.2	21(3)			

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2009-2010 • 1.1.1 • 1.1.2 • 1.1.3	 14(2) 14(2) 14(2)	 (1) (1) (1)		
• 1.2.1 • 1.2.2 • 1.2.3	14(2) 14(2) 14(2)	(1) (1) (1)		
• 1.3.1 • 1.3.2	6(1) 6(1)			8(2)
• 1.4.1 • 1.4.2	14(3) 14(3)			

Measurement Tool: Writing Across the Curriculum College Rubric: Research Paper WET 216 Digital Electronics

General Education Objective(s): 1

Goal Results: 90% “Excellent”/”Proficient”/ ”Adequate”

Legend: ENG 102(No ENG 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2010-2011				
• 1.1.1	14(2)	6	(1)	1
• 1.1.2	15(1)	4(1)	2(1)	
• 1.1.3	15(1)	3(1)	2	1(1)
• 1.2.1	15(1)	1(1)	5(1)	
• 1.2.2	16(2)	3	1(1)	1
• 1.2.3	16(2)	2	3	(1)
• 1.3.1	18(1)			3(2)
• 1.3.2	17(1)	1		3(2)
• 1.4.1	7(1)	7(1)	5	2(1)
• 1.4.2	13(2)	5	3	(1)

Measurement Tool: Writing Across the Curriculum College Rubric: Research Paper WET 212 Monitoring and Communication Technology

General Education Objective(s): 1

Goal Results: 90% “Excellent”/”Proficient”/ ”Adequate”

Legend: ENG 102(No ENG 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2010-2011				
• 1.1.1	16(1)	4(1)	1(1)	
• 1.1.2	18(1)	2(1)	1	(1)
• 1.1.3	18(2)	2		1(1)
• 1.2.1	14(1)	6(1)		1(1)
• 1.2.2	18(1)	2(1)	1	(1)
• 1.2.3	18(1)	2(1)	(1)	1
• 1.3.1	20(3)			1
• 1.3.2	19(2)	1		1(1)
• 1.4.1	4(1)	9	7(1)	1(1)
• 1.4.2	14(1)	4(1)	2	1(1)

Measurement Tool: Writing Across the Curriculum College Rubric: Research Paper WET 218 SCADA and Electronics of Wind Turbines

General Education Objective(s): 1

Goal Results: 90% “Excellent”/”Proficient”/ ”Adequate”

Legend: ENG 102 (No ENG 102)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 1.1.1	1(0)	6(0)	0(1)	0(0)
• 1.1.2	1(0)	6(0)	0(1)	0(0)
• 1.1.3	0(0)	7(0)	0(1)	0(0)
• 1.2.1	0(0)	7(0)	0(1)	0(0)
• 1.2.2	1(0)	6(0)	0(1)	0(0)
• 1.2.3	1(0)	6(0)	0(1)	0(0)
• 1.3.1	1(0)	6(0)	0(1)	0(0)
• 1.3.2	1(0)	6(0)	0(1)	0(0)
• 1.4.1	0(0)	7(0)	0(1)	0(0)
• 1.4.2	1(0)	6(0)	0(1)	0(0)

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2011-2012				
• 1.1.1	3	9	6	1
• 1.1.2	4	11	3	1
• 1.1.3	4	8	6	1
• 1.2.1	3	7	8	1
• 1.2.2	3	8	7	1
• 1.2.3	3	8	7	1
• 1.3.1	4	10	4	1
• 1.3.2	3	11	4	1
• 1.4.1	2	7	9	1
• 1.4.2	3	11	4	1

Measurement Tool: GEA College Rubric
General Education Objective(s): 1, 2, 3
Goal Results: 100% “excellent (4)”, “proficient (3)” or “adequate (2)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 1	21	19	90%(mean=2.20)
• 2	22	20	91%(mean=2.83)
• 3	21	14	67%(mean=3.88)*
2009-2010			
• 1	21	16	76%(mean=3.09)
• 2	21	21	100%(mean=2.99)
• 3	21	13	62%(mean=4.52)*

1 Present ideas in writing.
2 Present ideas orally according to standard usage.
3 Demonstrate application of information technology.
*Based on 5 point scale.

Measurement Tool: GEA College Rubric
General Education Objective(s): 4, 5, 6
Goal Results: 100% “excellent (5)”, “proficient (4)” or “acceptable (3)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 4	21	5	24%(mean=1.53)
• 5	21	18	86%(mean=2.88)
• 6	21	17	81%(mean=2.83)
2009-2010			
• 4	20	6	30% (mean=1.55)
• 5	21	12	57%(mean=2.94)
• 6	21	11	52%(mean=2.78)

4 Demonstrate mathematical principles.
5 Demonstrate scientific reasoning.
6 Apply scientific methods to the inquiry process.

Measurement Tool: GEA College Rubric
General Education Objective(s): Critical Thinking-Science Eval.
Goal Results: 100% “excellent (4)”, “proficient (3)” or “acceptable (2)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 7	21	20	95%(mean=2.95)
• 8	21	19	90%(mean=3.05)
• 9	21	19	90%(mean=2.76)

7. Identify and gather information.
8. Analyze and evaluate information.
9. Synthesize and formulate conclusions.

Measurement Tool: GEA College Rubric
General Education Objective(s): Critical Thinking-English Eval.
Goal Results: 100% “excellent (4)”, “proficient (3)” or “acceptable (2)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2010-2011			
• 7	22	22	100%(mean=2.95)
• 8	22	22	100%(mean=3.0)
• 9	22	22	100%(mean=2.91)

7. Identify and gather information.
8. Analyze and evaluate information.
9. Synthesize and formulate conclusions.

Measurement Tool: GEA College Rubric
General Education Objective(s): 7, 8, 9
Goal Results: 100% “excellent (5)”, “proficient (4)” or “acceptable (3)”

Reporting Period	# of Students Attempting	# Passing	% Passing
2009-2010			
• 7	20	11	55%(mean=2.84)
• 8	21	8	38%(mean=2.67)
• 9	20	17	85%(mean=3.36)

7. Read and analyze complex ideas.
8. Locate, evaluate and apply research information.
9. Evaluate and present well-reasoned arguments.

Measurement Tool: ACT Collegiate Assessment of Academic Proficiency (CAAP)
General Education Objective(s): 1, 4-9
Goal Results: 50%
Legend: n (Mean Score)

Year	Writing	Math	Reading	Critical Thinking	Science
2012-2013	7(59.9%)	7(57%)	7(59%)	7(60%)	7(58.1%)
2011-2012	20(43.9%)	20(43.4%)	20(55.8%)	20(48.5%)	20(54.1%)
2010-2011	22(44.7%)	3(75.7%)	22(58.8%)	22(51.5%)	22(50%)
2009-2010	12(35.0%)	1(90%)	13(49.6%)	18(41.5%)	17(54.8%)

General Education Objective(s): 1-6
Goal Results: 90% “Excellent(4)”/”Proficient(3)”/ ”Adequate(2)”

General Education Competency: Writing

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 1.1.1		4	1	
• 1.1.2		4	1	
• 1.1.3		4	1	
• 1.2.1		4	1	
• 1.2.2		4	1	
• 1.2.3		4	1	
• 1.3.1		5		
• 1.3.2		5		
• 1.4.1		5		
• 1.4.2		5		

General Education Competency: Oral Presentation

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 2.1.1	2	1	2	
• 2.1.2	1	1	3	
• 2.1.3	1	1	3	
• 2.2.1	1	2	2	
• 2.2.2	1	2	2	
• 2.2.3	1	2	2	
• 2.3.1	1	3	1	
• 2.3.2	1	3	1	
• 2.3.3	1	3	1	
• 2.4.1	1	2	1	1
• 2.4.2	1	4		
• 2.4.3	1	1	2	
• 2.5.1		2	1	2
• 2.5.2		3	1	1
• 2.5.3				

General Education Competency: Information Technology

Year	Pass (4)	Fail (1)
2012-2013		
• 3.1.1	2	3
• 3.1.2	2	3
• 3.1.3	4	1
• 3.1.4	5	
• 3.1.5	2	4
• 3.2.1	5	
• 3.2.2	4	1
• 3.2.3	4	1
• 3.2.4	5	
• 3.2.5	4	1
• 3.3.1	3	2
• 3.3.2	1	4
• 3.3.3	1	4
• 3.4.1	1	4
• 3.4.2	1	4

General Education Competency: Mathematical Reasoning

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 4.1.1	2	3		
• 4.1.2		4	1	
• 4.2.1	1	4		
• 4.2.2	2	2	1	
• 4.2.3				
• 4.3.1	1	3	1	
• 4.3.2	2	2	1	

General Education Competency: Scientific Reasoning

Year	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
2012-2013				
• 5.1.1	1	3		1
• 5.1.2	2	1	1	1
• 5.2.1	2	2		1
• 5.3.1		2	1	1
• 5.4.1	1	4		
• 5.5.1	1	2	1	1
• 5.5.2	1	2	1	1

PDSA CYCLE 2009-2010
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

Program objectives 1, 4, and 5 suffered in the 2009-2010 semesters due to a lack of educational material related specifically to Wind Energy Technology.

Goal

The goal for 2010-2011 academic year is to provide students with current and specific educational material related to Wind Energy Technology.

Action Plan

The plan of action is to review available material and purchase material specific to Wind Energy Technology.

Results

A review of the problem areas in objectives 1, 4, and 5 revealed the particular needs of current and specific educational material for the Wind Energy Technology program. A curriculum reconstruction was determined. Curriculum mapping was performed. Revamping was needed through the program curriculum. After review of possible textbooks, new textbooks were selected. Lesson plans, lab activities and syllabus are being revised to enhance the new material. The reconstruction will meet wind industry skill standards and a seal of approval from the American Wind Energy Association.

PDSA CYCLE 2010-2011
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Problem Area

Program objectives 1, 4, and 5 suffered in the 2010-2011 semesters due to a lack of balance between the classroom lectures and lab educational material.

Program objectives 2 and 3 experienced issues in 2010-2011 semesters due to a disconnection between education and real world activities.

Program objective 6 in 2010-2011 semesters encountered a deficient usage of the wind turbine for safety scenarios.

Goal

The goal for 2010-2011 academic year is to provide students with balance between the classroom lectures and lab educational material.

The goal for 2010-2011 academic year is to provide students with a connection between education and real world activities.

The goal for 2010-2011 academic year is to provide students using the wind turbine for safety scenarios.

Action Plan

The plan of action for program objectives 1, 4, and 5 is to evaluate each course in the Wind Energy Technology program. Restructure all courses which display an unbalance of classroom and lab material. Design a well balance class and lab instruction.

The plan of action for program objectives 2 and 3 is to assign a project in which the students will link college education to real world wind industry.

The plan of action for program objective 6 is to have each student involved in a simulated emergency scenario with the actually wind turbine.

Results

Program objectives 1 was met by analyzing and restructuring each course in which there was an unbalance identified between classroom and lab material. Lab material was reevaluated and restructured to meet the objectives of the individual courses.

Program objective 2 was met, by analyzing and restructuring course content to meet objective 2. Each student also has to research and discuss “real world industry” scenarios and link these to the ongoing training being received in the classroom, labs and climb courses.

Program objective 3 was met by requiring each student to research and explain “real world industry” scenarios and link these to the ongoing training being received in the classroom, labs and climb courses.

Program objective 4 was met by analyzing and restructuring each course in which there was an unbalance identified between classroom and lab material. Lab material was reevaluated and restructured to meet the objectives of the individual courses.

Program objective 5 was met by analyzing and restructuring each course in which there was an unbalance identified between classroom and lab material. Lab material was reevaluated and restructured to meet the objectives of the individual courses.

Program objective 6 was met by having students trained on the TracTel rescue system using the wind turbine. During each turbine climb, students are instructed in electrical safety, tool safety, Lock-Out/Tag-Out, personal protective equipment selection and use. Adult CPR and basic first aid are a core component of each degree-seeking students training.

PDSA CYCLE 2011-2012
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Area Describing Learning Improvements

Although Program Objectives 1-6 have all been met during the 2011-2012 Cycle, the 68% result on the Wind Turbine Diagnosis and Repair is an area of concern. This particular skill set is vital to students becoming eligible for promotion and showing their readiness for more responsibility so their skill here needs to be enhanced. The area is almost one of intuitive ability based on experience gained in the field but to enhance that ability more lab time on actual components brought to the labs from local wind farms has been allocated. Initial impressions seem to indicate that this is a positive effect.

Goal

This improvement will be assessed for the 2012-2013 period and a % Passing average of 75% will be the goal.

Action Plan

This increased emphasis on turbine trouble shooting and repair will be a point of emphasis in the wind faculty course review and semester evaluations.

Results

Results from increased use of real wind and other industrial components in the lab and classroom will be reported in the 2012-2013 report.

Additional Report of New Program

In the Spring and Summer of 2012, and currently in the Fall of 2012, in fulfillment of a New Mexico State Grant awarded to and naming the College as the New Mexico Wind center of Excellence the wind program created an Occupational Certificate program of twenty one credit hours using the same technical courses and syllabi as is used in the degree program. The program delivers in one semester all the technical wind courses taught in the first year of the degree program. The program utilizes block programing requiring an accelerated pace to allow completion of this number of credit hours in one semester. In addition, this program does not require any general education courses and is strictly intended to provide an acceptable level of skills to allow graduates to enter the workforce after completion. Since there are no acceptance testing requirements for this program, like the College's normal use of the Compass exam the class has been able to utilize the IBEST grant to provide in class tutors to help students in the class, particularly those without a high school diploma or GED with the intention that they pass their GED to attain the program Occupational Certificate. Four of five of those students achieved their GED simultaneous with their wind certificate and the other student is in the process of completing all sections of his GED.

It would seem to be a goal to compare these outcomes between the regular degree program students and the one semester students, at least on the similar courses taught. For several factors this has not been a program goal:

1. The pace for the short program is 21 credit hours for one semester whereas, for the degree program student, that same 21 credit hours is over two semesters. It would be assumed that this would result in a higher failure which is the case and therefore a higher dropout rate.
2. The program objectives are met for both classes but the Occupational Certificate students require a much higher degree of individual tutoring to achieve the objectives and there has been a somewhat higher failure rate. For the 33 students that started the one semester or short course program only 28 received their Occupational Certificate. That may be indicative of the rate of content delivery. On the other hand the ability to provide training to students that are then capable of entering the job market upon course completion is more than meeting the original grant objective with regard to attrition.

PDSA CYCLE 2012-2013
OPPORTUNITIES FOR IMPROVEMENT

ANALYSIS

Area Describing Learning Improvements

1.. Although Program Objectives 1-6 were met during the 2011-2012 Cycle, the 68% result on the Wind Turbine Diagnosis and Repair was an area of concern. This particular skill set is vital to students becoming eligible for promotion and showing their readiness for more responsibility so their skill here needs to be enhanced. The area is almost one of intuitive ability based on experience gained in the field but to enhance that ability more lab time on actual components brought to the labs from local wind farms has been allocated, this has had a positive effect on training.

2. During the reporting period 2012-2013 it was noted that the course materials scheduled to be used were deficient in both WET 121 Mechanical Systems and WET 204 Hydraulic Systems. The scheduled materials did not cover the proper aspects of each system (Program Objective 1). (This was identified early so it was acted upon during the semester in which identification took place.)

3. Program Objective 6 did not lead to OSHA 10 certification. (This was identified early so it was acted upon during the semester in which identification took place.)

Goal

1. This improvement was assessed for the 2012-2013 period and a passing average of 75% was the goal.

2. Introduce new course materials for WET 121 Mechanical Systems and WET 204 Hydraulic Systems, by using the current lab materials as course objectives, and reaffirming each topic with scheduled labs. (Program Objective 1)

3. The curriculum was modified so that student learning would lead to OSHA 10 certification. Program Objective 6

Action Plan

1. Increased emphasis on turbine trouble shooting and repair was a point of emphasis in the wind faculty course review and semester evaluations.

2. Implement new course materials into the current program. (Program Objective 1)

3. An instructor was assigned and trained in OSHA 10. Program Objective 6

Results

(The addressing of the 2012-2013 opportunities for improvement occurred during the same reporting cycle as the problems were identified; therefore, goals were established and an action plan was implemented to address these concerns early on so it was acted upon during the semester in which identification took place.)

1. For the 2012-2013 reporting period, the pass rate for the Wind Turbine Diagnosis and Repair was 100% as opposed to the 68% pass rate in the previous reporting period.

2. The changes implemented into WET 121 Mechanical Systems and WET 204 Hydraulic Systems, were met with success. Student learning improved with the changes made. All students had the chance to prove the knowledge gained in class, through each lab procedure. (Program Objective 1)

3. Each student was trained in OSHA 10 and received their OSHA 10 certification. (Program Objective 6)