Butler County Community College

Student Learning Outcomes Assessment

General Education Assessment Report

October 15, 2012

CONTENTS

Overview of General Education Program

The general education program at Butler County Community College (BC3) consists of 17 credits dispersed among the following minimums:

      Communication Skills, 6 credits
      Health Science/Physical Education, 2 credits
      Computation Skills or Mathematics, 3 credits
      Natural Science or Computer Science, 3 credits
      Social Sciences or Humanities, 3 credits

In comparing this program with Standard 12 requirements from the Middle States Commission on Higher Education (MSCHE), it is necessary to add information literacy and critical thinking skills as two educational proficiencies students can attain across a variety of courses rather than attaining these proficiencies through course dispersion. Table 1 below identifies general education proficiencies, the courses for evaluating them, and the majors that are required to complete the proficiencies.

In all, there are eight general education proficiencies; each associate degree program is expected to meet seven, having a choice of scientific reasoning or computer information technology.

Faculty members integrate critical thinking skills in their instruction and provide students assignments that foster students to think critically in varied ways.

Table 1: BC3 General Education Profile

General Education Proficiency	Population evaluated	Test or Measures	Majors required to complete Proficiency
Institutional Degree Credit Requirements Specified			
Oral Communication	COMM 201 Speech	Persuasive speech assignment	All associate degree programs, except the 20 programs listed below
Written Communication	ENGL 101	Two writing assignments	All associate degree programs
Wellness (Health)	PHED 125	Written papers or workout logs	All associate degree programs
Quantitative Reasoning	MATH 100, BUSN 121	Departmental Final Exams	All associate degree programs
Scientific Reasoning	BIOL 101, PHSC 110, PHYS 101, CHEM 115	Departmental Final Exams	All associate degree programs except business programs that substitute Computer courses

Computer Information Technology	COMP 210	Departmental Final Exams	Associate degree in business in lieu of Scientific Reasoning
No Institutional Degree Credit Requirements Specified			
Information Literacy	Sampling – 180 students from 10 classes	Standardized Assessment of Information Literacy Skills (SAILS)	All associate degree programs
Critical Thinking Skills	Faculty-selected Relevant Courses	Course-specified measures	All associate degree programs

The following 20 programs do NOT have COMM 201 (Speech) in their curriculum:

Business Management (302),
Computer Information Systems-- C IS (315), CIS (303A), CIS (303E), CIS (303D),
Graphic Design (275),
Hospitality Management -- HM (318A), HM (318B), HM (318),
Human Resources HR (225)
Marketing Management (311),
Nursing (208),
Office Administration--- OA (308), OA (313), OA (312),
Paramedic (209)
Park & Recreation Management (307C)
Photography (277)
Professional Media Production (276)
Recreation Tourism (343)

The following 18 programs include computer science instead of natural science as an elective.

    Accounting (301)
    Business Administration (205)
    Computer Information Systems --CIS (315), CIS (303A), CIS (303E), CIS (303B), CIS (303D)
    Graphic Design (275)
    Hospitality Management HM (318A), HM (318B), HM (318)
    Human Resources Management HR (225)
    Marketing Management (311)
    Office Administration OA (308), OA (313), OA (312)
    Recreation Tourism (343)
    Technical Trades – Cosmetology Management (314B)

Data Collection

Instructors who taught specified general education courses tagged for assessment submitted student performance data to the Assessment Division for analysis. Departmental final exam results in selected courses are used for quantitative reasoning, scientific reasoning, and computer information technology. The data for oral and written communication are collected from common class assignments aligned with a department-developed rubric utilized by instructors.

The data for the assessment of information literacy were obtained from two sources, the Standardized Assessment of Information Literacy Skills (SAILS) administered to a sample of 180 students, and a survey of faculty perceptions of students' information literacy skills. The SAILS test was chosen for its general acceptance in the library community, its wealth of norming data, and the fact that it specifically measures four of the elements in the College's definition of information literacy, breaking them into eight skill sets. The survey instrument for the faculty perception of information literacy skills was developed by the library staff and administered online through Survey Monkey™.

In an attempt to assess the integration of critical thinking skills in the curriculum, the College provided annual critical thinking forums for the past three years. Subsequently, a request was made to faculty to submit assignments that foster critical thinking. Eighteen instructors provided data on 20 courses for the critical thinking assessment.

General Education Assessment Results & Follow-up Actions

Oral Communication

Intended Learning Outcome:

The student/graduate will be able to demonstrate an ability to communicate effectively and persuasively in standard spoken English.

Means of Assessment:

Persuasive speech assignment in COMM 201 Speech Class

Minimum Criterion for Success:

Utilizing a standard, faculty generated rubric, 70% of students in COMM 201 will score at least 60% on their persuasive speech assignment.

Population Assessed:

555 students in 34 sections were assessed between the fall semester of 2010 and the summer of 2011. There were 18 different majors in the population

Result:

91.3% of the students evaluated earned a score of 60% or higher. The success criterion is met.

Follow-up Actions:

The Institutional Degree Requirements (IDR) specifies 6 credits minimum for communication skills and it does not differentiate between oral and written communication. Standard 12 of the Middle States Commission on Higher Education asks for "institutional requirements assuring that, upon completion, students are proficient in oral and written communication, scientific and quantitative reasoning, and technological competency appropriate to the discipline." The 20 programs that do not require speech as a program requirement need to show that the oral communication competency is achieved in other courses in the program and identify where the oral communication competency can be measured. Otherwise, the curriculum should be reviewed with a consideration to adding this general education competency.

Recommendation:

It is recommended that the Academic Affairs Committee begin the discussion regarding this issue.

General Education Assessment Results & Follow-up Actions

Written Communication

Intended Learning Outcome:

The graduate should be able to demonstrate an ability to communicate effectively and persuasively in standard written English.

Means of Assessment:

Two assignments in ENGL 101 – English I. These assignments are required in all classes.

1. A critical essay that will be assessed using the General English Essay Rating Scale developed by division faculty
2. A formal business letter that will be assessed using the Business Letter Assessment Rubric developed by the division faculty

Minimum Criterion for Success:

70% of the students will score at least 18 out of 24 points on each of the two assignments.

Population Assessed:

All English 101 classes: English I starting in the spring semester 2013

Results:

Results will be available in June of 2013

Follow-up Actions:

Instructor training on the rubric should commence as soon as possible especially with respect to adjunct instructors who teach most sections of this course.

Inform all instructors in the division, full and part-time, about this assessment process and the fact that data will be requested from all sections of ENGL 101 in the spring semester 2013 and subsequent semesters.

General Education Assessment Results & Follow-up Actions

Wellness

Intended Learning Outcome:

The student/graduate will be able to demonstrate a commitment to a healthy lifestyle.

Means of Assessment:

Written paper in PHED 120 (Health Science) – Wellness behaviors to enhance higher standard of health in the future

 OR

Workout Journal in PHED 125 (Physical Wellness)

Minimum Criterion for Success:

70% of the students will score at least 60% on the assignment.

Population Assessed:

328 students in 19 sections of PHED 125 were assessed between the fall of 2010 and the fall of 2011. There were 20 associate degrees in the population.

Results:

96.3% of the students earned a score of 60% or higher. The success criterion is met.

Follow-up Actions:

No actions recommended.

General Education Assessment Results & Follow-up Actions

Quantitative Reasoning

Intended Learning Outcome:

The Student/graduate will be able to demonstrate ability for quantitative reasoning.

Means of Assessment:

MATH 100-- Intermediate Algebra

BUSN 121-- Business Math

Minimum Criterion for Success:

70% of the students will score at least 60% on the departmental final exam in Math 100 or BUSN 121.

Population Assessed:

BUSN 121

375 students in 25 sections of BUSN 121 were assessed between the fall of 2007 and the spring of 2011. There were 15 associate degree majors represented in the population

MATH 100

861 students in 50 sections of MATH 100 were assessed between fall 2010 and fall 2011. There were 31 majors represented in the population

Results:

BUSN 121

Semester	Pass Count	Pass rate
Fall 07	66 out of 90	73.33%
Fall 09	53 out of 76	69.74%
Spring 10	35 out of 62	56.45%
Fall 2010	60 out of 85	70.59%
Spring 2011	40 out of 62	64.52%
Total All Fall	179 out of 251	71.31%
Total All Spring	75 out of 124	60.48%

Success criterion is met in the fall semesters and not in the spring semesters.

MATH 100

74.3% of the students earned a score of 60% or higher on the final exam. The success criterion is met.

Follow-up Actions:

BUSN 121

The course textbook has been changed. The course is classified as a gatekeeper course which will receive additional tutoring resources. The impact of tutoring will be assessed.

A math lab, Pearson's My Math Lab, has been provided to supplement tutorial resources for students. Instructors who use the math lab as a supplement are administering pre and posttests to see if it improves achievement.

This course will be assessed again in the fall, spring and summer of 2012/2013 academic calendar.

General Education Assessment Results & Follow-up Actions

Scientific Reasoning

Intended Learning Outcome:

The student/graduate will be able to demonstrate an understanding of scientific methodology.

Means of Assessment:

Departmental final exams in one of the following general education science courses BIOL 101: Biology I, PHSC 110: Environmental Science, PHYS 101: Physics I, CHEM 115: Descriptive Chemistry

Minimum Criterion for Success:

70% of the students will score at least 60% on the departmental final exam in the course.

Population Assessed:

a) 315 Students in 17 sections of BIOL 101 were assessed between fall of 2008 and spring of 2011. There were 18 associate degree majors in the population.
b) 27 students in 2 sections of PHSC 110 were assessed in the fall semester of 2011. There were 9 associate degree majors in the population

Results:

BIOL 101

54% of the students in the BIOL 101 classes scored 60% or above. Therefore the success criterion was not met.

Semester	No. of Sections	Pass Count	Pass rate
Fall 08	2	17 out of 42	40.48%
Spring 09	4	35 out of 70	50%
Fall 09	3	35 out of 49	71.43%
Spring 10	2	19 out of 50	38%
Fall 10	2	26 out 44	59.09%
Spring 11	4	38 out of 60	63.33%
Total	17 sections	170 out of 315	54%

PHSC 110

74% of the students in PHSC 110 earned 60% or higher on the departmental final exam. The success criterion is met.

Follow-up Actions:

BIOL 101

A study had shown that students whose placement tests put them at developmental reading or developmental English levels were not succeeding well in this course. A prerequisite for this course now includes eligibility to enroll in ENGL 101based on placement scores or successful completion of developmental courses with a grade of C or better.

Also, the Dean of Science and Technology will meet with the BIOL 101 instructors and have them review the course content, course delivery, course structure and assessment instruments and develop strategies to improve on students' learning of BIOL 101. Data will be collected after the changes are implemented.

General Education Assessment Results & Follow-up Actions

Computer Information Technology

Intended Learning Outcome:

> The student/graduate will be able to demonstrate the application of Microsoft Office software and electronic communication.

Means of Assessment:

> Departmental mid-term and final exams in COMP 210: Introduction to Micro computing

Minimum Criterion for Success:

> 70% of the students will score at least 70% on the final exam.

Population Assessed:

> Six sections of COMP 210 in the fall semester of 2011, total of 79 students
>
> Six sections of COMP 210 in the spring semester of 2012, total of 104 students
>
> One section of COMP 210 in the summer semester of 2012, total of 13 students

Results:

> A total of 175 students out of 196 or 89.3% scored 70% or above. The minimum criterion was met in nearly every semester. Sections B02 and B04 in the spring semester of 2012 were the two sections that did not meet the success the criterion in a semester.*

COMP 210 Fall 2011 6 sections   94.9% scored 70% or better (75 of 79 students met criteria)
COMP 210 Spring 2012 6 sections   84.6% scored 70% or better (88 of 104 students met criteria)
COMP Summer 2012 1 section   92.3% scored 70% or better (12 of 13 students met criteria)

Individual sections:

Fall 2011

B02	19/19	100%
B03	16/17	94.1%
B06	10/12	83.3%
B07	14/14	100%
B09	9/10	90%
Online	7/7	100%

Spring 2012
B01   18/19   94.7%
B02   11/16   68.8%*
B03   13/15   86.7%
B04   13/20   65%*
B06   18/19   94.7%
B61   15/15   100%

Summer 2012
B01   12/13   92.3%

Follow-up Actions:

The content of this course has been changed to meet the intended learning outcome of the State-wide articulation program. In addition to Microsoft Office software, the content now includes operating systems, electronic communication techniques, database software and World Wide Web.

 This course will be assessed again in the fall, spring and summer of 2012/2013 academic calendar. The assessment will include mid-term and final exam data.

General Education Assessment Results & Follow-up Actions

Information Literacy

Intended Learning Outcome:

The student/ graduate will be able to define information needed and effectively access, evaluate, internalize and utilize information.

Means of Assessment:

Library staff utilized the Standardized Assessment of Information Literacy Skills (SAILS), as well as a locally created survey of faculty perceptions of student information literacy skills.

Minimum Criterion for Success:

Success Criteria:
The success criteria were not defined internally prior to administering the assessment instrument. In speaking with the Dean of Library Services, it was his intent to utilize the standards set by the assessment division.

It is suggested that a success criterion be: The average students' score will be "about the same as the institution-type benchmark" or "better than the institution-type benchmark" in all identified categories on the Standardized Assessment of Information Literacy Skills.

Population Assessed:

Ten classes with a total of 180 students were assessed using SAILS. The students were from twelve associate degree majors; 163 (90.6%) identified themselves as sophomores, 13 as freshmen, two as juniors, one as a senior, and one as "other."

The entire student population was assessed by the entire faculty through the survey.

Results:

SAILS Test

BC3 students on the average scored "better than the institution-type benchmark" in the following categories:
- Developing a Research Strategy; Selecting Finding Tools; Searching;
- Retrieving Sources; Evaluating Sources; Documenting Sources;
- Understanding Economic, Legal, and Social Issues

They scored "about the same as the institution-type benchmark" in

- Using Finding Tool Features.

With regard to the elements of BC3's definition of information literacy (which correspond to the Association of College and Research Libraries' standards), "students at Butler County Community College performed better than the 'institution-type' benchmark on Standards 1 (Determines the Nature and Extent of the Information Needed), 2 (Accesses Needed Information Effectively and Efficiently), 3 (Evaluates Information and Its Sources Critically and Incorporates Selected Information Into His or Her Knowledge Base and Value System), and 5 (Understands Many of the Economic, Legal, and Social Issues Surrounding the Use of Information and Accesses and Uses Information Ethically and Legally)".

Faculty Perception Survey:

Seventy-two faculty members were surveyed on: perception of students' information literacy skills; inclusion of information literacy instruction in classes; expected use of sources for assignments and expected sources of information literacy instruction.

Information Literacy Skills:
- Out of the 12 skills listed, none was rated as "better than adequate". One was rated as "adequate" (Access information using the Internet) and the rest were rated between "inadequate" and "adequate".

- The two skills rated lowest by faculty were "Critically evaluate sources and information content" (60.6% at inadequate or no skills) and "Distinguish between authoritative, biased, and marginal sources" (68.6% at inadequate or no skills).

Information Literacy Instruction:
- 88.7% of faculty responding teach information literacy skills in their classes.

Sources of Information for Assignments:
- The largest category of sources that faculty report students use is the Internet (93.3%). Use of e-books as sources was reported by 27.8%, print books by 75%, and print journals by 69.4%.

- 90.3% of faculty responding expected students to access information using the Internet, while only 50% expect them to access information using the Beck Library's catalog, databases, and other resources.

The criteria for success have been met, and these results will be used as baseline for future assessment of information literacy skills.

Follow-up Actions:

It is noted that the sample size of 180 is small, and the margin of error is higher than desired. Further, while many majors are represented, the number of each is too small to develop specific programmatic breakdowns. It is also noted that there is a very small number of humanities majors in the sample.

Areas emerging from both sources of data (SAILS and Faculty) as needing improvement include: Evaluating Sources and Documenting Sources. The library staff has also identified a need to better communicate the breadth of resources in the library. As a result, the library staff is developing resources and developing training opportunities.

General Education Assessment Results & Follow-up Actions

Critical Thinking Skills

Intended Learning Outcome:

BC3 student/graduate will be able to think critically, reason analytically, and solve realistic problems.

A. General Education

Intended Learning Outcome:

BC3 student/graduate will be able to demonstrate the ability to evaluate and analyze source information, and subsequently to draw conclusions and present an argument based upon that analysis.

Students should be given tasks that involve:

a. Evaluation of evidence: How well does the student assess the quality and relevance of evidence?
b. Analysis and synthesis of evidence: How well does the student analyze and synthesize data and information?
c. Drawing conclusions: How well does the student form a conclusion from his or her analysis?
d. Acknowledging alternative explanations/viewpoints: How well does the student consider other options and acknowledge that her/his answer is not the only perspective?

B. Discipline

Intended Learning Outcome:

BC3 student/graduate will be able to demonstrate the ability to identify, define, and deal with problems pertinent to their future professional practice through logical, analytical and critical thinking.

Students should be given tasks that involve:

a. Identifying problems: How well does the student recognize and define a problem situation?

b. Analysis and interpretation of evidence: How well does the student analyze and synthesize data and information?

c. Formulating a solution: How well does the student formulate solutions and select the best one?

Means of Assessment:

Scores on faculty assignments that foster critical thinking skills according to the rubric stated below.

Critical Thinking Assessment

As part of complying with accreditation requirements regarding critical thinking, BC3 faculty have been sharing assignments in which students are asked to demonstrate critical thinking skills. The next step is to evaluate student performance with regard to the college's definitions of critical thinking.

The rubrics below list the elements of critical thinking defined through the BC3 critical thinking forums. When you submit a critical thinking assignment, please identify the critical thinking element(s) which the assignment covered and evaluate the student performance by identifying the number of students whose performances fell within each of the categories.

Please note that there are separate definitions for general education courses and discipline specific courses. Also, it is recognized that assignments may not cover all of the elements defined by the rubrics.

PHIL 220   Critical Thinking Comparison Paper   16 students

Critical Thinking Elements (Discipline Specific Course)	Highly Competent	Competent	Needs Improvement	Comments
1. **Evaluate evidence**	12	4		
2. **Analyze and synthesize evidence**	10	6		
3. **Draw conclusions**	10	6		
4. **Acknowledge alternative explanations/viewpoints**	N/A			

Critical Thinking Elements (General Education)	Highly Competent	Competent	Needs Improvement	Comments
1. **Identify problems**				
2. **Analyze and interpret evidence**				
3. **Formulate solutions**				
4. **Acknowledge alternative explanations/viewpoints**				

Critical Thinking Elements (Discipline Specific Course)	Highly Competent	Competent	Needs Improvement	Comments
1. **Evaluate evidence**				
2. **Analyze and synthesize evidence**				
3. **Draw conclusions**				
4. **Acknowledge alternative explanations/viewpoints**				

Minimum Criterion for Success:

70% of the students will demonstrate improvement on critical thinking skills.

Population Assessed:

Students in the 20 courses listed below

Faculty Member   **Subject**

- Karen Aul   Nursing I: Introduction to Nursing Care (NURS 101)

- Shirley Austin   Abnormal Psychology (PSYC 204)
                            Human Growth and Development (PSYC 203)

- Gretchen Cararie   Principles of Nutrition (FSVC 140)

- Sandy Geibel   General Microbiology (BIOL 201)

- Kim Getz   Introduction to Micro computing (COMP 210)

- Laurie Joanow   Child Psychology (PSYC 240)

- Steve Joseph   Introduction to Religions of the World (PHIL 215)

- Matt Kovac   Fluids (MECH 210)

- Jill Martin-Rend   Developmental Reading (ENGL 029)

- Jennifer Martin-Voit   Hospitality Law (FSVC 210)
- Stephen Mayfield   Ecology (BIOL 207)
- Ken McKeever   Business Statistics (BUSN 219)
  Business Calculus (MATH 125)
- Sherry Neely   Nursing 114 (NURS 114)
- Robin Pankiw   General Microbiology (BIOL 201)
- Deborah Stage   General Microbiology (BIOL 201)
- Karen Stubenbort   Contemporary Social Problems (SOCI 212)
- John P. Suesser   Introduction to Philosophy (PHIL 201)
- Joy Walsh   Developmental English (ENGL 034) – Fall 2011

Results:

Instructors view this competency as a formative process. As such they guide their students through critical thinking activities. Nearly all the instructors reported improvements in student performance.

Follow-up Actions:

It is recommended that the critical trainings and forums be offered to a wider campus audience and also foster increased participation from faculty members.

Summary

The general education program at BC3 consists of 8 competencies that include: oral and written communication, quantitative reasoning, scientific reasoning, computer information technology, information literacy and critical thinking skills. Six of the competencies are assessed in specified courses that the students must complete as part of the associate degree requirements. Information literacy is assessed by administering a skills test to a sample of students plus a faculty perception survey. Critical thinking skills are assessed in faculty-selected relevant courses. Student performance data have been collected and analyzed on seven of the eight competences. Data collection on the eighth one, written communication will begin in the spring 2013.

The results show that students are satisfactorily attaining the intended learning outcomes in four areas – oral communication, wellness, information literacy, and critical thinking skills. The success criteria were not consistently met in quantitative reasoning, scientific reasoning and computer information technology. Follow-up actions to improve on these results have been integrated into the curriculum and student learning will be reassessed during 2012-13.

Following the assessment of the general education program, the College is reviewing the consistency of the oral communication proficiency across all associate programs, making changes to the curriculum and or the delivery of instruction in Business Math (BUSN 121), Introduction to Micro-Computing (COMP 210) and Biology I (BIOL 101).