BISMARCK STATE COLLEGE

LEARNING OUTCOMES ASSESSMENT

SUMMARY REPORT FOR 2005-2006

ACADEMIC ASSESSMENT COMMITTEE
JANE SCHULZ, COORDINATOR

August 2007

Assessment at Bismarck State College includes a range of measures and processes to evaluate the occurrence and degree of student learning. Assessment activities focus on incoming student

assessment, class and course assessment, instructional program assessment, general education program assessment, and institutional assessment.

The 2005-2006 academic year marked further development of assessment activities and the accomplishment of several goals. The year was also spent in considerable discussion and evaluation of assessment activities. An overview of assessment activities and highlights of the year follow.

Assessment Committee

The Academic Assessment Committee consists of several permanent members and a rotating group of faculty group leaders. Each group leader works with a general education faculty group or with a faculty group from instructional programs. Meetings of the committee were held monthly.

Members of the committee for 2005-2006 were:

Permanent members:
- Provost and Vice President for Academic and Student Affairs – Dr. Wayne Boekes
- Associate Vice President for Academic Affairs – Dr. Drake Carter
- Assessment Coordinator – Dr. Jane Schulz
- Institutional Research Analyst – Michael Kubisiak
- Testing and Assessment Coordinator – Bonnie Weisz
- Recording Secretary – Jackie Hagel

Faculty members:
- Arts & Humanities – Ryan Pitcher
- Communications – Jaclyn Raw
- Science and Technology – Dr. Ron Jyring
- Mathematics – Jeff Skibicki
- Social Sciences – Wendy Pank
- CIP 1, 13 & 52 – Amy Helgeson
- CIP 43, 44 & 51 – Trudy Riehl, Lisa Hoynes
- CIP 15 & 50 – Holly Burch, David Sagsveen
- CIP 46, 47 & 48 – Dan Wahlman
- Developmental Courses – Kitty Netzer.

The committee is an exceptionally hard working and dedicated to the cause of assessment of learning on our campus. Three members of the committee have elected to remain on the committee for an additional length of time to continue to move assessment improvements forward.

Instructional Program Assessment

The occupational instructional programs have developed a process and forms that help them assess student learning. In addition, many programs have specialized accreditation and certifications that document evidence of learning.

Each year a number of instructional programs BSC is required to complete evaluations for the North Dakota University System. This year, evaluations were submitted for:
- Agri-Business Sales and Service; Farm and Ranch Management
- Associate Degree Nurse; Practical Nurse
- Hospitality Management
- Clinical Laboratory Technician
- Criminal Justice
- Electric Power Technology
- Electrical Transmission Systems Technology
- EMT Paramedic Technology
- Engineering Technician
- Fire Technology
- Geographic Information Systems
- Human Services
- Information Processing Specialist
- Mass Communication
- Nuclear Power Technology
- Paraeducation
- Phlebotomy Technician
- Transportation and Supply Chain Management
- Web Page Development and Design.

A full copy of the report is on file in the Office of the Provost and Vice President of Academic Affairs.

General Education Program Assessment

The Sophomore Survey was reviewed for appropriateness and value to the assessment program. It was decided by the committee that the existing report (in 3-4 sections) is cumbersome and confusing. A sub-team worked on revising the survey and presented their revision to the committee for discussion. The Sophomore Survey was revised as a shorter document and it was administered to students toward the end of the spring semester. Results of the survey are included following this narrative.

In the spring of 2006, a group of sophomore status students took the Collegiate Assessment of Academic Proficiency (CAAP) Writing Exam developed by ACT. The writing exam consisted of a sample of students' writings and was compared to other students across the country. Bismarck State College students scored a mean of 2.5 on the exam; the national mean was 3.2 on a 6.00 scale. Eleven students scored above the national mean. The exam indicated that students need additional help in improving their writing skills. Changes to the general education plan will include an emphasis on communication skills, including written skills.

There was much discussion about the general education program assessment. Since this was the last year of our Four Year Plan it was felt that the general education objectives needed to be reviewed and revised. Additionally, the committee felt that the general education assessment program should be streamlined and revamped to reduce the very significant workload of assessment and to make assessment activities more meaningful for faculty members.

In March, a group of eight committee members attended a Higher Learning Commission-sponsored workshop on assessment. The workshop was an intensive opportunity for the team to work with assessment mentors and among ourselves to review our general education assessment plan. This workshop proved to be extremely enlightening and valuable in streamlining the plan and in enhancing it for workability and effectiveness. Some of the things we learned at the workshop were to:

- Reduce the number of objectives and to make outcomes less cumbersome
- Simplify the assessment terminology
- Consider reorganizing the assessment committee structure
- Decide what students need when they graduate from BSC, and
- Simplify rubrics.

It was decided that, at our faculty inservice days in the fall, the assessment committee would share what was learned at the workshop, allow for discussion of what general education means at BSC, and identify specific knowledge and skills that we expect students to acquire through the general education program. After we have that information, we will work with the General Education committee to draft general education objectives and develop a general education assessment plan.

Professional Development

Jane Schulz and Kitty Netzer presented an assessment workshop for new faculty in October.

Lisa Hoynes attended the Assessment Institute in Indianapolis and reported that the institute was an excellent learning opportunity. She encouraged others to attend in the future.

Incoming Assessment

Incoming assessment activities are directed toward placing students appropriately in their college classes. A pre-enrollment assessment is required of all first-time and non-continuously enrolled degree-seeking students. Advisors use assessment scores to assist students in registering for courses in which they will most likely succeed.

The following information was provided by the coordinator for incoming assessment:

Progress of BSC Placement Scores
(Changes Made to Entry Level Placement Scores for Spring 2006 through Fall 2006)

Spring 2006

- Placement Score Brochures (which are sent by Student Records to new students reminding them of their placement scores and correct class placement) were updated to account for changes made in the past year to placement scores and courses.
- Commercial Art revised their cut score chart to clarify further what students would need prior to being accepted into the program

Fall 2006

- Updated and revised the "Course Placement Guide" handbook from 2004. Newly designed versions were printed and then sent to high school counselors and others working with potential students. This handbook lists current placement score information for English, math, reading and the technical programs.
- ACCUPLACER exam was established to be used in testing Distance Education Students who were having a difficult time finding COMPASS testing sites near them.
- Worked with the math and English departments, sharing score charts, examples of other schools' placement charts, and Interpretation of Scores for ACCUPLACER. Each department then determined what they felt were corresponding ACCUPLACER scores to the COMPASS scores we are currently using.
- After finalized ACCUPLACER scores were achieved, new math, English, and Reading placement charts were created which contained comparisons between COMPASS, ACT, and ACCUPLACER.
- ACCUPLACER exams and placement score messages were created using criteria based on these new placement scores and the testing needs of our college.
- "Flexible Amendment" was established by the English Department, allowing students whose scores placed them in ASC 089 (Web Based Lab) to, in certain circumstances; enroll in both the online lab and the online 110 English.
- Cut scores were established for the new Industrial Maintenance Program. It was determined that the entrance scores for that program would be an ACT 15 or COMPASS PreAlg 31 in math. This score would need to be met prior to being accepted into the program.

Developmental Education

2005-2006 Developmental Reading and Writing Placement:

Bismarck State College has seen an increasing number of students whose success in beginning composition courses is compromised because they lack basic reading and writing skills. In response to this concern, a developmental program addressing writing and reading skills were established within the English Discipline in Fall 1997. The English Discipline has been involved in determining appropriate assessment processes and placement of students. When students enter Bismarck State College, ACT and COMPASS English scores are used to determine placement in classes within the English Discipline.

Reading (082) – Overview

The following ACT/COMPASS reading scores are used to place entering freshmen in reading classes. At this time, the reading course is not required but is strongly recommended for students whose placement scores indicate they would benefit from this class.

ACT Reading Score	Placement Domain	COMPASS Score
0-14	ASC 082—Effective Reading	0-67
15-20	Independent work in the Sykes Student Success Center	68-84
21-36	Successfully completed test. Any college level course may be taken	85-100

Students are evaluated at the end of the semester using the COMPASS reading test.

Effective Reading (082) – Results
Our goal with Effective Reading (082) is to improve students' reading skills to the point where they can successfully complete college level work. Because we lack the personnel to offer enough classes to cover need, 082 is not a required course, even for those demonstrating grave need, but it is recommended. Below are the results from academic year 05-06, along with the results from the previous two academic years for comparison.

082	F 03	Sp 04	F 04	Sp 05	F 05	Sp 06
3rd Week Enrollment	43	10	38	15	**44**	**8**
End Enrollment	40	8	36	15	**41**	**6**
Post-Test completers	36	6	28	12	**32**	**4**
# of students who scored 68+ on post-test	22	5	21	7	**21**	**3**
# of students who scored lower on post-test	14	2	5	2	**3**	**1**
Average change on COMPASS	4.00	11.50	7.63	9.33	**13.28**	**5.00**
Average change on COMPASS (excluding reversals)	11.18	14.75	13.14	15.4	**14.93**	**10.33**

Of those who took the post-test, the majority raised their scores to or beyond 68, a score that indicates a minimal readiness for college level work, results that have been consistent for the past three academic years. The results for each of the past three academic years are given below.

082	F 03	Sp 04	F 04	Sp 05	F 05	Sp 06
% of post-test completers who reached 68+	61%	83%	75%	58%	**66%**	**75%**
% of post-test completers who scored lower than pre-test	38%	33%	18%	16%	**9%**	**25%**

Since 082 is not required and since we have no classes with 082 as a pre-requisite, it is hard to judge its effectiveness except through pre- and post-test performance and commonsense.
College Writing Prep (087) – Overview
The following ACT/COMPASS English scores are used to place entering freshmen in composition classes.

ACT English Score	Placement Domain	COMPASS Score
0-14	ASC 087—College Writing Prep	0-42
15-18	English 110/105 + 088—Composition Lab (Classroom)	43-74
19-21	English 110/105 + 088—Composition Lab (Web based)	75-85
22-36	English 110/105	86-100

Students whose ACT/COMPASS English scores require ASC 087 College Writing Prep are evaluated at the end of each semester using a post-course COMPASS test in writing.

Based on their writing skills in the class and the exit exam, students progress to Composition 110. The exit COMPASS score indicates whether students will be required to take a supportive grammar lab and through which medium the lab will be received (classroom or web-based) or if their exit score falls between 86-100, supportive grammar instruction is no longer required.

College Writing Prep (087) – Results
Our goal for 087 is that completing 087 will raise students' skills to the level where they are prepared to succeed in English 110 (attain a score of at least 43 on the post-course COMPASS test in writing. The table below presents the results of academic year 05-06, along with the results from the previous two academic years for comparison. Note that we did not offer 087 in the summer of '06 because of low demand.

087	F 03	Sp 04	Su 04	F 04	Sp 05	Su 05	F 05	Sp 06
3rd Week Enrollment	149	42	8	114	36	6	**119**	**33**
End Enrollment	129	33	5	105	31	6	**114**	**31**
Post-Test completers	111	22	5	93	22	4	**84**	**22**
# who scored 43+ on post-test	90	18	4	70	15	2	**58**	**20**
# who scored lower on post-test	6	2	0	15	2	1	**10**	**1**
Average change	35.47	28.95	32.25	34.13	30.73	16	**29.85**	**33.64**
Average change (excluding reversals)	36.65	31.30	32.25	42.99	34.05	22.67	**35.03**	**35.52**

Of those who took the post-test, the majority raised their scores to or beyond 43, which is the minimum score we have set to qualify for English 110. The results for each of the past three academic years are given below.

087	F03	Sp 04	Su 04	F 04	Sp 05	Su 05	F05	Sp 06
% of post-test completers who reached 43+	81%	82%	80%	75%	68%	50%	**69%**	**91%**
% of post-test completers who scored lower on post-test	5%	9%	0%	16%	9%	25%	**12%**	**5%**

As a snapshot of the effectiveness of College Writing Prep, we can compare the English 110 success rate (C or above) in Spring 2005 of the students who were required to take 087 with the

110 success rate in Spring 2005 of the students who were not required to take 087 (based on placement scores, the non-087 110 students should have been better prepared for success in English 110). Below are the results of the spring semester for the last three academic years.

110 Success	Spring 04	Spring 05	Spring 06
087 students	80%	66%	77%
Non-087 students	79%	61%	74%

College Writing Prep 087 students overall had slightly better [1] success in English 110 than their classmates who were placed directly into English 110, indicating that College Writing Prep effectively prepares students for success in English 110. Furthermore, the results over the last three spring semesters show consistently better results from the 087 students than the non-087 students. College Writing Prep provides a positive initial experience in a writing course for students who enter BSC without the skills necessary to successfully complete English 110. More than that, post-test results (COMPASS) combined with English 110 success rates suggest College Writing Prep effectively elevates the writing skills of initially under-prepared students.

Composition Lab (ASC 088 & 89) – Overview
As indicated in the table above, students may also be placed directly into English 110 but be required to take an accompanying grammar and usage lab either in a classroom or through a web-based program, depending on their scores (see the table above). Students must pass an end-of-course diagnostic test in order to pass the course. Students who are required to take the lab must successfully complete the lab in order to pass English 110.

Because the Composition Lab is a companion to Composition 110, the English Discipline has not systematically tracked student performance in the Composition Lab with pre-and post-testing, but this is part of the plan for future lab assessment.

Sophomore Survey Results

BSC General Education Sophomore Survey 2006
The following questions were ask of Sophomores to provide feedback on their General Education courses and experiences at BSC. These responses are used to help improve the curriculum and gauge the effectiveness of meeting our objectives.

At the end of this semester I will have earned at least 50 college credits?
Response Total
Yes 131
No 35
Total Respondents 166
(skipped this question) 1

I have earned at least 25 credits at Bismarck State College?
Response Total
Yes 153
No 13
Total Respondents 166

(skipped this question) 1

Improved my writing skills
Response Total
Yes 122
No 18
Does not apply to the courses I took at BSC 12
Total Respondents 152
(skipped this question) 15

Improved my oral communication skills
Response Total
Yes 119
No 13
Does not apply to the courses I took at BSC 18
Total Respondents 150
(skipped this question) 17

Improved my reading skills
Response Total
Yes 94
No 36
Does not apply to the courses I took at BSC 22
Total Respondents 152
(skipped this question) 15

Improved my understanding of the arts and/or humanities
Response Total
Yes 107
No 14
Does not apply to the courses I took at BSC 31
Total Respondents 152
(skipped this question) 15

Improved my understanding of the social and behavioral sciences
Response Total
Yes 120
No 9
Does not apply to the courses I took at BSC 23
Total Respondents 152
(skipped this question) 15

My classes and related experiences at Bismarck State College:

Improved my ability to identify problems and implement actions

Response Total
Yes 126
No 14
Does not apply to the courses I took at BSC 12
Total Respondents 152
(skipped this question) 15

Improved my abilities in mathematics
Response Total
Yes 112
No 15
Does not apply to the courses I took at BSC 24
Total Respondents 151
(skipped this question) 16

Improved my ability to make well thought-out decisions and choices
Response Total
Yes 115
No 22
Does not apply to the courses I took at BSC 14
Total Respondents 151
(skipped this question) 16

Improved my ability to collect and analyze information
Response Total
Yes 130
No 15
Does not apply to the courses I took at BSC 6
Total Respondents 151
(skipped this question) 16

Improved my understanding of the principles of laboratory science
Response Total
Yes 86
No 15
Does not apply to the courses I took at BSC 50
Total Respondents 151
(skipped this question) 16

Improved my understanding of the scientific method
Response Total
Yes 80
No 23
Does not apply to the courses I took at BSC 49
Total Respondents 152
(skipped this question) 15

Improved my ability to use computers and other technologies

Response Total
Yes 113
No 17
Does not apply to the courses I took at BSC 22
Total Respondents 152
(skipped this question) 15

My classes and related experiences at Bismarck State College:

Improved my understanding of the role that values and ethics play in making personal social and professional decisions
Response Total
Yes 105
No 21
Does not apply to the courses I took at BSC 25
Total Respondents 151
(skipped this question) 16

Increased my awareness of diverse cultures people and ideas
Response Total
Yes 98
No 23
Does not apply to the courses I took at BSC 30
Total Respondents 151
(skipped this question) 16

Increased my understanding of the issues and concerns facing my community country and world
Response Total
Yes 93
No 24
Does not apply to the courses I took at BSC 35
Total Respondents 152
(skipped this question) 15

Increased my ability to work cooperatively with others
Response Total
Yes 125
No 19
Does not apply to the courses I took at BSC 8
Total Respondents 152
(skipped this question) 15

Made me want to continue to learn throughout my life
Response Total
Yes 136

No 15
Does not apply to the courses I took at BSC 1
Total Respondents 152
(skipped this question) 15

Goals of the Assessment Committee for 2006-2007

- Work closely with the General Education committee to draft general education objectives based on what is learned from the faculty
- Develop a general education assessment plan
- Develop a more effective reporting process, possibly using electronic means
- Provide opportunities for committee members to learn more about assessment
- Continue to inform faculty about assessment.

Faculty Group Reports

The Faculty Group Reports included in the following pages are summary reports and may not include information from appendices, assessment forms, or explanatory graphs or charts. The full and complete Faculty Group Reports are on file in the office of the Assessment Coordinator.

No group report was submitted for the Arts and Humanities faculty group for this year.

Many **thanks** to all the members of the committee who wrote assessment reports and to the faculty for participating in assessment activities.

Learning Outcomes Assessment

Summary Report for 2005 - 2006

September 29, 2006

Business, Math, Science and Technology
Faculty Group

Bismarck State College

Assessment of the Business, Math, Science and Technology Component of General Education: A Summary Report

This report is prepared biannually based on Bismarck State College's four-year assessment plan. The introductory material remains the same from year to year and is provided to familiarize a first time reader with the assessment process at BSC. In an effort to accommodate those readers that are already familiar with this report, material from previous reports is included in italics and material new to this year's report is in standard type face.

Introduction

The Business, Math, Science and Technology (BMS&T) faculty group for assessment includes all full-time faculty members teaching courses that qualify as general education courses. There are several adjunct faculty members in BMS&T that teach general education courses as well. The adjunct faculty members are being introduced to assessment and will be participating in the process. The full-time and adjunct faculty members currently participating in assessment are listed in Appendix 1.

The courses in BMS&T general education are quite varied and numerous (Appendix 2). Despite their differences, students must gain knowledge of and practice using analytical thought processes to succeed in these courses. Once the essential competencies were identified, the process of choosing accurate measures of those competencies and the process of data collection was initiated. This is a work in progress. There will not come a time when no improvement is desired, where every student is successful, or where every principle of our coursework is fully understood by our students. Long before assessment of student learning was practiced, the faculty members in the BMS&T were student oriented and learning focused. Assessment of student learning is a tool to help faculty members in their commitment to their students by refining their strengths and by identifying areas for improvement.

This report describes the competencies identified as essential to student learning by BMS&T faculty, the assessment measures currently being used by BMS&T faculty and the matrices we use to document assessment in BMS&T. The findings of the assessment of students during the school year will be specifically identified and general observations discussed.

Selected information from earlier summary reports, compiled from the years since the assessment of student learning formally began at BSC are included in Appendix 8, Historic Information, so a record of improvements and observations are available for faculty who are new to the BMS&T faculty group. Appendix 10 is designed as a "how to write a summary" guideline for incoming faculty group leaders in BMS&T.

This document will be submitted to the Dean of Faculty, Jane Schulz, for inclusion in the annual report. It will be available for any interested individual upon request. Copies are held in the offices of the faculty group leaders for BMS&T.

Competencies in Business, Math, Science and Technology

Early in the assessment process at Bismarck State College, many faculty members from BMS&T identified core competencies shared by disciplines that fall under the heading of Business, Math, Science and Technology general education. The competencies for BMS&T come from the students' need to have theoretical and practical knowledge of analytical processes.

Student competency in critical thinking/ problem solving was considered essential to all courses in BMS&T. Technologies used in the courses are varied, yet all faculty members were able to identify a specific technology competency as essential to the courses they taught. Competency in math and/or science was central to all BMS&T courses.   Specific aspects of these competencies were identified as subcompetencies and are listed in the Competencies/Objectives column on the Business, Math, Science and Technology Assessment Plan Matrix (Appendix 3) and Faculty Group Assessment Report Matrix (Appendix 4) for BMS&T.

Assessment Measures

Each professor has his or her own style and forte. These differences are respected and evident in their choice of assessment measures. Creativity and innovation are encouraged. Faculty members use the measures they feel give the best information about the level of learning achieved by their students.

Where several faculty members teach different sections of one course that incorporates a common syllabus, has common course content and where specific areas of focus are identified, locally developed tests are used as the assessment measure to reflect learning across the field of students enrolled in the course.

The variety of measures used by BMS&T faculty members is listed on the Multiple Measures Matrix discussed in the next section. Specific measures are listed on the Faculty Group Assessment Report Matrix (Appendix 4).

Matrices used in BMS&T

Several matrices were developed to arrange information into a common format that would clearly identify competencies, measures, the results of the semester's assessment effort and

planned changes to improve learning. Information from these matrices is compiled for the summary reports and the annual assessment report. It is realistic to expect some refinement of these matrices to fit our needs as we develop and improve our assessment process.

***The Business, Math, Science and Technology Assessment Plan Matrix** (Appendix 3) for general education provides a format to attach general education objectives to the competencies identified by the BMS&T faculty group. Assessment methods are discussed in general terms and a schedule of implementation is included.*

***The Faculty Group Assessment Report Matrix** (Appendix 4) includes results gathered by all BMS&T faculty from their assessment measures. The results are identified by course and changes planned to improve learning are listed.*

***The Multiple Measures Matrix** identifies the types of measures used by each faculty member for each course they teach. The Multiple Measures Matrices for all BMS&T faculty members are on file in the BMS&T faculty group leaders' offices. Faculty members keep a copy of their own matrix.*

***The Composite Multiple Measures Matrix** (Appendix 5) identifies the variety of measures used across all BMS&T faculty members. A copy of this matrix is also held in the BMS&T faculty group leaders' offices.*

***The General Education Curriculum Matrix** is specific to each instructor. The matrix describes the major focuses of the course, secondary concepts for the course and skills practiced by the students for success in the course. A copy of each instructor's matrix is held in the BMS&T faculty group leaders' offices. Each instructor retains a copy of his or her own matrix.*

***The Composite General Education Curriculum Matrix** (Appendix 6) is a tool that indicates major, secondary and practiced areas of study across the entire curriculum. Copies are held in the BMS&T faculty group leaders' offices and by the Assessment Coordinator.*

The Assessment Process in BMS&T

Direct Measures

Assessment is new for some faculty in BMS&T. We are still developing a process and experimenting with various measures and matrices. It is a learning experience for all of us. Presently, faculty members are using embedded assessment measures to evaluate student learning. These measures are scored using traditional grading and PTA scales. All faculty members submit the scores on their PTA scales to the faculty group leaders. This data for each course is stored in the faculty group leaders' offices. The faculty group assessment report is generated from these data.

During the Spring semester of 2006, BSC had a sample (n=90) of sophomore students take the CAAP, College Assessment of Academic Proficiency, exam for Writing. The results are

included in the annual institutional report. These test results will also be sent to BSC faculty as well as the BSC Mystician.

The observations noted by the faculty group leaders during the writing of the summary report are mailed to the faculty over the summer so appropriate changes to coursework and syllabi can be made prior to the next school year.

The faculty group meets to discuss the results and changes planned to improve learning identified in the report on the first in-service day of the next school year. Accuracy and participation is highly valued in the BMS&T group. Any additional insights and comments resulting from the discussion are included as an amendment to the final draft of the faculty group report and submitted to the Assessment Coordinator.

In 2005-2006, the report was completed later in the year and the results were mailed to faculty in October 2006.

Indirect Measures

The format of the Sophomore Survey was altered prior to its administration in 2005-2006. Specific data for the Business, Math, Science and Technology courses that fall under this general education faculty group were not provided in a separate breakout category.

Copies of the most recent Sophomore Survey are on file in the office of the Institutional Research Analyst.

Analysis of the Assessment Results
(Math, Computer Science, and Accounting)

The results of the classroom (course-embedded) assessments in the disciplines stated above were quite encouraging in many areas, while in some courses certain aspects were revealed to be areas in need of improvement.

Students did quite well with the computational aspects of the assessment activities in the various courses. In several instances, however, it appears evident that more in class practice working/solving problems and familiarity with specific procedures is necessary to increase proficiency. Also, greater effort to complete and understand homework assignments is needed on the part of the students.

It seems that making an informed and reasonable analysis of graphical information continues to be an area of weakness for many of our students. Previous assessment results have also revealed limited ability to analyze graphs and make predictions based on a given

set of data or a graph obtained from a set of data. We need to bolster our efforts to curb this trend by enhancing their ability to create and/or interpret graphs and sets of data in our courses. In addition, providing clear, concise written explanations regarding problem solutions or conclusions drawn is another area in which further development would be quite beneficial. Proper usage of the mathematical and computer languages would certainly help with the written aspects of a problem.

Improvement in the use of computer software applications could be achieved by increased incorporation of classroom activities that would allow the students to get more practice formatting and modifying documents, as well as using good programming techniques and efficient use of the language. Graphics calculators will continue to be employed for regression analysis. However, perhaps an earlier exposure to the regression features of the graphics calculator would allow students to reach a level of proficiency that would enable them to achieve success in using technology to solve problems.

In light of the assessments results, in order to improve student learning our instructional focus will be on the areas in which students have exhibited limited abilities/proficiency. We will continue to utilize instructional techniques that have worked well in the past while also exploring new ways to help our students become active learners with an increased ability to understand a problem and provide reasonable analyses in a given field. Also, we will strive to employ various assessment tools and teaching strategies to assist us in identifying the ways that students learn best.

What We Have Learned From 2005-2006 Assessment of Learning(Sciences)

Science faculty assessed Science, Critical Thinking, Technology, and Language using multiple tools including exams and quizzes, essays, portfolios, and performance evaluations.

Results were generally very positive with most PTA scores exceeding 70% and many were over 85%. Many of the lower scores were due to writing difficulties (in essays) and/or an apparent lack of effort by students, or to "technical" problems with the assessment tools (unclear or ambiguous questions or instructions, timing of the tool).

Most faculty indicated a strong desire to improve these already high scores increasing instruction in the deficient areas, and of course, by fixing problems with the assessment instruments.

There were several problems with the assessment process itself. They could be summarized as "management" issues. First, there was a failure to systematically assign course

responsibilities. This, in part, lead to less than total participation, especially by adjunct instructors. Finally, and related, faculty had unequal "loads" in terms of numbers of classes and numbers of students for which they were responsible.

Most of these issues resulted from inexperience and the assumption that the successful process of two years ago would be passively repeated. However, the intervening year of broad-based general education assessment, changes in assessment committee members, and significant turnover of science faculty prevented this from happening.

Some of these problems will be mitigated in the near future. The 2006-2007 academic year will be devoted to classroom/course-embedded assessment for a second consecutive year. This will allow for timely corrections and adjustments before the problems are forgotten or passed on to new committee members. Specifically, a more emphatic approach to selecting assessors will be made. Concurrently, efforts will be made to more equitably assign assessment loads. Periodic reminders of assessment timelines will be sent.

An unsolved problem is the lack of participation by some adjunct instructors. This is especially true of those who are the sole instructor of a course.

List of Appendices

1. Full-time and Adjunct Faculty members participating in the Assessment Process for Business, Math, Science and Technology.

2. General Education Courses in Business, Math, Science and Technology

3. Business, Math, Science and Technology Assessment Plan Matrix

4. Faculty Group Assessment Report Matrix

An Annotated List of Direct Measures for Math, Science and Technology General Education Courses.   (DELETED IN 2003-2004 AND FUTURE REPORTS)

5. Composite Multiple Measures Matrix

6. Business, Math, Science and Technology Group Leaders by Semester.

7. Historical Information

8. General Education Courses Not Assessed in 2005-2006

9. Process for Preparing an Annual Assessment Report in BMS&T

Appendix 1

Assessment of General Education

Business, Math, Science and Technology Faculty Group
2005 - 2006

FULL-TIME FACULTY

Karen Arlien
Greg Bach
Carla Bickert
Juan Gomez
Jean Hushagen
Ron Jyring
Michael Kern
Jayne Kiner
Noah Kover
Dan Leingang
Subrata Mandal
Yvette Matthews
Carmel Miller
Brent Reems
Art Rude
Julie Schroer
Deborah Shipman
Jeff Skibicki
Kathy Swetich
Tim Thorstenson
Linda Tonolli
Joe Vuolo
Lyle Warner
Shirley Wilson
Jim Wright

ADJUNCT FACULTY
Sally Aadland
Don Bigwood
Rich Cleary
Valeria Howard
George Keiser
Craig Kleven
Colleen Leingang
Todd Leingang
Natasha Petry

Appendix 2

Business, Math, Science and Technology
General Education Courses as of 2005-2006

Acct 200 – Elements of Accounting 1
Acct 201 – Elements of Accounting 2
Astr 150 – Meteorology
Astr 150L – Meteorology lab
BADM 202 – Principles of Management
BADM 240 – Sales
BADM 281 – Organizational Behavior
BADM 282 – Human Resource
                Management
Biol 102 – Introduction to Aquarium Keeping
Biol 109 – The Living World
Biol 111 – Concepts of Biology
Biol 111 – Concepts of Biology (on line)
Biol 111L – Concepts of Biology lab
Biol 111L – Concepts of Biology lab (on line)
Biol 124 – Environmental Science
Biol 126 – Human Biology
Biol 126L – Human Biology Lab
Biol 150 – General Biology 1
Biol 150L – General Biology 1 lab
Biol 151 – General Biology 2
Biol 151L – General Biology 2 lab
Biol 220 – Anatomy and Physiology 1
Biol 220L – Anatomy and Physiology 1 lab
Biol 221 – Anatomy and Physiology 2
Biol 221L – Anatomy and Physiology 2 lab
Biol 250 – Survey of Tropical Biology
Biol 250L – Survey of Tropical Biology lab
Biol 251 – Community Ecology
Biol 251L – Community Ecology lab
Bot 170 – Plant Form and Diversity
Bot 170L – Plant form and Diversity lab
BUSN 120 – Fundamentals of Business
Chem 110 – Survey of Chemistry
Chem 110L – Survey of Chemistry lab
Chem 112 – Intro. to Forensic Science
Chem 112L – Intro. To Forensic Science lab
Chem 115 – Introductory Chemistry
Chem 115L – Introductory Chemistry lab
Chem 116 – Intro to Organic & Biochemistry
Chem 116L – Intro to Org. & Biochem. Lab
Chem 121 – General Chemistry 1
Chem 121L – General Chemistry 1 lab
Chem 122 – General Chemistry 2
Chem 122L – General Chemistry 2 lab
CSCI 101 – Introduction to Computers
CSCI 122 – Beginning Visual Basic
CSCI 160 – Computer Science 1
CSCI 161 – Computer Science 2
Geog 121 – Physical Geography
Geog 121L – Physical Geography lab
Geol 102 – Historical Geology
Geol 102L – Historical Geology lab
Geol 105 – Physical Geology
Geol 105L – Physical Geology lab
Math 103 – College Algebra

Math 104 – Finite Math
Math 105 – Trigonometry
Math 107 – Pre-Calculus
Math 146 – Applied Calculus
Math 165 – Calculus 1
Math 166 – Calculus 2
Math 208 – Discrete Mathematics
Math 210 – Elementary Statistics
Math 277 – Math for Elementary Teachers
MICR 202 - Introductory Microbiology
MICR 202L - Introductory Microbiology Lab
Phys 100 – Concepts of Physics
Phys 100L – Concepts of Physics lab
Phys 110 – Introductory Astronomy
Phys 110L – Introductory Astronomy lab
Phys 211 – College Physics 1
Phys 211L – College Physics 1 lab
Phys 212 – College Physics 2
Phys 212L – College Physics 2 lab
Phys 251 – University Physics 1
Phys 251L – University Physics 1 lab
Phys 252 – University Physics 2
Phys 252L – University Physics 2 lab
Plsc 110 – World Food Crops
Plsc 110L – World Food Crops lab
Scnc 101 – Physical Science 1
Scnc 101L – Physical Science 1 lab
Scnc 102 – Physical Science 2
Scnc 102L – Physical Science 2 lab
Scnc 103 – Physical Science 3
Scnc 103L – Physical Science 3 lab
Soil 210 – Intro to Soil Science
Soil 210L – Intro to Soil Science lab

APPENDIX 3
ASSESSMENT PLAN MATRIX
Business, Math, Science & Technology General Education Requirement, 2005-2006

College Mission and Goals statements on teaching and learning, condensed: Bismarck State College is committed to maintaining a proactive learning environment. By encouraging flexibility, innovation, and student success, we make it possible for people to identify and achieve their goals. The College places primary emphasis on high quality, student-oriented teaching and recognizes the importance of promoting cultural awareness. The College's goals for teaching and learning are to encourage student-centered learning; to provide academic support services for student success; to document student academic achievement for accountability reporting; to create a learning environment characterized by collaboration, fair-mindedness, and mutual respect.

Goal: Upon completion of the Math, Science and Technology requirement, students will demonstrate knowledge of mathematical concepts, an understanding of fundamental principles of scientific reasoning, and familiarity in the use of technology appropriate to these disciplines.

Gen. Ed. Objectives	Competencies	Assessment Methods	Implementation Plan
	(Science courses only) Recognize the role of science in understanding nature.	The methods described here apply each semester (with exceptions as noted) to <u>each</u> of the competencies being assessed for the Math, Science and Technology general education requirement.	**Faculty Group Leaders (Gen. Ed.) and Lead Teachers (Programs)**
To know the principles and be able to apply the methods and reasoning of science.	Understand the scientific process of question, investigation and interpretation. Acknowledge the changing nature of science. _____	The **direct measures** for each of the listed competencies are embedded in the context of the course and the classroom; thus, there is great variety in the measures used and a high level of participation among both math, science and technology faculty and their students. The Composite Multiple Measures Matrix (Appendix 5) shows the types of measures used for this semester.	**Weeks 1-5** - revise assessment plan and reporting matrices - complete the "Results'' column of the Faculty Group Report Matrix (covering the previous year's work) - conduct a Faculty Forum, either in an online or meeting format,

_____ To understand and apply mathematical principles and be able to communicate quantitative information effectively.	(Math courses only) Organize and analyze data to make inferences about real world situations. Use abstract concepts and symbols to solve (apply) equations and inequalities. The student will be able to demonstrate the ability to do the math required for computer science. Demonstrate the ability to use the principles of calculus to differentiate, integrate, solve logarithmic and exponential equations, and apply these principles to problems from business. Demonstrate ability to use abstract concepts and symbols to evaluate limits, derivatives, indefinite and definite integrals Demonstrate an understanding of the function concept by several means (verbally, graphically, numerically, and symbolically). _____	A sophomore student survey is used as an indirect measure across the General Education Curriculum. It is given to exiting sophomores at the end of the spring semester. The results are compiled for inclusion in the summary report. Additional indirect measures will be added as we become more comfortable with the assessment process.	to share aggregated results of last year's work and to discuss change recommendations to be presented in the faculty group or program. - Begin work on Faculty Group Report or Program Report. **Fall Semester only**. **Week 5-7** - **Faculty** begin preparing any new learning activities and corresponding PTA scales they plan to use for assessment for the current semester. **Week 7** - **Faculty Group Leaders** (Gen. Ed.) and **Lead Teachers** (Programs) submit their Faculty Report or Program Report (covering the previous year's work) to the Assessment Coordinator. Fall semester only. **Weeks 7-14** - **Faculty** conduct their course-embedded assessments and complete their PTA Analysis Forms, in preparation for

25

_____ To engage in an active, purposeful, organized cognitive process to examine their thinking and the thinking of others. _____ To be able to use technology to access, retrieve, process, and communicate information.	(Math, science, and technology courses) Ability to identify the problem. Ability to outline or describe a realistic approach to solving a problem. Ability to analyze/interpret results or outcomes of investigation. Ability to draw reasonable conclusions from the analysis. _____ Students can use the technology and equipment specific to the course. Students can explain what the technology and equipment does. Students can interpret data collected or generated by the technology and equipment. _____ Students will be able to read, write, speak and listen effectively in the language specific to the discipline. _____		submitting them to their Group Leader or Lead Teacher on or before the deadline-**the day final grades are due.** **Week 13-14** - **General Education Faculty** distribute and collect the Sophomore Student Self-Assessment of Learning Survey to students in their classes. - **Faculty** submit assessment reports to their Group Leader or Lead Teacher **on or before the final grades are due.** - **Faculty Group Leaders** submit PTA Analysis Forms from Fall and Spring semesters to Institutional Researcher. - **Faculty Group Leaders** (Gen. Ed.) Submit filled-in Sophomore Student Self-Assessment of Learning Surveys to Institutional Researcher for tabulation and analysis. 　　**Spring semester only**.

_____ To understand the language specific to the discipline. _____ To recognize the value Math, Science or Technology instruction has had on their quality of life.			

Faculty Group Assessment Report Matrix

This matrix summarizes the assessment work done by faculty teaching Math, Science and Technology courses during the semesters identified above.   Faculty members assessed competencies identified in the Math, Science & Technology Faculty Group Assessment Plan.   This matrix is a composite of their results and planned changes. This information is reviewed and discussed by the members of the Math, Science and Technology faculty. Any additional improvements identified in the faculty discussion are added and the completed matrix is made available to all BSC faculty and administration. The direct measures listed here are embedded in the coursework.

Math, Science, Technology General Education Competencies/Objectives	Assessment methods	Results of this semester's measures	Changes planned to improve learning
Liberal Skills – Critical/logical thinking/problem solving (**Math, science and technology courses**) Students can identify the problem, outline or describe a realistic approach to solving the problem, analyze and interpret results or outcomes of investigation, and draw reasonable conclusions from the analysis		The data recorded in this column represent the percentages of students scoring 3 or above out of the total number of students assessed in that class.	
	Biol 111 – essay	80% of 30	Low scoring students displayed a lack of effort. Future assessments may benefit from encouragement of students.
	Biol 124 – portfolio	71% of 7	Use of peer review was very successful. Low scores resulted from writing, rather than critical thinking, deficiencies. Alternate grading criteria will help emphasize critical thinking skills.
	Biol 126L – essay	75% of 48	Low scores typically resulted from unrealistic solutions. Clearer directions/expectations will be provided.

Math, Science, Technology General Education Competencies/Objectives	Assessment methods	Results of this semester's measures	Changes planned to improve learning
	Biol 150L – lab report	76% of 80	This assessment most effectively pointed out which students could follow directions and which could not; inexperience played a role since this was the first and only lab report students were assigned; perhaps students need to receive feedback from a first lab report prior to assigning this one.
	Biol 151 – essay	67% of 6	An apparent lack of effort resulted in most of the low scores, although a lack of time may also have contributed to low scores. More time will be given and the expected level of competence will be emphasized.
	Biol 220 – assessment quiz	71% of 51	A new quiz was developed and successfully used to simplify the assessment process. Student feedback suggested some questions were not clear and they will be rewritten.
	Biol 221 – assessment quiz	64% of 44	A new quiz was developed and successfully used to simplify the assessment process. One question needs to be rewritten.
	Micr 202 – short answer case studies	89% of 63	The first case study needs to be revised.
		94% of 17	The students in this course had very strong math skills which was helpful when it was time to teach chemistry. This explains why so

Math, Science, Technology General Education Competencies/Objectives	Assessment methods	Results of this semester's measures	Changes planned to improve learning
	Scnc 101 – word problem		many of the students did well on this assessment. I plan to have classroom activities to help those with weaker math skills so that all students can succeed in this class.
	Scnc 101L – word problem	94% of 17	The students in this course had very strong math skills which was helpful when it was time to teach chemistry. This explains why so many of the students did well on this assessment. I plan to have classroom activities to help those with weaker math skills so that all students can succeed in this class.
	Scnc 102 – word problem	93% of 15	This group of students had strong math skills, so calculations were not a problem for the class. I realize that not all students are going to be this strong, so I need to include projects that give me constant feedback on how the students are progressing. I also need to connect more theory to the problems.
	Scnc 102L – word problem	93% of 15	This group of students had strong math skills, so calculations were not a problem for the class. I realize that not all students are going to be this strong, so I need to include projects that give me constant feedback on how the students are progressing. I also need to connect more theory to the problems. May consider having students duplicate this activity in a field setting during their summer internship.

Math, Science, Technology General Education Competencies/Objectives	Assessment methods	Results of this semester's measures	Changes planned to improve learning
	PLSC 110/110L – Semester Project Soil 210/210L – Computer program	88% of 32 93% of 13	The students overall understanding of the concept and the reasoning for doing the program were very good. All were able to do the calculations with a calculator, but had some difficulty when they had to develop a program to speed up the process. The individual that had a rating score of 1 had not had intro to computers class so did not have the computer knowledge required to complete the project. As a department, we will continue to urge students to take Intro to Computers class their first semester.

APPENDIX 4 (Part 2, Language)
Faculty Group Assessment Report for 2005-2006
General Education – Business, Math, Science & Technology Faculty Group

Faculty Group Assessment Report Matrix

This matrix summarizes the assessment work done by faculty teaching Math, Science and Technology courses during the semesters identified above. Faculty members assessed competencies identified in the Math, Science & Technology Faculty Group Assessment Plan.   This matrix is a composite of their results and planned changes. This information is reviewed and discussed by the members of the Math, Science and Technology faculty. Any additional improvements identified in the faculty discussion are added and the completed matrix is made available to all BSC faculty and administration. The direct measures listed here are embedded in the coursework.

Math, Science, Technology General Education Competencies/Objectives	Assessment methods	Results of this semester's measures	Changes planned to improve learning
Liberal Studies – Language Students will be able to read, write, speak and listen effectively in the language specific to the discipline.		The data recorded in this column represent the percentages of students scoring 3 or above out of the total number of students assessed in that class.	
	Biol 220 – assessment quiz	76% of 51	A new quiz was successfully used to simplify the assessment process. Unfortunately, it was developed relatively late in the semester, but emphasized terms from earlier in the semester. It will be administered in a more timely manner in the future.

Math, Science, Technology General Education Competencies/Objectives	Assessment methods	Results of this semester's measures	Changes planned to improve learning
	Biol 221 – assessment quiz	25% of 44	A new quiz was successfully used to simplify the assessment process. Low scores resulted from a lack of coordination of content between the multiple instructors.
	Biol 221L – objective exam questions	66% of 35	This was an unsuccessful attempt to simplify the assessment process by using a single exam. Unfortunately, this was the last exam of the semester. A similar method will be tried, but earlier in the semester.

Appendix 4, Part 3, Math is included at the end of this appendix.

APPENDIX 4 (Part 4, Science)
Faculty Group Assessment Report for 2005-2006
General Education – Business, Math, Science & Technology Faculty Group

Faculty Group Assessment Report Matrix

This matrix summarizes the assessment work done by faculty teaching Math, Science and Technology courses during the semesters identified above. Faculty members assessed competencies identified in the Math, Science & Technology Faculty Group Assessment Plan. This matrix is a composite of their results and planned changes. This information is reviewed and discussed by the members of the Math, Science and Technology faculty. Any additional improvements identified in the faculty discussion are added and the completed matrix is made available to all BSC faculty and administration. The direct measures listed here are embedded in the coursework.

Math, Science, Technology General Education Competencies/Objectives	Assessment methods	Results of this semester's measures	Changes planned to improve learning
Liberal Studies – Science (**Science courses only**) Students will be able to: Recognize the role of science in understanding nature. Understand the scientific process of questions and investigation. Acknowledge the changing	Biol 102 – final project	The data recorded in this column represent the percentages of students scoring 3 or above out of the total number of students assessed in that class. 90% of 10	Students who complete the project understand it well and demonstrate a thorough understanding of the science involved. Methods appear to be successful.

Math, Science, Technology General Education Competencies/Objectives	Assessment methods	Results of this semester's measures	Changes planned to improve learning
nature of science.			
	Biol 111 – essay question	87% of 30	Essays based on case studies seemed to be most successful, therefore additional case studies may be used.
	Biol 126L – essay question	78% of 50	Clearer directions regarding the content of the essay are needed.
	Biol 151 - essay	89% of 55	Responses suggested a need to emphasize the pace of evolution in lecture.
	Chem 116 – exam question	84% of 43	Stress that out of class help is available from the instructor and tutors.
	Scnc 101 – essay	88% of 17	The students did well on the assessment but some students still have a hard time communicating their ideas. The instructor plans to have more activities concerned with writing.
	Scnc 101L – essay	88% of 17	The students did well on the assessment but some students still have a hard time communicating their ideas. The instructor plans to have more activities concerned with writing.

Math, Science, Technology General Education Competencies/Objectives	Assessment methods	Results of this semester's measures	Changes planned to improve learning
	Scnc 102 – essay	82% of 15	The students did well on this question but the sample size was very small. The instructor hopes to have more activities that help the students connect science to their everyday lives.
	Scnc 102L - essay	82% of 15	Students did well on this assessment but much more can be done to improve the score. The instructor hopes to have more interactive labs that are designed to help the students connect important scientific ideas to their own lives.

APPENDIX 4 (Part 5, Technology)
Faculty Group Assessment Report for 2005-2006
General Education – Business, Math, Science & Technology Faculty Group

Faculty Group Assessment Report Matrix

This matrix summarizes the assessment work done by faculty teaching Math, Science and Technology courses during the semesters identified above. Faculty members assessed competencies identified in the Math, Science & Technology Faculty Group Assessment Plan. This matrix is a composite of their results and planned changes. This information is reviewed and discussed by the members of the Math, Science and Technology faculty. Any additional improvements identified in the faculty discussion are added and the completed matrix is made available to all BSC faculty and administration. The direct measures listed here are embedded in the coursework.

Math, Science, Technology General Education Competencies/Objectives	Assessment methods	Results of this semester's measures	Changes planned to improve learning
Liberal Skills – Technology (All courses) Students can use the technology and equipment specific to the course. Students can explain what the technology and equipment does. **Students can interpret data collected or generated by the technology and**	Biol 102 – final project Biol 151L – multiple choice questions	The data recorded in this column represent the percentages of students scoring 3 or above out of the total number of students assessed in that class. 90% of 10 75% of 48	Students demonstrated high proficiency with the technology associated with this course. A better quality tool (dichotomous key) will be used and students will be given more time to practice using them.

Math, Science, Technology General Education Competencies/Objectives	Assessment methods	Results of this semester's measures	Changes planned to improve learning
equipment.	Biol 221L- performance evaluation	100% of 55	This technique (microscopy) is fundamental to this and the previous (Biol 220L) course. Students should have 100% mastery of these skills.
	Micr 202L – performance evaluation	96% of 51	The high success rate was likely due to repeated practice prior to the evaluation.

Appendix 4, Math, Computer Science and Accounting
Faculty Group Assessment Report 2005-2006
General Education – Business, Math, Science & Technology Faculty Group

Faculty Group Assessment Report Matrix

This matrix summarizes the assessment work done by faculty teaching Math, Science and Technology courses during the semester identified above.   Members assessed competencies identified in the Math, Science & Technology Faculty Group Assessment Plan and submitted their Faculty Assessment Reports. The Faculty Reports show the individual faculty members' assessment results and their planned changes. This matrix is a composite of these results and planned changes. This information is reviewed and discussed by the members of the Business, Math, Science and Technology faculty. Any additional improvements identified in the faculty discussion are added and the completed matrix is made available to all BSC faculty and administration. The direct measures listed here are embedded in the coursework.

Math, Science, Technology General Education Competencies/Objectives	Assessment methods	Results of this semester's measures	Changes planned to improve learning
Liberal Studies – Math Students will be able to:	Math 105 – 4 embedded quiz questions	79% of the 14 students scored 3 or more on a PTA scale of 1-4. (apply/solve equations).	Increase emphasis on these types of problems both in class and in homework
Organize and analyze data to make inferences about real world situations	Math 146 – 8 embedded quiz and exam questions	69% of the 32 students scored 3 or more on a PTA scale of 1-4. (apply/solve equations).	More emphasis on differentiation and the Fundamental Theorem of Calculus
Use abstract concepts and symbols to solve (apply) equations and	Math 165 – Written exam problems	85% of the 66 students scored	Continue to emphasize the skills of limit

Math, Science, Technology General Education Competencies/Objectives	Assessment methods	Results of this semester's measures	Changes planned to improve learning
inequalities Demonstrate an understanding of the function concept by several means		3 or more on a PTA scale of 1-4. (abstract concepts/ equations).	evaluation, differentiation, and integration. Strive for even better results in the future
	Math 166 – Written exam problems	80% of the 44 students scored 3 or more on a PTA scale of 1-4. (abstract concepts /equations).	Bolster efforts to achieve improvement with greater emphasis on integration, limits and series convergence
	Math 210 – Objective tests	73% of the 92 students scored 3 or more on a PTA scale of 1-4.	Emphasis will continue on the meaning of each parameter and statistic and on the corresponding symbols used in the calculations. More time spent on algebraic concepts required for success
	Math 277 – Outside of class project	67% of the 18 students scored 3 or more on a PTA scale of 1-4.	Obvious need for more practice; more in class explanation necessary and opportunities for working problems in class
Liberal Skills – Critical/logical thinking/problem solving Students can identify the problem, outline or describe a realistic approach to solving the problem, analyze and interpret results or outcomes of investigation, and draw reasonable conclusions from the analysis	Math 103 – Outside of class project	59% of the 142 students scored 3 or more on a PTA scale of 1-4.	Discouraging results; need to find a way to help students improve their skills at drawing reasonable conclusions and making predictions about trends in data from graphs obtained

Math, Science, Technology General Education Competencies/Objectives	Assessment methods	Results of this semester's measures	Changes planned to improve learning
	Math 104 – Objective test question	57% of the 7 students scored 3 or more on a PTA scale of 1-4.	More time needs to be spent on linear programming and interpreting graph results.
	Math 105 – Outside of class project	79% of the 14 students scored 3 or more on a PTA scale of 1-4.	Increased exposure to problems of this variety with hopes of increasing number of students scoring a 4.
	Math 107 – Take home project	81% of the 27 students scored 3 or more on a PTA scale of 1-4.	Need to further develop the students' ability to think independently and draw reasonable conclusions
	Math 146 – Outside of class project	83% of the 29 students scored 3 or more on a PTA scale of 1-4	More emphasis on written explanation of the solution of the problem
	Math 165 – Take home project	56% of the 64 students scored 3 or more on a PTA scale of 1-4	Discouraging numbers due to a common misinterpretation of one aspect of the problem; however, this common error is an easily correctible one and will be

Math, Science, Technology General Education Competencies/Objectives	Assessment methods	Results of this semester's measures	Changes planned to improve learning
			addressed prior to future assignments
	Math 210 – Objective test	54% of the 90 students scored 3 or more on a PTA scale of 1-4	Continued emphasis on identifying the parameter(s) involved with an inferential statistics problem; more practice will be provided for these types of problems
	Math 277 – Outside of class project	29% of the 17 students scored 3 or more on a PTA scale of 1-4	Provide introductory material and more adequately prepare students for this type of project
	CSCI 101 – 10 Personal Computer Concepts Questions	45% of the 239 students scored 3 or more on a PTA scale of 1-4	Create a worksheet/review document emphasizing the specific concepts to be assessed and further incorporate these concepts in class discussions
	CSCI 122 – Programming project(test question)	87% of the 23 students scored 3 or more on a PTA scale of 1-4	. This problem may be made to be more challenging in the future; continued emphasis on problem solving, critical thinking and proper language usage

Math, Science, Technology General Education Competencies/Objectives	Assessment methods	Results of this semester's measures	Changes planned to improve learning
	CSCI 160 – Programming project	92% of the 12 students scored 3 or more on a PTA scale of 1-4	Discuss commitment to class and effects of procrastination; urge students to allow themselves enough time to complete assignments
Liberal Skills – Technology Students can use the technology and equipment specific to the course. Students can explain what the technology and equipment does. Students can interpret data collected or generated by the technology and equipment.	CSCI 161 – Programming project	29% of the 7 students scored 3 or more on a PTA scale of 1-4 .	Continue to devote necessary class time to prepare students for this type of program; urge students to allow themselves enough time to complete assignments
	ACCT 200 – Semester project & test	65% of the 46 students scored 3 or more on a PTA scale of 1-4	None provided

Math, Science, Technology General Education Competencies/Objectives	Assessment methods	Results of this semester's measures	Changes planned to improve learning
	CSCI 101 – Lab assignment (create a document with specified application software)	80% of the 239 students scored 3 or more on a PTA scale of 1-4.	Continue to encourage students to complete textbook examples and demonstrate how to format and modify the documents in each software application
	CSCI 160 – Programming project	100% of the 12 students scored 3 or more on a PTA scale of 1-4.	Continue to demonstrate/explain and use a graded assignment for learning how to use any type of development environment software we use for this class.
	CSCI 161 – Programming project	43% of the 7 students scored 3 or more on a PTA scale of 1-4.	Add a class activity where we determine the correct range of expected values that should be produced by this program for each of the sorting methods.
	Math 103 – Individual project done outside of class	87% of the 142 students scored 3 or more on a PTA scale of 1-4.	Continue data analysis through the use of the regression features of the graphics calculator.
Liberal Studies – Language Students will be able to read, write, speak and listen effectively in the language specific to the discipline.	Math 107 – curve fitting assignment	74% of the 27 students scored 3 or more on a PTA scale of 1-4.	We need to evaluate whether or not this activity is a good measure of a student's ability to use technology.

44

Math, Science, Technology General Education Competencies/Objectives	Assessment methods	Results of this semester's measures	Changes planned to improve learning
	Math 104 – Final Test question	56% of the 9 students scored 3 or more on a PTA scale of 1-4.	Continue to use the computer program Simplex to help students solve linear programming problems, as well as institute the use of Excel with these types of problems.
	Math 166 – Take-home polar area problem	93% of the 42 students scored 3 or more on a PTA scale of 1-4.	Class time spent solving various polar area problems appears to have been quite beneficial. Continue to use *DERIVE 5* for graphing and integration purposes.
	CSCI 122 – Programming project	91% of the 32 students scored 3 or more on a PTA scale of 1-4.	We may require the use of *Option Strict On* for all programs which require the use of variables. We will continue to emphasize good programming techniques and appropriate and efficient use of the language.

Business, Math, Science and Technology (updated for 2005-2006)

This matrix provides evidence that in BSC's classroom-embedded assessment program, there are multiple measures to assess each of the objectives of the general education curriculum. The objectives/competencies appear below the matrix. This matrix has been modified to reflect only the objectives used by this general education faculty group.

Assessment Measures

Competencies	Lab report	Computer program	Semester project	Perfor-mance			Take-Home project	Objective test	Essay	Work Problems	Portfolio	
3. Science content/meth.			1					1	7			
Language		1						3				
4. Math content/meth.							1	5				
8. Technology		4		2			4	2				
9. Critical/log. Thinking	1	5	2				6	6	3	4	1	
10.Indep/Interp creative thkng.												

General Education Competencies/Objectives:
1. Know the principles and methods of the social sciences and understand the basic social, political, and economic issues of the contemporary world.
2. Have knowledge of and appreciation for the human cultural tradition in art, music, theater, language, literature, history, philosophy, or religion
3. Know the principles and be able to apply the methods and reasoning of science.
4. Understand and apply mathematical principles and be able to communicate quantitative information effectively.
5. Recognize the role of values in human interaction and understand the need for core values in making personal, social, and professional decisions.
6. Demonstrate knowledge of and respect for both global and American cultural variety, including races, religions, subcultures and ethnicities.
7. Read, write, speak, and listen effectively.
8. Be able to use technology to access, retrieve, process, and communicate information.
9. Be able to think logically and critically and solve problems effectively.
10. Be able to think independently in creative and interpretive tasks.

Appendix 6

Business, Math, Science and Technology Faculty
Group Leaders by Semester

Fall 2000 – Jean Hushagen and Linda Tonolli
Spring 2000 – Jean Hushagen and Linda Tonolli
Spring 2001 – Jean Hushagen and Linda Tonolli
2001- 2002 – Jean Hushagen and Linda Tonolli
2002-2003 – Broad Based - Michael Kern and Jean Hushagen
2003-2004 – Michael Kern and Jean Hushagen
2004-2005 – Broad-Based - Michael Kern and Jean Hushagen
2005-2006 – Jeff Skibicki and Ron Jyring

What We Have Learned From 2005-2006 Assessment of Learning (Sciences)

Science faculty assessed Science, Critical Thinking, Technology, and Language using multiple tools including exams and quizzes, essays, portfolios, and performance evaluations.

Results were generally very positive with most PTA scores exceeding 70% and many were over 85%. Many of the lower scores were due to writing difficulties (in essays) and/or an apparent lack of effort by students, or to "technical" problems with the assessment tools (unclear or ambiguous questions or instructions, timing of the tool).

Most faculty indicated a strong desire to improve these already high scores increasing instruction in the deficient areas, and of course, by fixing problems with the assessment instruments.

There were several problems with the assessment process itself. They could be summarized as "management" issues. First, there was a failure to systematically assign course responsibilities. This, in part, lead to less than total participation, especially by adjunct instructors. Finally, and related, faculty had unequal "loads" in terms of numbers of classes and numbers of students for which they were responsible.

Most of these issues resulted from inexperience and the assumption that the successful process of two years ago would be passively repeated. However, the intervening year of broad-based general education assessment, changes in assessment committee members, and significant turnover of science faculty prevented this from happening.

Some of these problems will be mitigated in the near future. The 2006-2007 academic year will be devoted to classroom/course-embedded assessment for a second consecutive year. This will allow for timely corrections and adjustments before the problems are forgotten or passed on to new committee members. Specifically, a more emphatic approach to selecting assessors will be made. Concurrently, efforts will be made to more equitably assign assessment loads. Periodic reminders of assessment timelines will be sent.

An unsolved problem is the lack of participation by some adjunct instructors. This is especially true of those who are the sole instructor of a course.

Analysis of the Assessment Results 2005-2006
(Math, Computer Science, and Accounting)

The results of the classroom (course-embedded) assessments in the disciplines stated above were quite encouraging in many areas, while in some courses certain aspects were revealed to be areas in need of improvement.

Students did quite well with the computational aspects of the assessment activities in the various courses. In several instances, however, it appears evident that more in class practice working/solving problems and familiarity with specific procedures is necessary to increase proficiency. Also, greater effort to complete and understand homework assignments is needed on the part of the students.

It seems that making an informed and reasonable analysis of graphical information continues to be an area of weakness for many of our students. Previous assessment results have also revealed limited ability to analyze graphs and make predictions based on a given set of data or a graph obtained from a set of data. We need to bolster our efforts to curb this trend by enhancing their ability to create and/or interpret graphs and sets of data in our courses. In addition, providing clear, concise written explanations regarding problem solutions or conclusions drawn is another area in which further development would be quite beneficial. Proper usage of the mathematical and computer languages would certainly help with the written aspects of a problem.

Improvement in the use of computer software applications could be achieved by increased incorporation of classroom activities that would allow the students to get more practice formatting and modifying documents, as well as using good programming techniques and efficient use of the language. Graphics calculators will continue to be employed for regression analysis. However, perhaps an earlier exposure to the regression features of the graphics calculator would allow students to reach a level of proficiency that would enable them to achieve success in using technology to solve problems.

In light of the assessments results, in order to improve student learning our instructional focus will be on the areas in which students have exhibited limited abilities/proficiency. We will continue to utilize instructional techniques that have

worked well in the past while also exploring new ways to help our students become active learners with an increased ability to understand a problem and provide reasonable analyses in a given field. Also, we will strive to employ various assessment tools and teaching strategies to assist us in identifying the ways that students learn best.

What We Have Learned From 2003-2004 Assessment of Learning

This year's results are enlightening, discouraging and at the same time positive. We have discovered a flaw in our process that has been reported to the Dean of Faculty and the BSC Assessment Committee. It will be the topic of much discussion in the year to come and this discussion will pave the road to a better, simpler and more valuable assessment process.

The quality of the assessment process in the BMS&T general education area plummeted this year. This was terribly discouraging. Many errors, procedural and technical, were evident in the PTA's turned in by faculty. There was a noticeable increase in faculty not assessing their courses at all or only assessing one competency instead of the required two. Attitude and enthusiasm for assessment as a valuable tool is at an all time low. This group has historically been compliant and interested, as best they can be in their busy schedules, in producing quality assessment measures and accurate results. The 2003-04 assessment did not reflect this former willingness and attention to detail. I do not think this is the result of 'the blush coming off the rose'. It is not due to faculty fatigue or complacency. I believe, as does the group, that the problem lies in the alternation of course-embedded and broad-based assessment and the loss of continuity in the process. Neither course embedded nor broad-based assessment will bare the valuable fruit they are intended to produce when a full year passes between the time the lessons learned and when they can be applied.

The faculty were just beginning to find a rhythm and familiarity with the course-embedded process but assessment had not yet become a part of the fabric of their thought process surrounding the planning of new and ongoing activities in their courses.   The effort put forth in the 2002-03 broad-based assessment helped them to refine their thinking about assessment and generated good discussion about assessment but the drawback was it took the focus off course embedded assessment resulting in low quality, last minute measures and equally low quality reporting of results in the 2003-04 cycle. It appears the process was an afterthought.

The faculty group met infrequently during the 2003-04 year as it was a 'course-embedded' year and there was less to discuss as a group. The faculty were not reminded until late the semester to collect assessment data and prepare their PTA reports. The relaxed frequency of assessment reminders contributed to the overall low quality of the assessment process.

A potential solution to this problem would be to have faculty present the competencies they intend to assess and the measure and rubric they have developed to use for each class at a faculty group meeting in the first or second month of the semester. The work would be done early and the faculty could get valuable feed back from others. New faculty could gain a greater understanding of the process through the examples of more seasoned instructors.

This solution would require a change to the Assessment Plan, Appendix 3.

The students performed well on the assessment tasks assigned in most cases. The results are reported in Appendix 4.

Analysis of the Assessment Results 2003-2004
(Math, Computer Science, and Accounting)

The results of the course-imbedded assessments in the mathematics courses yielded no major surprises. As we discovered in last year's broad-based assessment, analyzing graphical information is a weakness of many students, but most are comfortable and quite proficient in the use of technology (graphics calculator).

Improvements were found in the skills of limit evaluation, differentiation, and integration in the calculus classes. However, in the applied calculus classes, some students were deficient in understanding the concept of natural logarithms and exponents and more work needs to be done in the area of integration.

It appears that the mechanical manipulations of equations and data are not as much of a problem as the interpretation and analysis of the information. In statistics, for example, if the student could identify the proper parameter, the calculations were not as much of a difficulty as interpreting the results. Some instructors found success in the use of group work and assigned projects.

In the computer science courses, the main problem students have is actually taking the time to practice and apply the applications or construct the code for a computer program. Students in the introduction to computers courses also need to spend more time actually studying the basic computer concepts.

To continue to improve instruction, we are increasing the emphasis on areas where students tend to be the weakest, and we continue to use the methods that have worked well in the past in addition to trying out new ones. The key is to get the students

to learn by doing, whether it be solving an application, creating a spreadsheet, or developing a software solution (writing a program). Instructors have been using many different teaching techniques in order to address the variety of learning styles found in each classroom. The assessment tools used have varied as well.

What We Have Learned From Spring 2001 Assessment of Learning

The assessment process conducted during the Spring 2001 semester revealed a genuine desire by MS&T faculty members to produce successful students. Even though we are a diverse group, our assessment process has revealed common concerns and solutions. The disciplines that noted an issue are identified parenthetically. The following observations are noteworthy.

1. Fewer faculty members attached their assessment to their final exams.

2. Many faculty members commented on the need for more detailed instructions with the measurement tool. Providing the students with the PTA rubric was suggested. (Biology, Math, Science)

3. Coordination with the Sykes Student Success Center was mentioned to enhance student learning and make use of the tutoring services available at BSC. (Accounting, Chemistry)

4. We continued to be pleased with the success our students had with classroom technology. The incorporation of new technology was shown to enhance the students' skill level. Future application of new technologies is planned. (Accounting, Math)

5. Though many are satisfied with their measurement tools, comments were made encouraging thoughtful revision of the tools to more accurately assess the nature of the course or to more specifically target competencies. (Biology, Math & Science)

6. There should be more emphasis placed on real world applications and their connections to specific areas of course content. (Biology, Math)

7. Student success could be improved with better advising and placement, with more attention paid to incoming assessment scores. (Biology, Math)

8. Many faculty members noted a need to improve writing skills. This was specifically identified by those assessing language and in several assessments that used an essay as a measurement tool. (Biology, Math, Science and several anecdotal comments)

9. Students' understanding of terminology associated with many courses was inadequate. Vocabulary building exercises like crossword puzzles were suggested to improve the students' foundation in the course and promote learning. (Biology, Math)

10. Faculty members were able to identify the strengths of their methods and were able to identify subcomponents that could be improved.

11. All of the information in this section should be shared with faculty as early as possible so changes can be implemented for the next semester.

We were encouraged by the increase in the thoughtful responses of the faculty in their analysis of their classroom assessment. Several individuals felt their students were more successful this semester due to changes made in the coursework that stemmed from the assessment process.

What We Have Learned From Spring 2000 Assessment of Learning

The assessment process conducted during the spring 2000 semester revealed a genuine desire by MS&T faculty members to produce successful students. Several items are noteworthy.

1. Several faculty members saw a need for earlier introduction of key material and concepts as well as a need for more repetition of this material.
2. Our students are comfortable with the technology we expect them to use in the classroom.
3. Faculty members were able to identify the strengths of their methods and set a course to increase focus on problem areas for students.
4. Assessment measures attached to final exams do not accurately assess the success of students. Student fatigue and burnout are significant factors during final exam week.
5. To reflect the desire to produce better than average students, the PTA results will be changed to report the percentage of students scoring 3 or higher, rather than 2.
6. Faculty members feel we should spend some time on analysis of our data.
7. All of the information in this section should be shared with faculty as early as possible so changes can be implemented for the next semester.

Discussions of the assessment process with faculty members and the results we have seen are encouraging. Faculty members are coming on board and really starting to rethink how they teach and how they can improve learning everyday. They are developing a better understanding of student learning. They are finding creative and innovative ways to ensure the MS&T competencies are identified and specifically taught within their designated course material.

Some concerns have been voiced by the MS&T faculty. Is our data valid, and if so, what does it tell us? If we change our PTA results to report the percentage scoring 3 or higher, it will appear that the number of students doing well has decreased. Could this information be used against faculty? Dr. Carter, Dean of Instruction, has assured us that this will not happen.

Students are becoming more informed as to the assessment process.   Student awareness of PTA scales used in their course work helps them identify the level of learning we want them to achieve. Through this awareness they will achieve a more integrated understanding of how to sort and process the information we present to acquire the desired competency.

Appendix 8

General Education Courses not assessed during the 2005-2006 school year.

Acct 201 – Elements of Accounting 2
Astr 150 – Meteorology
Astr 150L – Meteorology lab
BADM 202 – Principles of Management
BADM 240 – Sales
BADM 281 – Organizational Behavior
BADM 282 – Human Resource
      Management
Biol 109 – The Living World
Biol 111 – Concepts of Biology (on line)
Biol 111L – Concepts of Biology lab
Biol 111L – Concepts of Biology lab (on line)
Biol 126 – Human Biology
Biol 150 – General Biology 1
Biol 220L – Anatomy and Physiology 1 lab
Biol 250 – Survey of Tropical Biology
Biol 250L – Survey of Tropical Biology lab
Biol 251 – Community Ecology
Biol 251L – Community Ecology lab
Bot 170 – Plant Form and Diversity
Bot 170L – Plant form and Diversity lab
BUSN 120 – Fundamentals of Business
Chem 110 – Survey of Chemistry
Chem 110L – Survey of Chemistry lab
Chem 112 – Intro. to Forensic Science
Chem 112L – Intro. To Forensic Science lab
Chem 115 – Introductory Chemistry
Chem 115L – Introductory Chemistry lab
Chem 116L – Intro to Org. & Biochem. Lab
Chem 121 – General Chemistry 1
Chem 121L – General Chemistry 1 lab
Chem 122 – General Chemistry 2
Chem 122L – General Chemistry 2 lab
Geog 121 – Physical Geography
Geog 121L – Physical Geography lab
Geol 102 – Historical Geology
Geol 102L – Historical Geology lab
Geol 105 – Physical Geology
Geol 105L – Physical Geology lab
Math 208 – Discrete Mathematics(online)
MICR 202L - Introductory Microbiology Lab
Phys 100 – Concepts of Physics
Phys 100L – Concepts of Physics lab
Phys 110 – Introductory Astronomy
Phys 110L – Introductory Astronomy lab
Phys 211 – College Physics 1

Phys 211L – College Physics 1 lab
Phys 212 – College Physics 2
Phys 212L – College Physics 2 lab
Phys 251 – University Physics 1
Phys 251L – University Physics 1 lab
Phys 252 – University Physics 2
Phys 252L – University Physics 2 lab
Scnc 103 – Physical Science 3
Scnc 103L – Physical Science 3 lab

Appendix 9
Process for Preparing an Annual Assessment Report in BMS&T

1. Revise the title page to reflect the current year.

2. Update Appendix 1, Business, Math, Science and Technology Faculty Group with new faculty names and delete faculty names no longer assessing in the Business, Math, Science and Technology General Education area.

3. Update Appendix 2, Business, Math, Science and Technology Courses with any courses (names and number) being assessed in the Business, Math, Science and Technology General Education area. Remove any course names for which the General Education check sheet has been changed and approved by the curriculum committee to no longer assess in this area.

4. Check if revisions to Appendix 3, Assessment Plan Matrix are necessary.

5. Delete last year's entries to the last two columns on the right of Appendix 4. Enter the new data from the PTA assessment that the faculty have submitted. Check to see that the measurement tool is the same as last year. If it has changed on the PTA you will need to change it on the matrix too.

6. Delete the entries to Appendix 5, Composite Multiple Measures Matrix. Tally the number of courses assessing using the various measures on the matrix. Enter these numbers under the appropriate measure. Add new measures that are not on the matrix. Delete columns with measures not used.

7. Faculty should notify you if any changes to the General Education Matrix are necessary. Revise the matrix accordingly.

8. Review the analysis and changes the faculty have included on their PTA's. Identify trends, noteworthy comments and suggestions. Include these observations in the body of the report under "What We Have Learned From (year) Assessment of Learning" heading. Make a copy of the changes section and include that in Appendix 7, Historic Information.

9. Revise Appendix 8, Courses Not Assessed This Year, to reflect those courses that were not offered, for which you did not receive PTA's, or for which PTA's were turned in too late to be included in the writing of the annual report.

10. Revise Appendix 6 to include the year and your name(s).

11. Make a copy of all the PTA's and the final report to be held in the group leaders' offices. The PTA's are saved as our raw data.

12. Make any changes to the faculty group name throughout the report depending on which disciplines are in the group during this cycle.

13. Submit your report to the Assistant Dean of Faculty.

14. Isolate the changes made this year to "What We Have Learned From (year) Assessment of Learning" and mail it to the faculty listed in Appendix 1 with a cover letter.

YOU ARE FINISHED HAVE A GOOD SUMMER!

SOCIAL SCIENCE ASSESSMENT GROUP
COURSE ASSESSMENT
2005-2006

The following report summarizes the results of the direct measure of course assessment.

COURSE ASSESSMENT

Faculty in the Social Science area assessed several different traits in a variety of manners. For instance, two Instructors in the psychology department used an assignment in which the students were required to analyze behavioral patterns to determine whether classical or operant conditioning had been utilized. The Instructors were attempting to measure the students' use of critical/logical thinking and Independent/Interpretive thinking. The results showed the majority of students having at least a basic understanding of operant and classical conditioning, with 90% scoring a "2" or above. The Instructors plan on utilizing similar assignment in the future to increase the application skills of the students.

In the political science arena the students were asked to view the film "The Media and Politics" and write an essay which showed their knowledge in determining the four major themes of the film. The results showed 100% of the students had the ability to correctly name the four major themes, the Instructor plans on utilizing the same activity in the future.

From the above scenario's we see there are a variety of assessment methods being utilized in the Social Sciences with all of them contributing to changes that will be made in instruction in the future, or reinforcing methods already incorporated into the course. There was no area in which assessment was completed that showed a need for drastic change. Several Instructors reported 100% of the students were able to score a "2" or above on many of the measures, some improvement in instructional methods was indicated where less than 100% scored adequately. I did not receive assessment results form all faculty in my group.

Faculty seem to be frustrated with the amount of reporting and assessing that is required of them, I suggest changes to our procedures in the future.

For a full break-down of all completed assessments please refer to the charts.

APPENDIX D
Faculty Group Assessment Report for 2005-2006
General Education – Social Sciences Faculty Group

Faculty Group Assessment Report Matrix

This matrix summarizes the assessment work done by faculty teaching Social and Behavioral Science courses during 2005-2006. Members followed the Social Sciences Faculty Group Assessment Plan and submitted their Faculty Assessment Reports. The Faculty Reports show the individual faculty members' assessment results and their planned change actions. This matrix shows a summary of the statistical data gleaned by the faculty and some of their plans for change.

Social Science Gen.Ed. Competencies/Objectives	Assessment methods	Results of this semester's measures	Changes planned to improve learning
Social Science-Knowledge Know the principles and methods of the social sciences and understand the basic social, political, and economic issues of the comtemporary world. **Social Sciences - Values** Recognize the role of values and ethics in making personal, social, and professional decisions.	The **direct measures** for each of the listed competencies are embedded in the context of the course and the classroom The Multiple Measures Matrix shows the types of measures planned for this semester. One **indirect** measure is taken and is used to enrich the data gathered through the direct measures:	**Social Science-Knowledge** Scores of 2 or above Sociology 110-77% Sociology 115-90% Political Science 115-100% Political Science 220-90% Psychology 111-90%/94% **Social Science – Critical/logical thinking/problem solving** Scores of 2 or above Sociology 110-93% Sociology 115-80% Political Science 115-92% Political Science 220-100% Psychology 111-90%/94%	**Social Science-Knowledge** More thorough review of materials and design additional activities which stress the acquisition of this knowledge. **Social Science – Critical/logical thinking/problem solving** Utilize more of this type of assignment in the future.

Social Science Gen.Ed. Competencies/Objectives	Assessment methods	Results of this semester's measures	Changes planned to improve learning
Social Science – Critical/logical thinking/problem solving Think logically and critically and solve problems effectively. **Social Science– Independent/ interpretive/creative thinking** Think independently in creative and interpretive tasks. **Social Science- Cultural Diversity** Demonstrate knowledge of both global and American cultural diversity, including races, religions, subcultures, and ethnicities.		**Social Science– Independent/interpretive/creative thinking** Scores of 2 or above Sociology 110-93% Sociology 115-74% Political Science 115-100% Political Science 220-92% Psychology 111-90%/91% **Social Science- Cultural Diversity** Psychology 111-94%	**Social Science– Independent/ interpretive/creative thinking** More of this type of assignment in the future. More practice **Social Science- Cultural Diversity** Continue instruction.

Bismarck State College

Faculty Group Assessment Report

2005-2006

The Communications Faculty Group

Jaclyn A. Allen
Faculty Group Leader

July 3, 2006

Table of Contents

Faculty Group Report
2005-2006
The Communications Faculty Group

Introduction

In 2005-2006, the Communications Faculty Group at Bismarck State College completed its assigned assessments as part of year four of the Four-Year Plan for General Education Outcomes Assessment (previously called Broad-Based Assessment). We were assigned to assess five of the 24 assessable outcomes of our General Education Objectives. These assessable outcomes were as follows:

> 7 – Understand and communicate quantitative information effectively.
> 8 – Recognize the role of values and ethics in making personal, social, and professional decisions.
> 9 – Demonstrate knowledge of both global and American cultural diversity, including races, religion, subcultures, and ethnicities.
> 11 – Evaluate what is read.
> 17 – Evaluate information and ideas gathered through listening.

The rubrics for these outcomes had already been designed and each faculty member used them to assess the outcomes.

The Assessment Process

The Communications Group was responsible for assessing five intended outcomes during the 2005-2006 school year, according to the 4-Year Plan. The outcomes assessed by Communications during the 2005-2006 school year are as follows:

Understand and communicate quantitative information effectively (7)
- Organize and analyze data to make inferences about real world situations
- Clearly communicate quantitative relationships and solutions

Recognize the role of values and ethics in making personal, social, and professional decisions. Develop, organize, and present ideas in a formal or informal speaking situation (8)
- Identify, articulate, and explain their own values
- Recognize the connection between values and behavior.
- Identify and understand the values and ethics of another individual or group as revealed through actions, society, and culture
- Use their understanding of their own values and those of others to resolve conflicts and make responsible decisions

Demonstrate knowledge of both global and American cultural diversity, including races, religions, subcultures, and ethnicities (9)

- Understand that all individuals and cultures are not alike
- Display tolerance for the ideas and perspective of others
- Use the knowledge, attitudes, and skills gained through their understanding of individual and cultural diversity to communicate, work, and make decisions with people of other backgrounds

Evaluate what is read (11)
- Evaluate the effectiveness and validity of an author's style, organization, support, evidence, and presentation
- Demonstrate awareness of the connection that style and language have to an author's topic, audience, and purpose

Evaluate information and ideas gathered through listening (17)
- Evaluate the effectiveness and validity of a speaker's style, organization, support, evidence, and delivery
- Demonstrate awareness of the connection that style and language have to a speaker's topic, audience, and purpose, as well as the occasion.

Students in English 110 were assessed on quantitative information (7) during the Fall of 2005. For this assessment, students completed a brief writing assignment which had them summarize two tables of information and then communicate what those results indicated. Eleven faculty members, including two adjunct faculty members, participated, but the essays were assessed by only one faculty member in order to have consistency in scoring. That faculty member used a 4-point PTA scale to assess the essays. The scores were broken down into students who had taken math or were currently taking math, and those students who had not taken their math classes yet.

In addition to being assessed on quantitative information, English 110 students were assessed on values (8) as well during the Fall of 2005. All were assigned to write an essay on the same assignment, which asked, "Why is it important for you and other college students to have the opportunity to understand your own values and other students' values?" The essays were then assessed by each instructor, based on a common 4-point PTA scale (rubric).

In English 120 students were assessed on their evaluation of a reading (11) during the Spring of 2006. All students in English 120 evaluated the same essay, "I Want a Wife" by Judy Brady, while in English 125 all the students received the same case study to evaluate. The students wrote a 500 word essay evaluating support, style, presentation, and organization. The essays were then assessed by each instructor, based on a common 4-point PTA scale. Nine instructors participated in this exercise.

In Communications 110, students were assessed on their knowledge of cultural diversity in making decisions and evaluating information and ideas through listening (17). One communication faculty member assessed one section of the class during the Spring of 2006 in Communications 110. These assessments were combined into one assignment in which students prepared and delivered a speech about diversity in which they were to demonstrate sensitivity and knowledge about diversity. Students were assigned to listen

to their peers' speeches; afterwards, students performed a self evaluation and a peer evaluation, which assessed their skills.

A caution needs to be noted here: many of our students take these classes in their first or second semester, so this is not intended to be the definitive measurement of the abilities of our exiting students. But if we were to limit our investigation to only those students in their last semester of study, it might skew the results, since it is often the more reluctant writing and speech students who are taking these classes in their last semesters. Thus, our efforts were concentrated in English 110, English 120 and 125 and Communications 110 because these classes are ones that have the greatest number of students.

The 2005-2006 Assessment Experience – Results

Direct Measures (General Education Assessment in English 110) – Results seemed relatively uniform across all of the assessments, perhaps in part because of the rubrics, and that three out of five of the outcomes were assessed by a single faculty member to strive for consistency in our results. Our students are doing well in the five outcomes, with 100% of students performing at 2 or above in some sections of courses. Overall, when results from each instructor are combined and totaled for each outcome, our results are as follows:

Combined Results – General Education Assessment for English 110, 120, 125, and Communications 110		
	% at 2+	% at 3+
7 – Understand and communicate quantitative information effectively	67.2	16.8
8 – Recognize the role of values and ethics in making person, social, and professional decisions	96	80
9 – Demonstrate knowledge of both global and American cultural diversity, including races, religions, subcultures, and ethnicities	100	0
11 – Evaluate what is read	93	67
17 – Evaluate information and ideas gathered through listening	100	0

Scores of 2 or above would be considered passing. Scores of 3 or above would be considered good or very good mastery of the learning outcome.

See p. 10 for details from each instructor and p. 23 for graphs of the results.

Direct Measures – Each of the assessments done for the five outcomes was a direct assessment.

In understanding quantitative information, the scores were broken down by students who had taken or were currently taking Math 103 or 210, and those students who had not yet taken math. Of these scores 73 percent of students taking math scored a 2 or higher compared to 63 percent of students not taking math. This small, yet significant 9 percent difference in scores could be attributed to the skills students gained in their math classes at BSC.

Eleven faculty members, including two adjunct instructors, participated in the assessment of quantitative information; for this assessment 176 students in English 110 responded to the first two questions to summarize the quantitative data in the tables. 196 students responded to the second set of questions to communicate if those results surprised them and how would they advise students using the information from these tables. One instructor assessed all of the essays, and the results suggest that 32.8 percent of students do not understand and communicate quantitative information effectively in any ways, while 50.4 percent only have a fair understanding of quantitative information. However, the majority of students (67.8 percent) still received a score of 2 or higher. Some of the lower results may be from poor reading skills, rather than poor math skills, even though the reading was very limited. However, this still suggests that more work needs to be done to ensure that our students understand quantitative information. See pg. 10 for the full results of the assessment of quantitative information.

In recognizing the role of values and ethics, students in English 110 wrote an essay which supported with evidence why they thought it was important that they were able to understand their own and other college students' values. Students did quite well in this assessment, with only 4% scoring a 1. Clearly, most students could articulate their understanding of the importance of values.

In evaluating reading, again students did quite well, perhaps to our realization early on in the process that we should be teaching the evaluation process more clearly, and then correcting that oversight. Only 7 percent of students received a 1, suggesting the majority understood how to evaluate what is read on some level.

In Communications 110, one faculty member assessed one of her classes on diversity and evaluating listening combined into one assessment score. Students evaluated themselves to be adept at listening and demonstrating sensitivity to diversity, with 100 percent evaluating themselves at 2 or above.

Changes Planned to Improve the Assessment Process

As part of the assessment process, we need to incorporate "norming" sessions so that we all know how to use the rubrics that we designed in year's past. These sessions would include example essays that each instructor would assess and then discuss the results, so that we would have greater consistency in assessing students' projects, essays, etc.

As a campus, we need to evaluate some of our outcomes because we are assessing what a graduate of a four-year college might know, rather than a student in the first two years of college. For example, evaluating what is read to a level four would probably be what a four-year graduate should know.

It would also be informative for the quantitative assessment to have students in Math 102 or 103 do the same assessment to see if results were skewed because of the integration of the quantitative analysis in an English class.

Finally, in 2006-2007 school year we are planning to streamline our general education outcomes to make them more efficient and workable. Currently, we are so bogged down

in the process that we do not have enough time or energy to actually implement changes in the areas that need help.

Changes Planned to Improve Learning – in the Courses

While quantitative thinking is usually not considered to be a major part of communication classes, logical thinking is. Students need to be able to analyze information effectively, no matter what the topic is. In order to help students understand quantitative information more effectively, we need to focus on those logical thinking skills in communication courses and perhaps incorporate writing about various quantitative topics in math classes.

We have found that one of our largest challenges as general education faculty is to ensure that students are aware of the ethical aspects of making decisions, personally, professionally, and socially, and this should be emphasized in all general education classes. Specifically in Communication courses, faculty should discuss ethical behavior and incorporate discussions of this into their classes to ensure the knowledge base for making ethical decisions is there.

After the English faculty's first discussions about evaluating reading, we realized collectively that we were usually not teaching the process of evaluation. We taught them to read effectively, to analyze, and expected evaluation as a part of their skill set, but never taught them the process. Thus, just by discussing our assessment goal, faculty changed their thinking and their teaching processes. As a faculty we will incorporate teaching the process of evaluation now before we give an evaluative task, which will help students learn more efficiently.

In Speech courses, students assessed themselves to be sensitive and knowledgeable about diversity, and students were fairly good at evaluating the information gathered through listening. Moreover, listening and diversity should be taught by all general education faculty members to promote these skills

Overall, emphasizing quantitative knowledge, values, diversity, reading, and listening needs to be support across campus by courses in all disciplines making use of assignments that make use of these elements.

Communications Assessment

Full-Time Faculty – 2005-2006

Jaclyn Allen – Writing
John Berry – Writing
Carol Cashman – Speech
Julie Gard – Writing
Amy Juhala – Writing
AnnMarie Kajencki – Writing
Kitty Netzer – Writing
Barb Perry – Speech
Dan Rogers – Speech
Jane Schreck – Writing
Lynn Severson – Writing
Tom Stein – Writing

Adjunct Faculty – 2005-2006

Karen Bauer – Writing
Tom Hesford – Writing
Shelly Hoff – Speech
Traci Juhala – Writing
Ethel Keeley – Writing
Josh Kern – Writing
Suzy Kramer-Brenna – Writing Kathleen Lundstrom – Speech
Laura Novak – Writing
Sherry Omlid – Speech
June Prom – Writing
Jeanne Prom – Writing
Nicholas Rahrich – Writing
Russ Riehl – Speech
Jack Ryan – Writing
Jessica Santini – Writing
Jan Schultz – Writing
Carolyn Twingley – Writing

Communications Courses – 2003-2004

Speech 110 – Fundamentals of Public Speaking
English 110 – College Composition I
English 120 – College Composition II
English 125 – Introduction to Professional Writing

7-Understand and communicate quantitative information effectively.						Students were given two tables of information, gathered in the spring of 2005 from BSC students regarding their opinion on the types of course where they were given the opportunity to deal with or express their values or the values of others. The courses were group according to Gen Ed. Areas. In the survey, the students could choose more than one answer. One hundred twenty eight students responded, with 176 responses in the first question and 196 responses in the second questions. Our students were asked to summarize the information in each of the tables. The response needed to include the appropriate limitations or restrictions to the data, like BSC students in Spring 2005 and their opinion. Also students needed to communication the point of the question in each	Students did not do particularly well on this assessment, with nearly 33% performing poorly and earning a score of 1. Over half of the students managed only a score of 2 (fair) on the assessment, leaving nearly 83% of students at a poor or fair. These results may be due to the cross-disciplinary nature of the assignment (students sometimes don't think they have to write well in non-English classes and calculate well in non-math classes). The poor performance could be related more to poor reading skills than to poor math skills, although the reading was not excessive. Some students seemed not to have read the instructions or information carefully and were guessing at the meaning as they tried to summarize the information. Others spun off into interpretation, when they had only been	Certainly English can do more to help students understand quantitative information, particularly in the area of statistical evidence and its relevant use in building an argument. Most of us already emphasize the need for a healthy skepticism when dealing with statistics, but we could be more precise in interpreting numerical data with students. Still it does seem that the teaching of these concepts is better taught in the math classes, where students need to be required to verbalize quantitative information, not simply calculate with it.
	Rating	Math 103 or 210	Higher Math	# of Students	Percent			
	4	1	0	1	0.8%			
	3	11	9	20	16.0%			
	2	37	26	63	50.4%			
	1	28	13	41	32.8%			
	Total	77	48	125	100%			

| 7 | | | case and summarize the results.

All students in English 110 in Fall 2005 completed the assessment. These were then grouped according to who had completed or was currently enrolled in Math 103 or higher. A total of 358 students completed the assessment assignment, with 125 of those qualifying with the minimum general education math course.

In an effort to strive for consistency in the evaluation, one faculty member evaluated all of the assessment assignments. | asked to summarize. Only one student did an excellent job of summarizing the information completely, including the various restrictors.

In the two follow-up questions, students were asked if the results surprised them and which types of classes they would advise someone to take who wanted to understand values more thoroughly. One disturbing aspect of this was the number of students who that it made sense that Math-Science-Technology classes not deal with values. Their reasoning was that these classes just deal with facts—no opinions, no creativity. The only suggested value connected to science was evolution. We did not collect any profile information from students about the amount of science they had completed, and perhaps students who have finished a lab | |

7			science requirement might be more open to the idea of creativity or difference of opinion in these classes. My concern is that students seem to view science as set and not open to new discoveries, new developments, questions, or doubts. Also there seemed to be little or no consideration of values related to math, science, or technology.	

8-Recognize the role of values and ethics in making personal, social, and professional decisions.	Rating / Students / Percent: 4 / 4 / 14; 3 / 18 / 18; 2 / 5 / 17.5; 1 / 1 / 3.5; Total / 28 / 100%		All students in English 110 classes wrote on the same question: Why is it important for you and other college students to have the opportunity to understand your own values and other students' values? Students were then to support their opinions and suggestions with specific examples from classes they have taken at Bismarck State College. Then the essays were assessed by the faculty member teaching the class.	The students expressed a preference for classes that discuss values, which is problematic however, for classes such as math/computer.	The one change I could make is to drop the one essay (descriptive) that does not lend itself to values discussions. I have made no decision at this time.
8	Rating / Students / Percent: 4 / 8 / 31; 3 / 12 / 46; 2 / 5 / 19; 1 / 1 / 4; Total / 26 / 100%			The majority of my Composition I students seem to have a good grasp of the importance of values in education and can articulate their own views. Many students describe college as a time not only to develop their own values, but as an opportunity to learn to respect the values of others even when different from their own. Many students mention tolerance as an important value. They see college as a place in which to broaden one's mind and learn to work with others. I only had one student who did not express any clear understanding of values. There were a few students who seemed to be on the right track but had trouble articulating their views in writing. Overall, I found	I plan on continuing to incorporate readings and assignments that challenge students to think critically about their own and others' values. I will continue to include readings, exercises and discussions that encourage students to think and write about their values and beliefs. I would like to incorporate more assignments that require students to directly put themselves in the shoes of a person who is "different" from them in some way and have them consider as many viewpoints as possible. I wonder how we might help students expand

| | | | | these results encouraging. It seems that students are hungry for opportunities to think critically about what it is they believe, and they appreciate readings and films that encourage them to look at others' perspectives. They appear to learn from literacy and cinematic works that encourage empathy and tolerance, such as the nonfiction book *Tuesdays with Morrie*, Brent Staples' essay "Black Men and Public Space," and the film "In the Heat of the Night." | their definition of tolerance as a value to include attitudes about minorities in their own community. At some point, I would like to expand my unit on racism and stereotyping to include Native American and perhaps to line up a guest speaker who could enlighten students on this important issue. |

| 8 | Rating / Students / Percent table | | | All of my students engaged to some extent with the concept of values in their essays, but only three out of 36 demonstrated anything like reflective self-awareness or a profound understanding of the connection between values and behavior. | With each essay we read in 110, I have students identify briefly what is sacred or important in the essay. Usually they identify something obvious without much examination or question. I need to do more with this idea in class discussion and in their writing, requiring that they justify their choices or explore alternatives. |

Table for row 8 (first):

Rating	Students	Percent
4	3	8.33
3	16	44.45
2	17	47.22
1	0	0
Total	36	100%

| 8 | | | | The majority of the 44 students who completed the assessment assignment showed they could write a well-formed academic essay complete with thesis statement and body paragraphs containing specific evidence. Articulating and supporting the | In the future I will again emphasize to students the important and effectiveness of the actual writing process as well as the necessity of employing concrete examples to support assertions. |

Table for row 8 (second):

Rating	Students	Percent
4	17	38
3	22	50
2	5	11
1	0	0
Total	44	100%

				"value" prompt was a task in itself because of the short amount of time the students were given to think about and draft their responses. The prompt was revealed on a Wednesday and formally written upon the following Friday. The 44 students definitely rose to the occasion. Their responses indicate that the curriculum presented these past sixteen weeks in English 110 was successful.	
8	Rating 4 3 2 1 Total	Students 22 19 7 1 49	Percent 45 39 14 2 100%	None comments submitted	No comments submitted.
8	Rating 4 3 2 1 Total	Students 16 11 2 0 29	Percent 55.2 37.9 6.9 0 100%	Small groups with posed questions eliciting value discussions are effective.	Look to build values that contrast more and more during a course's progress.
8	Rating 4 3 2 1 Total	Students 13 29 2 0 44	Percent 30 66 5 0 100%	The students seem to enjoy having a chance to get to know each other during discussions. The argument paper gave them a chance to explore what is important to them—and to see what is important to others. They also really enjoyed reading *Tuesdays with Morrie*. I will try to implement even more groups discussion times and activities.	Even more activities—and more focus on exploring ALL views on an issue.

8	Rating	Students	Percent		My analysis is that many students mention our English class in their essays as a place to discuss and learn about values, but I also suspect that the students' own intelligence and personal growth level may have more to do with their higher order thinking than me.	I must try harder to get the self-absorbed students to open up further to the world and the people around them, perhaps more time devoted to class discussions.
	4	40	59			
	3	9	13			
	2	10	15			
	1	9	13			
	Total	68	100%			
8-Total	Rating	Students	Percent			
	4	123	38			
	3	136	42			
	2	53	16			
	1	12	4			
	Total	324	100%			
9 and 17-Total 9-Demonstrate knowledge of both global and American cultural diversity, including races, religion, subcultures, and ethnicities 17-Evaluate information and ideas gathered through listening	Rating	Students	Percent	Students prepared and delivered a speech about diversity in which they were to demonstrate sensitivity and knowledge about diversity. Students were assigned to listen to their Speech 110 peers when they delivered that diversity speech. Then students performed a self evaluation which asked how they assessed their own knowledge of values and a peer evaluation which assessed how well they listened and demonstrated their awareness and sensitivity to diversity. Students were given one assessment score for both since this was one	This indicates that the students were adept at listening and aware of diversity from a listening perspective.	Strengthen the speaking assignment. Create a more challenging listening task.
	4	8	37			
	3	6	25			
	2	10	38			
	1	0	0			
	Total	24	100%			

				assignment. These scores reflect the peer evaluation of their listening skills about the diversity.		
11-Evaluate what is read	Rating 4 3 2 1 Total	Students 4 5 8 6 23	Percent 17.4 21.7 34.8 26.1 100%	In all English 120 classes students evaluated the essay "I Want a Wife" by Judy Brady, which they had copies of in its original format as well as an easier to read version. Then students responded to the prompt: In a well-formed essay (with an introduction, body paragraphs, and conclusion) evaluate the effectiveness of the author's writing in about 500 words (about 1 ½ to 2 pages). Your essay should include most, if not all, of the following: evaluate the effectiveness of the author's style, organization, support, evidence and presentation. Each faculty member assessed their own students.	Obviously more time needs to be spent focusing on "what is read". Although a few students did a very thorough evaluation of the essay's effectiveness and the validity of the author's style and support (as well as connecting style and language to the author's topic, audience, and purpose), many more students focused more on the content of the essay and reacted to it rather than evaluated it for what it was. The guys, especially, had a difficult time accepting the essay for what it was; they immediately went on the defensive and attacked the essay rather than evaluate what was said and how it was accomplished. In other words, I need to focus more on teaching them to "evaluate" rather than respond.	I think more exercises focusing on reading comprehension and evaluation of styles would be greatly beneficial for both English 120 classes AND English 110. Although I like for them to react and respond to readings, I am going to spend more time on evaluating readings/essays.
11	Rating 4 3 2 1 Total	Students 23 8 3 0 34	Percent 67 23 8 0 100%		Students did very well on this assessment assignment. The benefits of BSC's first two semesters of composition show in the results. Students should exhibit good writing, critical thinking, and reading skills by the end of English 120. Only a few students were weak in their writing and analytical skills.	Continue to emphasize the importance of effective writing and accurate reading.

11	Rating	Students	Percent		Most of the students were able to understand and address the essay question, focusing solely or at least primarily on evaluation of the article's effectiveness rather than their own beliefs and opinions regarding its subject matter. Of the 11 students who received a two or one, many wrote competent essays but focused far too heavily (or exclusively, for the ones) on their own thoughts and feelings. Students who ranked at three performed a "hybrid" analysis, with a dual focus on their own views and the actual effectiveness of the article for its intended audience. The fours did an excellent job of assessing the essay in terms of structure, style, evidence, etc. In terms of implications for teaching, I think these results show that there is still a need to help all students analyze and address the specific requirements of a given assignment.	The results of this assessment exercise lead me to think that I would like to incorporate at least some nonfiction into my Composition II curriculum, perhaps in conjunction with certain short stories or poems. My students did an fine job of transferring their ability to analyze fiction and poetry to this essay, but overall they did not possess the vocabulary to properly refer to many aspects of the nonfiction craft. I think there could be some interesting opportunities here to teach multiple genres simultaneously, since literature contains themes that are reflected in contemporary journalism and creative nonfiction.
	4	13	35			
	3	13	35			
	2	9	24			
	1	2	6			
	Total	40	100%			
11	Rating	Students	Percent		I believe I trained my students fairly well to read critically, respond academically, and use proper essay format. However, the low scoring students responses not as intellectuals, but as overly-emotional uneducated individuals.	First, I am going to better impress upon future students critical reading and objectivity, and by second, starting of my Comp II students with more evaluative reading and responding earlier and
	4	21	72			
	3	3	10			
	2	2	7			
	1	3	10			
	Total	29	100%			

						more often in the semester.

11	Rating	Students	Percent		Tends to support my notion that "teaching to the middle" is no longer pertinent as there is none. Thus, implications are problematic.	Will continue to develop creative, thought provoking lessons while participating in developmental classes and supporting Sykes Center participation.
	4	11	52			
	3	4	19			
	2	6	29			
	1	0	0			
	Total	21	100%			

11	Rating	Students	Percent		Because Composition 120 focuses on analyzing works of fiction and does not focus on evaluating essays, I approached the students' responses to this assessment exercise with some trepidation. How pleasant it was to discover that they had not filed "Evaluating Effective Writing" under Never Think of Again and that they could recognize when an author had achieved such writing. The majority of the students did not argue the author's point of wanting of needing a wife but concentrated on assessing her persuasive technique. Most used appropriate terminology to describe the elements of the essay—thesis statement, topic sentence, details and support' recognized the irony and/or sarcasm of the piece; and used those terms to describe the tone of the essay. The students spoke to the organization, and	Although examining the writing of others is part of Composition 110, application of the effective writing principles concentrates on the student's writing. The change I plan to make is to add an essay evaluation assignment to Composition 110. Reading and analyzing well-formed essays should serve to heighten student awareness of effective writing and serve as a pattern for their writing. For Composition 120, I plan to more specifically address the effective writing principles in class discussion and reaction writing by adding this component to the notebook/journaling assignments. My students have been encouraged to
	4	6	16			
	3	14	37			
	2	15	39			
	1	3	8			
	Total	38	100%			

				analyzing, not re-telling the content. To prepare the students for the assessment exercise, we "practiced" with another essay. I feel this was helpful in preparing them for the exercise and reminded them of the terminology to use in their evaluation. Based on the results, I am convinced the students are aware of what effective writing entails. They seem comfortable with the vocabulary and can adequately apply and support their observations. For a few students, the exercise was difficult. I am not sure if they understood what was expected of if they were reacting to the subject matter of the essay. For this reason, I believe it is necessary to review the impact of style, presentation, and organization, so the students understand what will make their writing more effective.	identify and understand literary devices—theme, motif, etc., and to concentrate on their personal connection rather than the structural techniques the author has used to evoke the reader's reaction to the writing.
11	Rating / Students / Percent table below				I cannot get over how much students think their worlds exist on an island, that their beliefs are ones they hatched completely on their own, or that the past has little or no meaning in their lives. Many of the essays show students remove themselves from this ancient essay written in 1972, that their lives have little to do	The most important thoughts are that students must be asked to consider presentation of words and graphics on the page and their effect on meaning, especially with the web page now so dominant in our students' lives, and that instruction for argument

Row 11 embedded table:

Rating	Students	Percent
4	8	36
3	10	45
2	4	18
1	0	0
Total	22	100%

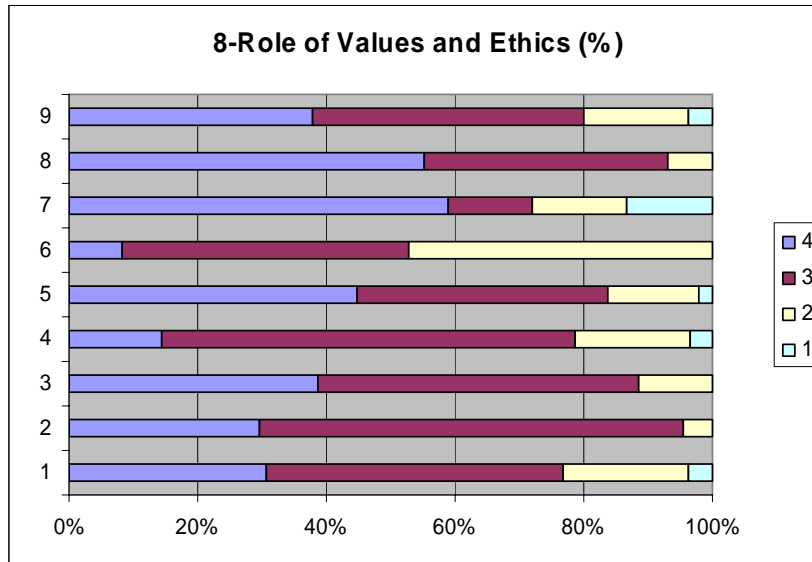|				with this old fashioned society, but the extraordinary essays reveal an ability to connect personally to the past. I will try to draw more lines from the past into the present with all ideas in the course so that students see faster I their college educations that we are products of the past, that our lives are very much our parents in the end, and that everything we believe in comes from a collective consciousness as much as any individual thinking.	and logic needs more attention from me.
11	Rating Students Percent 4 20 41 3 14 29 2 10 20 1 5 10 Total 49 100%			I find that the majority of the students could evaluate a piece of writing, which could be due in part to the discussions about evaluation we had in class prior to the assignment, as well as their responses in their reaction papers, which requires some evaluation of a piece of writing, albeit informally. The students that were receiving ones tended to analyze what the article meant, but never took the next step to evaluating whether that was effective or not.	This was something I never used very much in teaching English 120, but realized students would not usually learn this skill elsewhere in the general education curriculum; thus, I plan to integrate this more formal evaluation into their response essays for each of the major works we read.
11	Rating Students Percent 4 2 4.7 3 20 46.5 2 20 46.5 1 19 2.3 Total 43 100%		In English 125 students were given a case study about a friend who is working on a team project. The friend has been asked to give his boss a candid progress report on the project, particularly how the team is working together.	I devised a draft memo for students to evaluate and tried to give them strengths and weaknesses to comment on, while still keeping it realistic. I violated points of style, tone, organization, presentation, and content, while still maintaining the	I was pleased with my students' ability to recommend appropriate organization and tone. They even did a reasonable job with style issues. The weakest aspect of their responses had to do with

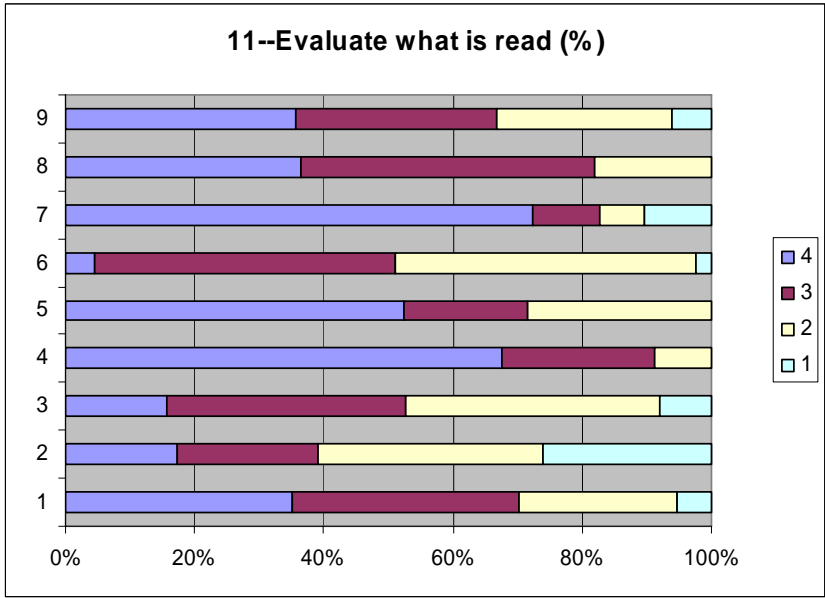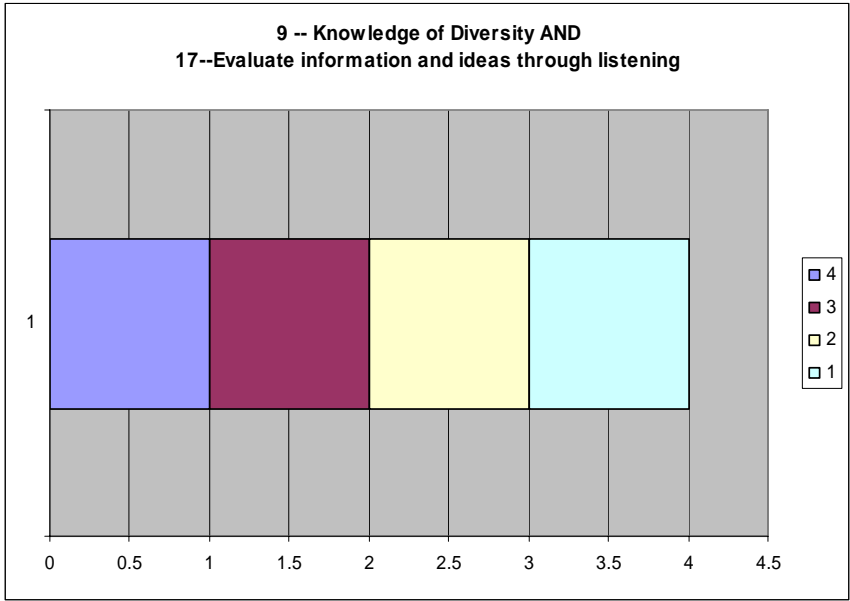| | | He writes a draft of his report in a memo. Students are told that the friend sends them the draft and asks for recommendations on how to revise it. The friend asks for the response in an e-mail. They were instructed to comment on style, tone, organization, presentation, and content. Students were also given these written directions consistent with course material throughout the semester: "Style pertains to the author's use of vocabulary and sentence structure. Tone pertains to the connotation of the words and phrases. Organization should be clear and follow the reader's expectations. Presentation should be neat and professional and again follow expected conventions for the type of document it is. Finally content needs to include what is necessary and exclude what is unnecessary. With an argument, evaluation, or recommendation such as what Natalie is asking of Bob, appropriate content must include specific supporting evidence, | general look and feel of a professional progress report. All but one student understood the point of the assignment and did a fair to excellent job of evaluating the progress report for their hypothetical friend. Of those who understood the assignment, all recognized an unprofessional tone, all had correct things to say about the organization of the report, and nearly all recognized some or most of the stylistic errors (redundancy, wordiness, use of clichés, etc.). Most missed errors in format or presentation, and nearly all failed to comment on the poorly constructed argument or inadequate use of evidence, even though it was specially highlighted in the instructions. One surprise was how many students thought the bad news in the report (some lack of progress and some personnel problems) needed to be covered up or downplayed, even though the instruction had said that the boss had requested an honest evaluation. The draft memo may have had too many errors and overwhelmed students, giving | content, especially effective use of evidence. I will put more emphasis on effective use of evidence and building an argument, including in-class assignments and graded assignments. |

				presented in a way to convince and gain the reader's trust." The scenario outlined problems with the progress of the project and in particular with the personnel on the project team. The set-up information was given to students about a week ahead of time. The draft of the memo was not shared until the time of the in-class final exam.	them so many superficial things to comment on that they didn't get to the deeper issues.	
11-Total	Rating	Students	Percent			
	4	108	36			
	3	91	31			
	2	77	26			
	1	20	7			
	Total	296	100%			

Results—English 110, 120, and 125, and COMM 110
General Education Assessment of Outcomes 7, 8, 9, 11, 17

General Education assessment results from English 110, 120, and 125, and COMM 110 are summarized in the following graphs. The bar at the top of each graph shows the results of combining all ten instructors' results and reducing that total to percentages for comparison.

8-Role of Values and Ethics (%)

**9 -- Knowledge of Diversity AND
17--Evaluate information and ideas through listening**

11--Evaluate what is read (%)

Form A: Broad-Based Assessment of General Education

Faculty Group: Communications

Instructional Degree Program: General Education
Diploma, AA, AS, AAS   **Degree Level:** Certificate,

Semester Administered: ____Fall 2005_____   **Date Submitted:** July 6,
2006

Submitted by: Jaclyn Allen

Intended Outcome (title and #): Recognize the role of values and ethics in making personal, social, and professional decisions. Develop, organize, and present ideas in a formal or informal speaking situation (8) • Identify, articulate, and explain their own values • Recognize the connection between values and behavior. • Identify and understand the values and ethics of another individual or group as revealed through actions, society, and culture • Use their understanding of their own values and those of others to resolve conflicts and make responsible decisions	
Measure used	Students wrote an essay on the question: Why is it important for you and other college students to understand your own and other students' values? Students then supported their opinions and suggestions with specific examples.
Assessment method (criteria including PTA)	• 4- Identifies, articulates, and explains his or her personal values, demonstrating reflective self-awareness. Demonstrates a profound understanding of the connection between behavior and values. Consistently identifies major and subtle influences on values and ethics, whether for individuals or groups. Weighs values and ethics in making decisions. Resolves conflict through careful consideration of values and ethics. • 3- Identifies and explains the student's personal values, demonstrating some self-awareness. Demonstrates some understanding of the connection between behavior and values. Identifies only major influences on values and ethics, whether for individuals or groups. Sometimes weighs values and ethics in making decisions. Resolves conflict through partial consideration of values and ethics. • 2- Identifies obvious person values, demonstrating superficial self-awareness. Demonstrates a cursory understanding of the connection between behavior and values. Sometimes identifies

	major influences on values and ethics, whether for individuals or groups. Rarely weighs values and ethics in making decisions. Resolves conflict through a cursory consideration of values and ethics. • 1- Is unable to identify his or her personal values. Separates values from behavior. Acts in a way that is inconsistent with or contradictory to his or her values. Fails to demonstrate an understanding or awareness of personal values. Cannot identify major or subtle influences on values and ethics, whether for individuals or groups. Consistently fails to account for values or ethics in conflict resolution or decision making. Makes decisions without regard to consequences.
Sample (# of students and profile or description)	24 Communications 110 students One section of students
Summary of results	<table><tr><td>Rating</td><td>Students</td><td>Percent</td></tr><tr><td>4</td><td>8</td><td>37</td></tr><tr><td>3</td><td>6</td><td>25</td></tr><tr><td>2</td><td>10</td><td>38</td></tr><tr><td>1</td><td>0</td><td>0</td></tr><tr><td>Total</td><td>24</td><td>100%</td></tr></table> **17-Evaluate information and ideas gathered through listening: 100% at 2+, 62% at 3+**
Use of results to improve student learning	Strengthen the speaking assignment and create a more challenging listening task.

Form A: Broad-Based Assessment of General Education

(to be filled out by the Faculty Group Leader)

Faculty Group: Communications

Instructional Degree Program: General Education   **Degree Level:** Certificate, Diploma, AA, AS, AAS

Semester Administered: ____Spring 2006_____   **Date Submitted:** July 6, 2006

Submitted by: Jaclyn Allen

Intended Outcome (title and #):   Demonstrate knowledge of both global and

American cultural diversity, including races, religions, subcultures, and ethnicities (9)
- Understand that all individuals and cultures are not alike
- Display tolerance for the ideas and perspective of others
- Use the knowledge, attitudes, and skills gained through their understanding of individual and cultural diversity to communicate, work, and make decisions with people of other backgrounds

Measure used	Students prepared a delivered a speech about diversity in which they were to demonstrate sensitivity and knowledge about diversity. Students were assigned to listen to their Speech 110 peers when they delivered that diversity speech.
Assessment method (criteria including PTA)	4- Demonstrates extensive knowledge and awareness of cultural elements and influences of several different groups of people, including his or her own. Can acknowledge even subtle similarities and differences in cultures. Consistently recognizes stereotyping and bias as an oversimplified views of others. Can articulate in a reasonable manner similarities and/or differences between his or her own culture and/or the culture of others. Exhibits a strong ability to articulate contradictory ideas or perspectives. Identifies all stakeholders in a situation. Consistently considers other points of view and incorporates relevant viewpoints when communicating with others. Works successfully with people whose background or viewpoints differ from his or her own. Consistently makes decisions that consider and allow for the perspective and concerns of those involved. 3- Demonstrates substantial knowledge and awareness of cultural elements and influences of several different groups of people, including his or her own. Acknowledges some similarities and differences in cultures. Sometimes recognizes stereotyping and bias as an oversimplified view of others. Articulates basic similarities and/or differences between his or her own culture and/or the culture of others. Can articulate contradictory ideas or perspectives. Identifies most stakeholders in a situation. Sometimes considers other points of view and incorporates relevant viewpoints when communicating with others. Sometimes makes decisions that consider and allow for the perspective and concerns of those involved. 2- Demonstrates basic knowledge and awareness of cultural elements and influences of several different groups of people, including his or her own. Acknowledges the most obvious similarities and differences in cultures. Fails to recognize or often resorts to stereotyping and bias when dealing with others. Articulates only obvious similarities and/or differences between his or her own culture and the culture of others. Makes an attempt to articulate contradictory ideas or perspectives. Identifies most obvious stakeholders in a situation. Rarely considers other points of view and incorporates relevant viewpoints when communicating

	with others. Rarely makes decisions that consider and allow for the perspective and concerns of those involved. • 1- Is unaware of or refuses to acknowledge differences among individuals or groups of people. Refuses to acknowledge similarities and differences in cultures. Judges people and ideas based on stereotyping and bias. Dismisses as incorrect or evil perspectives other than his or her own. Is incapable of articulating ideas or perspectives other than his or her own. Fails to communicate or work cooperatively with people whose background or viewpoints differ from his or her own. Makes decisions based on self-interest and a narrow understanding of the world. Seldom makes decisions that consider and allow for the perspective and concerns of those involved.
Sample (# of students and profile or description)	24 Communications 110 students One section of students
Summary of results	<table><tr><td>Rating</td><td>Students</td><td>Percent</td></tr><tr><td>4</td><td>8</td><td>37</td></tr><tr><td>3</td><td>6</td><td>25</td></tr><tr><td>2</td><td>10</td><td>38</td></tr><tr><td>1</td><td>0</td><td>0</td></tr><tr><td>Total</td><td>24</td><td>100%</td></tr></table> **17-Evaluate information and ideas gathered through listening: 100% at 2+, 62% at 3+**
Use of results to improve student learning	Strengthen the speaking assignment and create a more challenging listening task.

Form A: Broad-Based Assessment of General Education

(to be filled out by the Faculty Group Leader)

Faculty Group: Communications

Instructional Degree Program: General Education   **Degree Level:** Certificate, Diploma, AA, AS, AAS

Semester Administered: ____Spring 2006_____   **Date Submitted:** July 6, 2006

Submitted by: Jaclyn Allen

Intended Outcome (title and #): Evaluate information and ideas gathered through listening **(17)**

- Evaluate the effectiveness and validity of a speaker's style, organization, support, evidence, and delivery
- Demonstrate awareness of the connection that style and language have to a speaker's topic, audience, and purpose, as well as the occasion.

Measure used	Students prepared a delivered a speech about diversity in which they were to demonstrate sensitivity and knowledge about diversity. Students were assigned to listen to their Speech 110 peers when they delivered that diversity speech.
Assessment method (criteria including PTA)	• 4- Listener was able to identify the organizational elements of an effective speech (Introduction, Body, Conclusion). Listener could pick out and articulate flaws and strengths of structure and organization (i.e., problem did not have a solution, or no summary with conclusion). Listener is aware of transitions to tie speech together, noted distractions or omissions which disrupted the flow of the speech. Listener can identify and articulate the speaker's thesis and key ideas. Listener can identify and evaluate various forms of support: are they recent, relevant, unbiased, and varied. Through discussion or written analysis, listener articulates connections and draws conclusions based on the total contributions of speeches given. Active listeners could compare or contrast information gathered during speeches. • 3- Listener is aware of the organizational elements. May be able to pick out organizational pattern of the speech and comment on some of the strengths and weaknesses. Notices some transitions and whether speech stayed on course. Listener can identify the general purpose of the speech and its key ideas. Listener notes the types of support used and has a sense of their validity. Listener clearly identifies connections between speeches, but is unable to draw conclusions. Listener is able to compare and contrast speech content, language use, and effectiveness of delivery • 2- Listener is not able to distinguish the major points of the speech. They may be just listening for facts and not for main ideas. Listener is not aware of the function of each part of speech. Listener can state general topic but can not identify main ideas. They can identify a few elements of support but are not able to evaluate their quality. Listener could write or speak about the connections they perceived. Listener has difficulty comparing or contrasting speech content and delivery styles. • 1- Listener does not clearly distinguish or is unable to identify key areas of a speech or their functions. Listener is unaware of the structure the speaker is following and how it helps with the flow of the speech. They miss some of the key points and do not connect

	supporting material with proof or how it is used to make a point. Listener is unable to identify thesis or main ideas. Is unaware of types of support used. Listeners could write or speak about a few of the perceived connections. Listener has considerable difficulty comparing and contrasting speech content and delivery styles.
Sample (# of students and profile or description)	24 Communications 110 students One section of students
Summary of results	

Rating	Students	Percent
4	8	37
3	6	25
2	10	38
1	0	0
Total	24	100%

17-Evaluate information and ideas gathered through listening: 100% at 2+, 62% at 3+

Use of results to improve student learning	Strengthen the speaking assignment and create a more challenging listening task.

Form A: Broad-Based Assessment of General Education

(to be filled out by the Faculty Group Leader)

Faculty Group: Communications

Instructional Degree Program: General Education   **Degree Level:** Certificate, Diploma, AA, AS, AAS

Semester Administered: ____Spring 2006_____   **Date Submitted:** July 6, 2006

Submitted by: Jaclyn Allen

Intended Outcome (title and #):   Evaluate what is read **(11)** • Evaluate the effectiveness and validity of an author's style, organization, support, evidence, and presentation • Demonstrate awareness of the connection that style and language have to an author's topic, audience, and purpose
Measure used	Students evaluated a piece of writing on the effectiveness of the author's style, organization, support, evidence, and presentation.

Assessment method (criteria including PTA)	• 4- Evaluates the logic and accuracy of evidence in support of the writer's main idea. Identifies and explains language devices and language adaptations in written materials, as they contribute to the writer's meaning.
	• 3- Identifies the logic and accuracy of evidence in support of the writer's main idea. Identifies language devices and language adaptations in written materials, as they contribute to the writer's meaning.
	• 2- Sometimes identifies general support sentences. Can sometimes identify language devices and language adaptations in written materials when directed that these are in the material.
	• 1- Has difficulty in identifying general support sentences. Does not understand language devices and language adaptations in written materials.
Sample (# of students and profile or description)	253 English 120 students 43 English 125 students • Students are 1-3 semesters away from graduation.
Summary of results	Rating / Students / Percent table below
Use of results to improve student learning	More emphasis on logic and argument and evaluative reasoning in classes needs to occur.

Rating	Students	Percent
4	108	36
3	91	31
2	77	26
1	20	7
Total	296	100%

11-Evaluate what is read: 93% at 2+, 67% at 3+

Form A: Broad-Based Assessment of General Education

(to be filled out by the Faculty Group Leader)

Faculty Group: Communications

Instructional Degree Program: General Education Diploma, AA, AS, AAS

Degree Level: Certificate,

Semester Administered: ____Fall 2005_____

Date Submitted: July 6, 2006

Submitted by: Jaclyn Allen

Intended Outcome (title and #): Understand and communicate quantitative information effectively **(7)** • Organize and analyze data to make inferences about real world situations • Clearly communicate quantitative relationships and solutions	
Measure used	Students were given two tables of information, gathered from BSC students regarding their opinion on the types of course where they were given the opportunity to deal with or express their values or the values of others. Our students were asked to summarize the information in each of the tables. The response needed to include the appropriate limitations or restrictions to the data. Also students needed to communication the point of the question.

Assessment method (criteria including PTA)	4	3	2	1
	The student response represents an accurate and organized analysis of the data, shows a complete understanding of the problem, thoroughly addresses all points relevant to the solution, and includes accurate and reasonable inferences regarding the given situation. The response may contain insignificant errors that do not interfere with the completeness or reasonableness of the response.	The student response contains minor flaws. Although the student shows an understanding of the problem, there are minor errors in the organization and/or analysis of the data and may contain one unrealistic inference regarding the given situation.	The student response reflects significant errors in organization and analysis of the data, an incomplete understanding of the problem, and contains more than one erroneous inference regarding the given situation.	The student response shows little effort towards organization and analysis of the data and the solution contains some combination of the following flaws: little understanding of the problem, failure to address most aspects of the problem, and lacks reasonable inferences regarding the given situation.

Sample (# of students and profile or description)	125 English 110 students • 77 students had taken math 103 or Math 210 • 48 students had taken a math higher than Math 103 or Math 210
Summary of results	

Rating	Math 103 or 210	Higher Math	# of Students	Percent
4	1	0	1	0.8%
3	11	9	20	16.0%

	2	37	26	63	50.4%
	1	28	13	41	32.8%
	Total	77	48	125	100%
	7-Understand and communicate quantitative information effectively: 67.2% at 2+ and 16.8 at 3+				
Use of results to improve student learning	More work on writing about quantitative information is needed.				

Assessment Report – Instructional Programs

BSC 05-06 ASSESSMENT

AUTO COLLISION TECHNOLOGY

A direct measure was used within the class, and 12 of 12 students scored above a 75% on all competencies. An Employer Survey on competencies was again conducted, and as a result of that survey, again this year, contractors would like more emphasis placed in the areas of structural damage and mechanical/electrical components. A graduate survey was sent out to all trainees completing the program, but a very poor reply has shown a need to approach the graduates in a different method. A new graduate survey will be needed. The Employer Survey showed that the contractors surveyed felt that the students were being prepared for employment, but we would like to rewrite this survey in the hopes of getting better results on employability skills. All graduating students have met and /or exceeded the standards set by NATEF. The assessment implementation plan, multiple measures matrix, composite curriculum matrix and Faculty Group Report were completed and are on file with the assessment team.

AUTOMOTIVE TECHNOLOGY

The End of Program tests are currently being given at the end of the school year which results in lower scores in the classes given at the beginning of the school year. They will be given at the end of each semester. There is concern about the number of Graduate surveys returned and the method that the data is given to the program. We will work with Career Services to improve the number and the data that is returned to the program. Finally, all areas in the program will update to the new NATEF standards for the 2006-2007 school year.

HVAC

The assessment program did not reveal any concerns at this time. The program is currently being reviewed by a committee of industry members, faculty, and administration members. After implementing these changes in 2007, the effects of these changes will be compared to the assessment data for this year.

Carpentry

The assessment plan results achieved the outcomes of the faculty member in the program. Scores in all areas were above those of last year. Again, the Graduate Surveys returned was lower than desired, but results indicated favorably on the program. The increases in all areas seem to indicate that the addition of the lab assistant has had a positive effect on the program and student learning.

Assessment Plan
Heating, Ventilation and Air Conditioning Program
Academic year – 2005-2006

Program Goals: Following completion of the Heating, Ventilation and Air Conditioning program, the student should have developed technological competence, problem solving skills, interpersonal skills, and communication skills, resulting in marketable qualities required for entry level employment and success in the HVACR field.

Program Objectives	Program Competencies	Assessment Methods	Courses Assessed In	Implementation Plan	Measure Results	Changes Planned	Follow-up Requirements
Upon completion of the HVAC program, students should be able to demonstrate technical knowledge in the competency areas.	Technical knowledge of HVACR Electrical Systems	Pretest/Posttest	HVAC 100, HVAC 114, HVAC 113,	The pretest will be given during the 1st week of the Fall semester. The post test will be given around the 6th week of the same semester	Students showed an average improvement of 61.4% on the post tests; 92% met NCCER requirements	none	none
	Technical knowledge of forced air heating systems	Pretest/posttest, Task lists, NCCER task lists, employer survey, graduate survey	HVAC 104, HVAC 114	The pretests will be given around the 6th week of the Fall Semester and the post test will be given during the 16th week.	Students showed an 82.8% improvement on post test	none	none
	Technical knowledge of air conditioning and refrigeration systems	EPA 608 certification, pretest/posttest, task lists, NCCER Task lists, employer surveys, graduate surveys	HVAC 103, HVAC 113, REFG 216	The EPA 608 certification exam has will be administered during the 34th and 35th program week.	80% of the students tested received at least one level of certification	none	none

Comment [AC1]: Enter the Full Program Name here.

Comment [AC2]: Enter the Academic Year here.

Comment [AC3]: Enter your program goals here. This should be a full paragraph describing your goal statement.

Comment [AC6]: Enter your assessment methods here. How do you plan on assessing the program competencies?

Comment [AC10]: What changes are planned to address your assessment measure results for the individual competencies?

Comment [AC11]: What follow-up or action is needed, after the changes have been made and implemented?

Comment [AC7]: Enter what course or courses you plan on assessing the program competencies?

Comment [AC5]: Enter your program competencies here. This is a base list of skills that is measurable and these are directly related to assessing your program objectives.

Comment [AC8]: Enter your Implementation plan here. When do you plan on assessing the individual program competencies. These can be a general time frame (eg. WEEK 1)

Comment [AC9]: Enter your results here. What did your assessment show for results for the individual competencies?

Comment [AC4]: Enter your program objectives. What are the base principles your students need to possess before they graduate?

	Technical knowledge of principles of sheet metal and sheet metal layout.	Pretest/Posttest, task lists, NCCER task lists, employer surveys, graduate surveys	SMTL 105, SMTL 106, SMTL 110, SMTL 111, SMTL 115, SMTL 116, SMTL 205, SMTL 210	Pretests given during the 4th week and the 18th week of program. Post tests given during the Fall and Spring Semester Finals Week.	100% of students have shown proficient knowledge in sheet metal and sheet metal layout techniques	None	None
	Technical knowledge of operation and maintenance of power tools and shop machinery.	Pretest/Postest, task lists, NCCER task lists, employer surveys, graduate surveys	SMTL 105, SMTL 106, SMTL 110, SMTL 111, SMTL 115, SMTL 116, SMTL 205, SMTL 210	Pretests given during the 1st week of each semester. Posttests given during the finals week of each semester. Employer surveys and graduate surveys conducted during the fall semester.	100% of students have shown proficiency in maintenance of tools and machinery	None	None
	Technical knowledge of hand tools.	Pretest/Postest, task lists, NCCER task lists, employer surveys, graduate surveys	SMTL 105, SMTL 106, SMTL 110, SMTL 111, SMTL 115, SMTL 116, SMTL 205, SMTL 210	Pretests given during the 1st week of each semester. Posttests given during the finals week of each semester. Employer surveys and graduate surveys conducted during the fall semester.	89% of students demonstrated technical knowledge of hand tools	none	none
Upon completion of the HVAC Program, students should be able to demonstrate the mechanical skills needed for entry level positions in the HVACR industry.	Mechanical skills in HVACR electrical systems	NCCER task lists, employer surveys, graduate surveys	HVAC 100, HVAC 113, HVAC 114, REFG 215, REFG 216	Pretests given during the 1st week of each semester. Posttests given during the finals week of each semester. Employer surveys and graduate surveys conducted during the fall semester.	Students showed an average improvement of 61.4% on the post tests; 92% met NCCER requirements	none	none
	Mechanical skills in forced air heating systems	Pretest/posttest, Task lists, NCCER task lists, employer survey, graduate survey	HVAC 104, HVAC 114	Pretests given during the 1st week of each semester. Posttests given during the finals week of each semester. Employer surveys and graduate surveys conducted during the fall semester.	92% met NCCER requirements; Students showed an average improvement of 82.8% on the post test	none	none
	Mechanical skills in air	Pretest/posttest,	HVAC 103, HVAC	Pretests given during the	Students	none	none

conditioning systems	Task lists, NCCER task lists, employer survey, graduate survey	113, REFG 215, REFG 216	1st week of each semester. Posttests given during the finals week of each semester. Employer surveys and graduate surveys conducted during the fall semester.	showed an average improvement of 61.8% on the post test; 92% met NCCER requirements		
Mechanical skills in principles of sheet metal processes	Pretest/posttest, Task lists, NCCER task lists, employer survey, graduate survey	SMTL 105, SMTL 106, SMTL 110, SMTL 111, SMTL 115, SMTL 116, SMTL 205, SMTL 210	Pretests given during the 1st week of each semester. Posttests given during the finals week of each semester. Employer surveys and graduate surveys conducted during the fall semester.	87% of students passed satisfactory post tests involved with mechanical skills.	none	none
Mechanical skills in operation and maintenance of power tools and shop machinery	Pretest/posttest, Task lists, NCCER task lists, employer survey, graduate survey	SMTL 105, SMTL 106, SMTL 110, SMTL 111, SMTL 115, SMTL 116, SMTL 205, SMTL 210	Pretests given during the 1st week of each semester. Posttests given during the finals week of each semester. Employer surveys and graduate surveys conducted during the fall semester.	100% of students are proficient in operation and maintenance of tools and shop machinery.	none	none
Mechanical skills with hand tools	Pretest/posttest, Task lists, NCCER task lists, employer survey, graduate survey	SMTL 105, SMTL 106, SMTL 110, SMTL 111, SMTL 115, SMTL 116, SMTL 205, SMTL 210	Pretests given during the 1st week of each semester. Posttests given during the finals week of each semester. Employer surveys and graduate surveys conducted during the fall semester.	89% of students passed satisfactory post test involved with mechanical skills and hand tools	none	none

Implementation Plan Submitted Date: October 1, 2005
Person responsible for program assessment: Arlan Okerson

Please submit this matrix to your group leader upon completion of the Implementation Plan. This form will be resubmitted upon completion of program assessment no later that two weeks after completion of the academic program year.

Comment [AC12]: Place the date that you will submit the Implementation plan to your program lead person.

Comment [AC13]: Who is in charge of assessment for your program area?

Assessment Plan
Automotive Technology
Academic year – 2005-2006

Program Goals: Upon completion of the program the student should have entry level technical competence, problem solving skills, and interpersonal skills to succeed in the automotive industry.

Program Objectives	Program Competencies	Assessment Methods	Courses Assessed In	Implementation Plan	Measure Results	Changes Planned	Follow-up Requirement
I. Students should have the technical knowledge for an entry level position in the automotive field.	A. Electrical Systems	Pre and post tests Automotive Service Excellence (ASE) End of Program Test	Electronics AUTO 161 Starting & Charging systems AUTO 163 Instruments & Accessory Systems AUTO 164	Pre-test given the first day week of class. Post test given at course completion. Given to freshmen in the spring semester.	BSC Pre 40.2% Post 76.7% 36.5% gain MRCC Pre 38.4% Post- 68.7% 30.3%gain BSC (100%) 7 of 7 students passed with an average score of 72% MRCC (91%) 10 of 11 students passed with a 64% average score.	Final test needs to be revised to reflect changes in the course content. End of program tests should be given at the end of each semester for more accurate assessment.	Verify tests are given the end of each semester. Web base instead of paper penc
I. Students should have the technical knowledge for an entry level position in the automotive field.	B. Brake Systems	Pre and post tests Automotive Service Excellence (ASE) End of Program Test	Brake Fundaments AUTO 151 Brake Repair AUTO 152	Pre-test given the first day week of class. Post test given at course completion. Given to freshmen in the spring semester.	BSC Pre 48% Post 90.3% 42.3% gain MRCC Pre 48% Post 90.3% 42.3%gain BSC (100%) 7 of 7 students passed with an average score of 78% MRCC (100%) 1 of 1 students passed with a 69% average score.	End of program tests should be given at the end of each semester for more accurate assessment.	Verify tests are given the end of each semester. Web base instead of paper penc

I. Students should have the technical knowledge for an entry level position in the automotive field.	C. Suspension and Steering	Pre and post tests Automotive Service Excellence (ASE) End of Program Test	Suspension & Steering Systems AUTO 148	Pre-test given the first day week of class. Post test given at course completion. Given to freshmen in the spring semester.	BSC Pre 42% Post 80.8% 38.8% gain BSC (100%) 7 of 7 students passed with an average score of 72%	End of program tests should be given at the end of each semester for more accurate assessment.	Verify tests are given the end of each semester. Web base instead of paper penc
I. Students should have the technical knowledge for an entry level position in the automotive field.	D. Automatic Transmissions/ Transaxles	Pre and post tests Automotive Service Excellence (ASE) End of Program Test	Automatic Transmissions & Transaxles AUTO 128	Pre-test given the first day week of class. Post test given at course completion. Given to freshmen in the spring semester.	BSC Pre 35.9% Post 81% 45.1% gain BSC (100%) 7 of 7 students passed with an average score of 69%	End of program tests should be given at the end of each semester for more accurate assessment.	Verify tests are given the end of each semester. Web base instead of paper penc
I. Students should have the technical knowledge for an entry level position in the automotive field.	E. Manual Drive Train and Axles	Pre and post tests Automotive Service Excellence (ASE) End of Program Test	Manual Transmissions & Transaxles AUTO 128 Clutches, Drive Trains & Axles AUTO 131	Pre-test given the first day week of class. Post test given at course completion. Given to freshmen in the spring semester.	BSC Pre 35.7% Post 73.9% 38.1% gain BSC (100%) 7 of 7 students passed with an average score of 69%	End of program tests should be given at the end of each semester for more accurate assessment.	Verify tests are given the end of each semester. Web base instead of paper penc
I. Students should have the technical knowledge for an entry level position in the automotive field.	F. Heating and Air Conditioning	Pre and post tests Automotive Service Excellence (ASE) End of Program Test	Air Conditioning-Heating Theory & Operation AUTO 271 Air Conditioning-Heating Diagnosis & Service AUTO 272	Pre-test given the first day week of class. Post test given at course completion. Given to freshmen in the spring semester.	BSC Pre 33.3% Post 87.4% 54.1% gain MRCC Pre 29% Post 67% 38% gain BSC (100%) 7 of 7 students passed with an average score of 71% MRCC none taken	End of program tests should be given at the end of each semester for more accurate assessment.	Verify tests are given the end of each semester. Web base instead of paper penc

I. Students should have the technical knowledge for an entry level position in the automotive field.	G. Engine Repair	Pre and post tests Automotive Service Excellence (ASE) End of Program Test	Engine Fundamentals AUTO 211 Engine Repair AUTO 212	Pre-test given the first day week of class. Post test given at course completion. Given to freshmen in the spring semester.	BSC Pre 32.7% Post 87.9% 55.1% gain MRCC Pre 53% Post 82% 29%gain BSC (100%) 7 of 7 students passed with an average score of 83% MRCC none taken	End of program tests should be given at the end of each semester for more accurate assessment.	Verify tests are given the end of each semester. Web base instead of paper penc
I. Students should have the technical knowledge for an entry level position in the automotive field.	H. Engine Performance	Pre and post tests Automotive Service Excellence (ASE) End of Program Test	Ignition Systems AUTO 282 Fuel Delivery Systems AUTO 283 Emission Control Systems AUTO 284	Pre-test given the first day week of class. Post test given at course completion. Given to freshmen in the spring semester.	BSC Pre 30.1% Post 81.7% 51.6% gain BSC (100%) 7 of 7 students passed with an average score of 75%	End of program tests should be given at the end of each semester for more accurate assessment.	Verify tests are given the end of each semester. Web base instead of paper penc
II. Students should have the performance skills needed for an entry level position in the automotive field	A. Electrical Systems	National Automotive Teachers Education Foundation (NATEF) Standards Completer Survey Employer Survey	Electronics AUTO 161 Starting & Charging systems AUTO 163 Instruments & Accessory Systems AUTO 164	Each student's progress will be tracked during the spring semester. The Completer survey will be compiled during the fall semester each year. *The employer survey will be compiled during the spring semester.	P1 P2 P3 BSC 99% 86% 60% MRCC 100% 94% 55% 7 responses, ratings are: 6 more than adequate 1 adequate 0 less than adequate 4 of 5 Employers say the program prepared students in this area adequately or greater.	Task list will be updates to the new NATEF standards.	

II. Students should have the performance skills needed for an entry level position in the automotive field	B. Brake Systems	National Automotive Teachers Education Foundation (NATEF) Standards Completer Survey Employer Survey	Brake Fundaments AUTO 151 Brake Repair AUTO 152	Each student's progress will be tracked during the spring semester. The Completer survey will be compiled during the fall semester each year. *The employer survey will be compiled during the spring semester.	P1 P2 P3 BSC 97% 97% 71% MRCC 100% 92% 54% 7 responses, ratings are: 4 more than adequate 3 adequate 0 less than adequate 6 of 6 Employers say the program prepared students in this area adequately or greater.	Task list will be updates to the new NATEF standards	
II. Students should have the performance skills needed for an entry level position in the automotive field	C. Suspension and Steering	National Automotive Teachers Education Foundation (NATEF) Standards Completer Survey Employer Survey	Suspension & Steering Systems AUTO 148	Each student's progress will be tracked during the spring semester. The Completer survey will be compiled during the fall semester each year. *The employer survey will be compiled during the spring semester.	P1 P2 P3 BSC 99% 89% 60% 7 responses, ratings are: 4 more than adequate 3 adequate 0 less than adequate 6 of 6 Employers say the program prepared students in this area adequately or greater.		
II. Students should have the performance skills needed for an entry level position in the automotive field	D. Automatic Transmissions/ Transaxles	National Automotive Teachers Education Foundation (NATEF) Standards Completer Survey Employer Survey	Automatic Transmissions & Transaxles AUTO 128	Each student's progress will be tracked during the spring semester. The Completer survey will be compiled during the fall semester each year. *The employer survey will be compiled during the spring semester.	P1 P2 P3 BSC 98% 99% 100% 7 responses, ratings are: 2 more than adequate 5 adequate 0 less than adequate 4 of 5 Employers say the program prepared students in this area adequately or greater.		

II. Students should have the performance skills needed for an entry level position in the automotive field	E. Manual Drive Train and Axles	National Automotive Teachers Education Foundation (NATEF) Standards Completer Survey Employer Survey	Manual Transmissions & Transaxles AUTO 128 Clutches, Drive Trains & Axles AUTO 131	Each student's progress will be tracked during the spring semester. The Completer survey will be compiled during the fall semester each year. *The employer survey will be compiled during the spring semester.	P1 P2 P3 BSC 99% 93% 79% 7 responses, ratings are: 3 more than adequate 4 adequate 0 less than adequate 5 of 5 Employers say the program prepared students in this area adequately or greater.		
II. Students should have the performance skills needed for an entry level position in the automotive field	F. Heating and Air Conditioning	National Automotive Teachers Education Foundation (NATEF) Standards Completer Survey Employer Survey	Air Conditioning-Heating Theory & Operation AUTO 271 Air Conditioning-Heating Diagnosis & Service AUTO 272	Each student's progress will be tracked during the spring semester. The Completer survey will be compiled during the fall semester each year. *The employer survey will be compiled during the spring semester.	P1 P2 P3 BSC 99% 100% 74% MRCC 96% 100% 60% 5 responses, ratings are: 5 more than adequate 0 adequate 0 less than adequate 4 of 5 Employers say the program prepared students in this area adequately or greater.	Completer survey is too limited in responses to be statically valid.	Completer survey process needs to be reviewed and improve This involves Career Services which implements the proce
II. Students should have the performance skills needed for an entry level position in the automotive field	G. Engine Repair	National Automotive Teachers Education Foundation (NATEF) Standards Completer Survey Employer Survey	Engine Fundamentals AUTO 211 Engine Repair AUTO 212	Each student's progress will be tracked during the spring semester. The Completer survey will be compiled during the fall semester each year. *The employer survey will be compiled during the spring semester.	P1 P2 P3 BSC 100% 94% 82% MRCC 100% 85% 100% 4 responses, ratings are: 2 more than adequate 2 adequate 0 less than adequate 5 of 5 Employers say the program prepared students in this area adequately or greater.	Completer survey is too limited in responses to be statically valid.	Completer survey process needs to be reviewed and improve This involves Career Services which implements the proce

II. Students should have the performance skills needed for an entry level position in the automotive field	H. Engine Performance	National Automotive Teachers Education Foundation (NATEF) Standards Completer Survey Employer Survey	Ignition Systems AUTO 282 Fuel Delivery Systems AUTO 283 Emission Control Systems AUTO 284	Each student's progress will be tracked during the spring semester. The Completer survey will be compiled during the fall semester each year. *The employer survey will be compiled during the spring semester.	P1 P2 P3 BSC 99% 99% 73% 3 responses, ratings are: 1 more than adequate 2 adequate 0 less than adequate 4 of 5 Employers say the program prepared students in this area adequately or greater.	Completer survey is too limited in responses to be statically valid.	Completer survey process needs to be reviewed and improve This involves Career Services which implements the proce

Implementation Plan Submitted Date: 9-30-05   *Employer Survey will be sent out every
second year as per advisory committee recommendation.

Person responsible for program assessment: Dean D. Gunsch

103

Assessment Plan
Residential Carpentry
Academic year – 2005-06

Program Goals: Upon completion of the program the student should have the entry level technical knowledge, skills and problem solving skills to succed in the Residential Construction Industry.

Program Objectives	Program Competencies	Assessment Methods	Courses Assessed In	Implementation Plan	Measure Results	Changes Planned	Follow-up Requirements
Upon completion of the Carpentry Program, students should be able to demonstrate technical knowledge in the competency areas.							
	Technical Knowledge of Rough Framing	Post Test Employer Survey	Carp 120,135,125	post test upon completion of framing units. employer survey after 6 months of employment	94% passed 100% Of employers satisfied.	No change planned	None
	Technical Knowledge of Exterior Finish	Post Test Employer Survey	Carp 130	post test upon completion of exterior finish units. employer survey after 6 months of employment	89% pased 100% Of employers satisfied	No change planned	None
	Technical Knowledge of Interior Finish	Post Test Employer Survey	Carp 140, 145	post test upon completion of interior finish units. employer survey after 6 months of employment	93% passed 100% of employers satisfied	No change planned	None
	Technical Knowledge of Cabinetry	Post Test Employer Survey	Carp 150	post test upon completion of cabinetry units. employer survey after 6 months of employment	94% passed 100% of employers satisfied	No change planned	None
Upon Completion							

of the Carpentry Program, students should be able to demonstrate technical skills in the competency areas.							
	Safe and proper use of hand and power tools	NCCER Performance test Employer Survey Graduate Survey	Carp 120, 125, 150	post test upon completion of tool use units. employer survey after 6 months of employment	100% passed 100% employer satisfied 100% graduate satisfied	No change planned	None
	Proper framing layout techniques	NCCER Performance test Employer Survey Graduate Survey	Carp 120,125	post test upon completion of framing layout units. employer survey after 6 months of employment	89% passed 100% employer satisfied 94% graduate satisfied	No change planned	None
	Proper exterior finish techniques	NCCER Performance test Employer Survey Graduate Survey	Carp 130	post test upon completion of exterior finish units. employer survey after 6 months of employment	89% passed 100% employer satisfied 94% graduate satisfied	No change planned	None
	Proper trim carpentry techniques	NCCER Performance test Employer Survey Graduate Survey	Carp140,145	post test upon completion of interior finish units. employer survey after 6 months of employment	93% passed 100% employer satisfied 93% graduate satisfied	No change planned	None
	Proper cabinetry techniques	NCCER Performance test Employer Survey Graduate Survey	Carp 150	post test upon completion of cabinetry units. employer survey after 6 months of employment	93% passed 100% employer satisfied 93% graduate satisfied	No change planned	None

Implementation Plan Submitted Date:

Person responsible for program assessment:

Please submit this matrix to your group leader upon completion of the Implementation Plan. This form will be resubmitted upon completion of program assessment no later that two weeks after completion of the academic program year.

Comment [AC25]: Place the date that you will submit the Implementation plan to your program lead person.

Comment [AC26]: Who is in charge of assessment for your program area?

Assessment Plan
Auto-collision
Academic year – 05-06

Program Goals: College Mission and Goals statements on teaching and learning, condensed: Bismarck State College is commitied to maintaining a proactive learning environment. By encouraging flexibility, innovation, and student success, we make it possible for people to identify and achieve their goals. The College places primary empasis on high quality.student -oriented teachng and recognizes the importance of promoting cultural awareness. The College goals for teaching and learning are to encourage student-centered learning; to provide academic support services for student success, to document student academic achievement for accountability reporting; to create a learning enviroment characterized by collaboration, fair-mindedness, and mutual respect.

Auto Collision Technology Program Goal: Upon completion of this program the student should have entry level technical competence, problem solving skills and interpersonal skills to succeed in the automotive industry

Program Objectives	Program Competencies	Assessment Methods	Courses Assessed In	Implementation Plan	Measure Results	Changes Planned	Follow-up Requirements
1. Auto Collision repair, students should be able to demonstrate technical knowledge in these area , .	A Non Structural-Analysis an d damage repair B Structural- Analysis and damage repair	Post test Employer Survey Competency, Graduate Survey NATEF Standards Post test Employer Survey Competency, Graduate Survey	Competencies A Non Structural-Analysis an d damage repair B Structural-Analysis and damage repair	Test given during the semester Send Survey to Employers after completion of program, Due Dec 1 Send students survey after graduation. Due Dec 1 Complete doc. 70-1000c during the semester Test given during the semester Send Survey to	12 students passed with 2.0 or greater grade	none	We will follow the Natef guide lines

	C Mechanical and Electrical components	NATEF Standards Post test Employer Survey Competency, Graduate Survey	C Mechanical and Electrical components	Employers after completion of program. Due Dec 1 Send students survey after graduation. Due Dec 1 Complete doc. 70-1000c during the semester Test given during the semester			
	D Plastic and Adhesives	NATEF Standards Post test Employer Survey Competency, Graduate Survey	D Plastic and Adhesives	Send Survey to Employers after completion of program. Due Dec 1 Send students survey after graduation. Due Dec 1 Complete doc. 70-1000c during the semester Test given during the semester			
	E Painting and Adhesives	NATEF Standards Post test Employer Survey Competency, Graduate Survey NATEF Standards	E Painting and Adhesives	Send Survey to Employers after completion of program. Due Dec 1 Send students survey after graduation. Due Dec 1 Complete doc. 70-1000c during the semester Test given during the semester			
Employability Skill	Personal Characteristics	Employability		Send Survey to Employers after			

	Job Seeking Techniques	portion of Doc. 70-1000c Employer Survey	Personal Characteristics	completion of program. Due Dec 1			
				Send students survey after graduation. Due Dec 1			
		Employability portion of Doc. 70-1000c Employer Survey	Job Seeking Techniques				
	Entrepreneurship			Complete doc. 70-1000c during the semester			
		Employability portion of Doc. 70-1000c Employer Survey	Entrepreneurship				
				Doc. completed at the end of the program			
				Doc. completed at the end of the program			
				Doc. completed at the end of the program			

Comment [AC30]: Enter your program objectives. What are the base principles your students need to possess before they graduate?

Comment [AC31]: Enter your program competencies here. This is a base list of skills that is measurable and these are directly related to assessing your program objectives.

Comment [AC33]: Enter the course or courses you plan on assessing the program competencies in?

Comment [AC32]: Enter your assessment methods here. How do you plan on assessing the program competencies?

Implementation Plan Submitted Date: 2/18/07
Person responsible for program assessment: Richard Malsam

Please submit this matrix to your group leader upon completion of the Implementation Plan. This form will be resubmitted upon completion of program assessment no later that two weeks after completion of the academic program year.

2005-06 Annual Assessment Report for Occupational Instructional Programs

Occupational Instructional Programs assessment at Bismarck State College is an ongoing process involving students, instructors and members from industry. All of the programs utilize an advisory committee made up of industry leaders from the surrounding community. These individuals take on the responsibility of developing or refining program curriculum and directional focus for each of the programs offered at Bismarck State College. Along with their focus and guidance, program assessment is also used to identify areas of concern and accomplishments of student learning.

The occupational instructional programs have a developed a process with forms that help them assess student learning. In addition, many programs have specialized accreditation and certifications that document evidence of learning.

The following is a summary report of the compiled of assessment results and recommendations for improvement prepared for each program for this past school year.

Instructional Programs with CIP Codes 15 & 50
Submitted By: Holly Burch and David Sagsveen; February, 2007.

This section includes the following instructional programs:
Commercial Art
Electronics/Telecommunications Technology
Engineering Technician
Geographic Information Systems Technician
Mechanical Maintenance
Power Plant Technology
Process Plant Technology
Online Electric Power Technology
Online Electrical Transmission Systems Technology
Online Nuclear Power Technology
Online Power Technology Program
Online Process Technology Program

Commercial Art

The program used a Juried Portfolio Review for their direct measure. Included for the first time was a mock interview scenario where each student presented his/her portfolio to the instructor and three industry professionals. Students were given verbal feedback from our industry professionals and the instructor provided written evaluation. Each portfolio was also reviewed by their peersSelect members of industry, the Commercial Art Advisory Committee, student peers, and faculty were used for the review. 88% of the reviews resulted in a favorable rating. Plans are to continue with the mock interview, to improve the judging

criteria and the assessment vehicle, and to keep the curriculum current with industry as well as improve direct measures of specific classes. We've also changed the curriculum to include Typography, a topic of continual mention during the portfolio reviews by the industry professionals. The results of this curriculum change will not be measured until 2007-2008. The assessment plan, multiple measures matrix, composite curriculum matrix and Faculty Group Report were completed and are on file with the assessment coordinator.

Electronics/Telecommunications Technology

The results of the graduate survey, employer survey, pre-test/post-test and PTAs were all positive, indicating no major changes are necessary. Curriculum updates will continue as industry changes dictate. This matrix shows the composite results, as well as change actions taken or recommended at the faculty group level and passed along to department chairs and the Assessment Committee.

ELECTRONICS/ TELECOMMUNICATIONS TECHNOLOGY Competencies/Objectives	Assessment methods	Results of this year's measures	Changes planned to improve learning
1. Technical knowledge			
A. Circuit Calculations	1. Graduate survey.	All of the responses were adequate or above.	No action required
	2. Pre-Test/Post-Test	100% of the students showed improvement	No action required.
B. Knowledge of Circuit Operation	1. Employer survey.	All of the responses were adequate or above.	No action required
	2. Graduate survey.	All of the responses were adequate or above.	No action required
	3. Pre-Test/Post-Test	100% of the students showed improvement	No action required
2. Technical Skills			
A. Use of Test Equipment	1. Employer survey.	All of the responses were adequate or above.	No action required
	2. Graduate survey.	All of the responses were adequate or above.	No action required
	3. In-class project. PTA scale.	97.9 % scored above average to outstanding.	No action required
B. Soldering	1. Employer survey.	All of the responses were adequate or above.	No action required
	2. Graduate survey.	All of the responses were	No action required

	3. In-class project. PTA scale.		95.3 % scored above average to outstanding.	No action required
C. Interpretation of Schematics	1. Employer survey.		All of the responses were adequate or above.	No action required
	2. Graduate survey.		All of the responses were adequate or above.	No action required
	3. Pre-Test/Post-Test		100% of the students showed improvement	No action required

Engineering Technician

The Engineering Technician program measures nine competencies through a variety of methods and through a variety of courses.

Assessment Results 2005-2006

Program Competencies	Assessment Methods	Courses	Measured Results	Changes Planned
1. Graphic techniques used to produce engineering documents	Student Portfolio	CAD 211	Fall: Avg was 86.9 out of 100. Spring: Avg was 89.8 out of 100.	Improved communication of what is required and expected.
		CAD 212	Fall: Avg was 98 out of 100	Same as above
2. Methods and materials used to conduct standardized field and laboratory tests on common building materials	Graded lab procedure in each: Soil, Concrete, Aggregate Graded lab reports	CT 251L	No measured results in lab due to time and facility restraints	Change assessment method to lecture instead of lab
3. The use of traditional and modern surveying equipment and methods for land measurements and construction layout	Horizontal curve layout Topographical survey	ENGR 204L ENGR 205L	100% scored 3 or better out of 4; 45% scored 4 out of 4 100% scored 3 or better out of 4; 75% scored 4 out of 4	None None
4. Analysis procedures used to determine forces and stresses of elementary structural systems	Truss analysis problem	CT 250	100% scored 2 or better out of 4; 33% scored 4 out of 4	Expand the section and time involved prior to assessing
5. Analysis procedures used to design simple beams and columns	Beam analysis and design problem Column analysis and design problem	CT 250	100% scored 4 out of 4	None
6. The terms and bidding methods used in contracts and specifications on engineering projects	Pre- and Post- Test	CT 252	Pre- test avg. was 2.33 out of 10 Post- test avg. was 5.67 out of 10	Align course material with test to ensure that test is measuring actual course content. Also,

Assessment Results 2005-2006

Program Competencies	Assessment Methods	Courses	Measured Results	Changes Planned
				new textbook
7. Procedures used to estimate material quantities and prepare bid tabulations on engineering projects	Estimating problem	CT 252	Avg. was 49 out of 50	None
8. The use of computer-aided drafting and surveying software as tools to solve technical problems	CAD Statics problem	CT 250	100% scored 3 or better out of 4; 67% scored 4 out of 4	None
	Total station coordinate geometry problem	ENGR 205L	No measurable results due to time	Different software with a shorter learning curve
9. Communication skills necessary to prepare and present lab and field results	Lab reports, including oral presentation and discussion of results to instructor and class	CT 251	Avg. of 95.3%	None

Most changes required are minimal, as listed in the right column above. Biggest change will have to be method of measurement in CT 251L – lab time and facility restraints are making it difficult to measure individual performance in lab.

Geographic Information Systems Technician

BSC initiated the Geographic Information Systems Technician program during the 2005 to 2006 school year. Full implementation of the program began at the start of the 2006 to 2007 school year, and assessment will begin in the 2007 to 2008 school year.

Mechanical Maintenance

BSC initiated the Industrial Maintenance program during the 2005 to 2006 school year. During the fall of 2006, the name for this program was officially changed to Mechanical Maintenance. Full implementation of program assessment will begin in the 2007 to 2008 school year.

Power Plant Technology

The Power Plant Technology Program Assessment is continuing to undergo changes. We are currently revamping the assessment and revisiting our Terminal and Enabling Objectives for each course. Until this process is complete, accurate assessment is proving difficult. We are developing our testing material as we revamp our objectives.

Process Plant Technology

The Process Plant Technology Program Assessment is continuing to undergo changes. We are currently revamping the assessment and revisiting our Terminal and Enabling Objectives for each

course. Until this process is complete, accurate assessment is proving difficult. We are developing our testing material as we revamp our objectives.

Online Electric Power Technology

There are no assessment results to report for the 2005-2006 school year. New assessment measures are being instituted for this program.

Online Electrical Transmission Systems Technology

There are no assessment results to report for the 2005-2006 school year. New assessment measures are being instituted for this program.

Online Nuclear Power Technology

There are no assessment results to report for the 2005-2006 school year. New assessment measures are being instituted for this program.

Online Power Technology Program

There are no assessment results to report for the 2005-2006 school year. Assessment criteria will be developed for this program during the 2006-2007 school year with assessment implementation to follow.

Online Process Technology Program

There are no assessment results to report for the 2005-2006 school year. Assessment criteria will be developed for this program during the 2006-2007 school year with assessment implementation to follow.

Learning Outcomes Assessment
Summary Report for 2005-2006
Bismarck State College
CIP Codes 1, 11, 13 & 53

Executive Summary

The CIP Codes of 01, 11, 13 and 52 consist of the following programs at Bismarck State College (BSC):

1. Agri-Business - Sales and Service

2. Agri-Business – Farm and Ranch Management

3. Farm Management Education

4. Web Page Development and Design

5. Computer Support Specialist

6. Paraeducaton

7. Management

8. Transportation and Supply Chain Management

9. Administrative Assistant – General

10. Administrative Assistant – Legal

11. Administrative Assistant – Medical

12. Computer Information Systems – Information Processing Specialist

13. Basic Hotel Administration

14. Basic Restaurant Management

15. Hotel Restaurant Management

During the 2005-2006 academic year, one new faculty member was added to the above programs. A listing of all full-time and adjunct faculty members in the programs in included in this report as "Appendix A". This was the second full year of the term for the assessment group leader of CIP codes 01, 11, 13 and 52.

In this report, three of the fifteen programs will not show any results for the academic year 2005-2006, since the programs now only report on program completers listed by the Registrar's Office. The Web Page Development and Design program showed only two completers. It was decided by the Faculty Group that two completers could be potentially identified and associated with a particular score; therefore, no report was generated for the program.

The **Agribusiness – Sales and Service program** saw significant increases in enrollment for the 2005-2006 school year. We made some program changes the previous year and sent monthly follow up letters to every student who had expressed interest in the program.

Students in the program are assessed in the four areas of emphasis: Agribusiness Management, Crop Science, Animal Science and Agricultural Mechanics.   Scores

increased from Pretest to Posttest in Agribusiness Management by 40%, Crop Science by 35%, Animal Science 30% and Agricultural Mechanics 42%.

Employers of graduates of the program were sent surveys to determine their satisfaction level of the students they hired. Each required class was assessed as to how it met job entry standards and 100% indicated that the student had entry level qualifications in the above mentioned areas of AVERAGE or higher.

The previous years graduates were surveyed and 100% responded indicating they felt their job readiness in the above areas was AVERAGE or above. Comments on the survey indicated that they were very satisfied with the quality of their education and felt they had developed the skills necessary to succeed in their chosen occupation.

In the **Agribusiness – Farm and Ranch Management program** we saw significant increases in enrollment for the 2005-2006 school year. We made some program changes the previous year and sent monthly follow up letters to every student who had expressed interest in the program.

Students in the program are assessed in the four areas of emphasis: Recordkeeping / Analysis, Crop Science, Animal Science, and Agricultural Mechanics.

All of the sophomore students completed a financial and enterprise analysis for their farm utilizing the information gathered from the records they kept on the farm the past year. Each student then developed a plan to facilitate their return to the farm and a transition plan for management and ownership. After graduation, a survey was sent to their parents and 100% indicated that the student had entry level qualifications in the above areas of AVERAGE or higher. The majority indicated SUPERIOR.

In the **Farm Management Education program** about 60% of the surveys sent out responded, a slight improvement over last year's response rate of 55% and 50% for 2004 and 33% in 2003. The survey indicates satisfaction on the part of the vast majority of all students enrolled in the Farm Management Education program at BSC. 99% of the responses indicated average, above average or excellent quality of education in the areas included in the survey with 4% indicating they either did not take part in that area at all or did not want to take part in that area of education. There continues to be a slightly higher percentage of students who indicate a desire to get more help in developing a marketing plan. I will continue to have marketing meetings with any students who wish to learn more about marketing. Some areas have been emphasized more during instructional visits due to the results of the survey. I also spent more time developing other methods to compare local numbers to the individual business in a self study unit which was sent out to all farms and I was available to discuss and cover individually if desired. 47% of the responses indicated superior, 40% above average, 7% average 1% below average and 4% not applicable.

In the **Web Page Development and Design program**, this year's graduates totaled 2 students, therefore, no results will be reported in the interest of the potential of identifying individual student scores.

In the **Computer Support Specialist program**, students performed well with the additional hands-on time given in each class. Student feedback indicates an appreciation of hands-on learning to supplement lecture material. For the upcoming graduates, a curriculum change will provide more in-depth material and increased lab time.

This year's **Paraeducation and Transportation and Supply Chain Management programs** saw no completers, therefore, no results will be reported for these two programs.

In the **Management program**, the pre-post test was conducted again with similar results from last year. The pretest students performed at an average 25% on the test. Those sophomores completing the program performed at an average of 57%. Those results indicate improvement again but not the degree of improvement that would be desirable. I do think the instrument should be reevaluated and revised. Many high performing students did not perform well on this test which to me indicates a need to reevaluate the instrument. We did not get the instrument revised this year but we are working on the revision for fall to be implemented in next year's assessment.

The results of the intern evaluation were very impressive. 100% of the students evaluated were given a superior or very good rating. The employers seem satisfied with the quality and performance of our students.

The graduate survey did not receive as high a response rate as desired however those that responded provided positive feedback about the program. In the area of technical training, the program received a 2 (met expectations completely). Quality of instruction was rated 2 (met expectations completely) as did the preparation for their current position. Recommendations suggested last year were to network more, which we have done in many classes that provides contacts for job prospects.

The **Administrative Assistant – General program** had 10 completers reported by the Registrar's Office during the time of September 2005 – August 2006. All of the completers achieved keyboarding skill, oral presentation competencies, portfolio competency, grammar competency, and the transcription competency.

This year's **Administrative Assistant – Legal program** saw no completers, therefore, no results will be reported for this program.

The **Administrative Assistant – Medical program** had 7 completers reported by the Registrar's Office during the time of September 2005 – August 2006. All of the completers achieved medical terminology and anatomical structures skills. 6 of the 7 completers achieved keyboarding, transcription skills, written communications and verbal communications.

This program has as its subject specialist an adjunct instructor (previously a full-time professor.

In the **Computer Information Systems – Information Processing Specialist** program, this year's graduates totaled 8 students, as well as 1 student completing the certificate program, a decrease of 7 students over the previous year.

A significant change in student count was the loss of students enrolled in what was formerly the Web option, which is now a separate degree program.

A form has been created for all students to prepare to allow for tracking of students throughout their college degree. This form is located on the G: drive.

The database has been moved to a top priority level for completion. We are now able to receive a report of all enrolled students within the program from the Student Records office, which will greatly assist this endeavor.

The **Hotel-Restaurant Management Program** changed names in 2005 and became the **Hospitality Management Program**. The change in name reflects the University system change at NDSU and since we have an articulation agreement with the NDSU program it was logical to keep consistency.

The **Restaurant program** saw an increase in student numbers for 05-06 as the result of a marketing campaign headed up by Margie Enerson. 107 certification tests were administered with 100 successful completions at the rate of 94%. Our Food Sanitation class switched to a CD ROM driven curriculum called the TAPS series certification.

The **Hotel program** finished out the year with 21 certification tests administered and 19 successful completions at a rate of 91%. Our new smart classroom was a welcome addition to this program. The Hotel industry has changed tremendously with the advent of online reservations and advertising and marketing. Students used this new capability to enhance their project presentations.

Internships are a requirement in the Hospitality Management Program with the current evaluation process being very encouraging. 28 employer assessments were received with 27 overall ratings at very good to excellent. One student received an average rating.

Matrix used in CIP Codes 01, 11, 13 and 52 Faculty Groups

This year, the Faculty Group members submitted the following document for the assessment process:

1.   Program Assessment Matrix

Programs Assessment Matrix

All Program Assessment Matrix forms for the 2005-2006 academic year are on file in the Assessment Coordinator's office and in the group leader's office.

Summary of Program Assessment for 2004-2005

Agri-Business – Sales and Service

The Agribusiness – Sales and Service Program saw significant increases in enrollment for the 2005-2006 school year. We made some program changes the previous year and sent monthly follow up letters to every student who had expressed interest in the program.

Students in the program are assessed in the four areas of emphasis:
Agribusiness Management
Crop Science
Animal Science
Agricultural Mechanics

Employers of graduates of the program were sent surveys to determine their satisfaction level of the students they hired. Each required class was assessed as to how it met job entry standards and 100% indicated that the student had entry level qualifications in the above mentioned areas of AVERAGE or higher.

The previous years graduates were surveyed and 100% responded indicating they felt their job readiness in the above areas was AVERAGE or above. Comments on the survey indicated that they were very satisfied with the quality of their education and felt they had developed the skills necessary to succeed in their chosen occupation.

All of the freshman students enrolled in the Sales and Service program completed an internship in which the worked a minimum of 400 hours in a business related to their area of study. During the internship, each student is required to submit weekly reports on hours worked, wages, things they have learned and problem they experienced. This project begins the first part of April and runs thru the end of summer break.

All of the employers of students enrolled in this program expressed job readiness satisfaction levels of AVERAGE or above when they entered the internship. Employers are very supportive of the visits as it gives them a chance to provide input into what we teach and it keeps us as instructor current on industry trends.

Pretest – Posttest scores for the individual areas are as follows:

	Pretest	Posttest
Agribusiness	37%	77%
Crop Science	41%	76%
Animal Science	48%	78%
Agriculture Mechanics	37%	79%

We are hosting a Focus group on November 7, 2006 to help us develop a marking plan for traditional students, online students. The group will also look at image or BSC and the Agribusiness program.

To better meet students diverse needs we will be offering a crops and livestock emphasis option to the Sales and Service students. This will allow for more flexibility in class choices.

Our students are very involved in local, state and national organizations dealing with agriculture. We had numerous national winners last year. We are also competing in the BOSS Marketplan Competition for business plans and been very successful, winning the competition at Mary College, DSU and two teams placing in the top 8 at Fargo.

We will be developing several online classes next year.

Agri-Business – Farm and Ranch Management

The Agribusiness – Farm and Ranch Management Program saw significant increases in enrollment for the 2005-2006 school year. We made some program changes the previous year and sent monthly follow up letters to every student who had expressed interest in the program.

Students in the program are assessed in the four areas of emphasis:
       Recordkeeping / Analysis
       Crop Science
       Animal Science
       Agricultural Mechanics

All of the sophomore students completed a financial and enterprise analysis for their farm utilizing the information gathered from the records they kept on the farm the past year. Each student then developed a plan to facilitate their return to the farm and a transition plan for management and ownership. After graduation, a survey was sent to their parents and 100% indicated that the student had entry level qualifications in the above areas of AVERAGE or higher. The majority indicated SUPERIOR.

Farm Management Education

About 60% of the surveys sent out responded, a slight improvement over last year's response rate of 55% and 50% for 2004 and 33% in 2003. The survey indicates satisfaction on the part of the vast majority of all students enrolled in the Farm Management Education program at BSC. 99% of the responses indicated average, above average or excellent quality of education in the areas included in the survey with 4% indicating they either did not take part in that area at all or did not want to take part in that area of education. There continues to be a slightly higher percentage of students who indicate a desire to get more help in developing a marketing plan. I will continue to have marketing meetings with any students who

wish to learn more about marketing. Many of the students who feel the least adequate in the marketing area do not attend the meetings to learn more. Some areas have been emphasized more during instructional visits due to the results of the survey. I also spent more time developing other methods to compare local numbers to the individual business in a self study unit which was sent out to all farms and I was available to discuss and cover individually if desired. 47% of the responses indicated superior, 40% above average, 7% average 1% below average and 4% not applicable.

Web Page Development and Design

This year's graduates totaled 2 students, therefore, no results will be reported in the interest of the potential of identifying individual student scores.

Changes Made During 2005-2006 Academic Year

The following changes were made during the 2005 - 2006 academic year in the Web Page Development and Design program:

1.   Added Macromedia Fireworks software to course CIS230 Electronic Publishing to provide students with more design exposure.

Changes Planned for Web Page Development and Design

The following change is planned for the 2006 - 2007 academic year, according to the Faculty Assessment Group Report:

1   Replaced Macromedia Fireworks software in CIS230 Electronic Publishing with Cascading Style Sheets (CSS) – advisory board recommendation.

2   Recording CIW exam scores for grade with the expectation that students will take it more seriously.

3   Updated CIS253 language content from Java Server Pages to PHP – advisory board recommendationl

Courses required for the Web Page Development and Design program are not exclusive to the program; the courses are also required for other programs and contain a mix of students enrolled in various programs.

Computer Support Specialist

Students performed well with the additional hands-on time given in each class. Student feedback indicates an appreciation of hands-on learning to supplement lecture material. For the upcoming graduates, a curriculum change will provide more in-depth material and increased lab time.

Changes Made During 2005-2006 Academic Year

The following changes were made during the 2005 - 2006 academic year in the Computer Support Specialist program:

2.   Provided more examples and in-depth coursework for all objectives

3.   Added additional practical hands-on experience in class for students

Changes Planned for Computer Support Specialist

The following change is planned for the 2006 - 2007 academic year, according to the Faculty Assessment Group Report:

4   Continue to provide more examples and in-depth coursework.

5   Increase lab time for additional student experience

6   Provide increased hands-on experience in course material

Courses required for the Computer Support Specialist program are not exclusive to the program; the courses are also required for other programs and contain a mix of students enrolled in various programs.

The Program Assessment Matrix Computer Support Specialist program was completed and is on file with the Assessment Coordinator's office and the group leader's office.

Paraeducation

The **Paraeducation program** saw no completers, therefore, no results will be reported.

Management

Explanation of Assessment Procedures

Our program conducts three different assessments to measure program success. The Pretest/Post test is conducted with students in their first semester and again in their last semester. Success rates on the test are compared to see assumptions about learning in all the major content areas.

The second assessment is based on results of our intern evaluations given to employers with those that are enrolled in the cooperative education course. The results of a 2 or better in all criteria are acceptable measures on that evaluation. Personal comments are also noted.

The third assessment is the survey given to students who graduated with in the last year. This is included in the Follow-up survey conducted y the career placement center. A rating of 1-4 with one being superior is used for rating four areas of the program.

Additional comments are also requested from those graduates.

Results of the Assessments

The pre-post test was conducted again with similar results from last year. The pretest students performed at an average 25% on the test. Those sophomores completing the program performed at an average of 57%. Those results indicate improvement again but not the degree of improvement that would be desirable. I do

think the instrument should be reevaluated and revised. Many high performing students did not perform well on this test which to me indicates a need to reevaluate the instrument. We did not get the instrument revised this year but we are working on the revision for fall to be implemented in next year's assessment.

The results of the intern evaluation were very impressive. 100% of the students evaluated were given a superior or very good rating. The employers seem satisfied with the quality and performance of our students.

The graduate survey did not receive as high a response rate as desired however those that responded provided positive feedback about the program. In the area of technical training, the program received a 2 (met expectations completely). Quality of instruction was rated 2 (met expectations completely) as did the preparation for their current position. Recommendations suggested last year were to network more, which we have done in many classes that provides contacts for job prospects.

Transportation and Supply Chain Management

The **Transportation and Supply Chain Management program** saw no completers, therefore, no results will be reported.

Administrative Assistant – General

The Administrative Assistant – General program had 10 completers reported by the Registrar's Office during the time of September 2005 – August 2006. All of the completers achieved keyboarding skill, oral presentation competencies, portfolio competency, grammar competency, and the transcription competency.

Changes Made 2005-2006 Academic Year

The following changes were made during the 2004-2005 academic year in the Administrative Assistant – General program:

1. A new text was used in Business Communications by Mary Ellen Guffey. A supplementary CD is included and the use of INFOTRAC for research is also part of this text. More research has been presented along with doing group presentations and speeches. A pretest in Business Communications was given covering all aspects of grammar, punctuation, capitalization, and word usage. A pretest was also given in Business English 121—this text is also by Mary Ellen Guffey as Greg McGraw Hill no longer publishes the College Business English text. A post test will be given at the end of the semester and the results compared by student and for the entire class.

2. A different keyboarding text was used in Keyboarding I—it parallels to the software used for mastering the keyboard. It also has a CD which brings in student files to be inserted in different documents. Also, documents are called up from this CD from which to make corrections.

Changes Planned for Administrative Assistant - General

The following are changes planned for the 2006-2007 academic year, according to the Faculty Assessment Group Report:

1. Coordination with online instructors so that all are using updated exact same assessment methods.

2. Create a list of approved courses for those courses substituted by a completer.

3. Require oral presentation may not be read by student.

4. Create database to maintain student assessment records.

5. Setup keyboarding I with the Campus Instructor Management (Standalone) Program which works in conjunction with GDP Software. It monitors students, class progress, and generates student grades. It automatically stores students' work and adds comments. It adds instructor communication with the students that they wouldn't have otherwise.

Courses required for the Administrative Assistant – General program are not exclusive to the program; the courses are also required for other programs and contain a mix of students enrolled in various programs.

The Program Assessment Matrix Administrative Assistant – General program was completed and is on file with the Assessment Coordinator's office and the group leader's office.

Administrative Assistant – Legal

The **Administrative Assistant - Legal** program saw no completers, therefore, no results will be reported.

Administrative Assistant – Medical

The **Administrative Assistant – Medical program** had 7 completers reported by the Registrar's Office during the time of September 2005 – August 2006. All of the completers achieved medical terminology and anatomical structures skills. 6 of the 7 completers achieved keyboarding, transcription skills, written communications and verbal communications.

This program has as its subject specialist an adjunct instructor (previously a full-time professor.

The Program Assessment Matrix Administrative Assistant – Medical program was completed and is on file with the Assessment Coordinator's office and the group leader's office.

Computer Information Systems – Information Processing Specialist

In the **Computer Information Systems – Information Processing Specialist** program, this year's graduates totaled 8 students, as well as 1 student completing the certificate program, a decrease of 7 students over the previous year.

A significant change in student count was the loss of students enrolled in what was formerly the Web option, which is now a separate degree program.

After review of the Assessment data for the 2005-2006 academic year, the following changes will be made to the Information Processing Specialist degree program requirements:

All online students, starting Fall 2007, will be required to take the Microsoft Office Specialist exams as well as the on-campus students. This has been a concern in past years of the dual-requirements; however, this year's assessment has shown there is a difference which needs to be remedied. This will allow for online and on-campus students to have the same requirements.

Beginning Fall 2007, all CIS 120 students will be required to sit for the Outlook Microsoft Office Specialist exam. A base testing was completed in Spring 2006, and it was found the students do perform very comparably to the other MOS required exams.

BOTE 210 Business Communications will be removed from the degree requirements and replaced with BOTE 121 – Business English. The change will be made partly due to the constrictions of the course requirements in offering BOTE 210 online. In the past, this course has been substituted out of the curriculum for online students. Changing the requirements will allow for online and on-campus students to have the same requirements.

BOTE 108 – Business Math has been prepared for online delivery, beginning Spring 2007. This new online course also will allow for online and on-campus students to have the same requirements.

CIS 180 – Creating Web Pages – will be removed from the degree requirements. It was determined one web course using a GUI interface was preferred.

The new courses of CIS 202 – Advanced Software Applications and CIS 203 Software Prep – will be offered for the first time Spring 2007.

A form has been created for all students to prepare to allow for tracking of students throughout their college degree. This form is located on the G: drive.

The database has been moved to a top priority level for completion. We are now able to receive a report of all enrolled students within the program from the Student Records office, which will greatly assist this endeavor.

A written theory assessment will be prepared for all graduating students to complete with their advisor by Spring 2007 graduation. This theory-based assessment will be vendor-neutral.

The intent of these changes is primarily to reduce the difference in degree requirements between online and on-campus students in Information Processing Specialist.

Courses required for the CIS-Information Processing Specialist program are not exclusive to the program; the courses are also required for other programs and contain a mix of students enrolled in various programs.

The Program Assessment Matrix Information Processing Specialist program was completed and is on file with the Assessment Coordinator's office and the group leader's office.

Hospitality Management

The Hotel-Restaurant Management Program changed names in 2005 and became the Hospitality Management Program. The change in name reflects the University system change at NDSU and since we have an articulation agreement with the NDSU program it was logical to keep consistency.

The Restaurant program saw an increase in student numbers for 05-06 as the result of a marketing campaign headed up by Margie Enerson. 107 certification tests were administered with 100 successful completions at the rate of 94%. Our Food Sanitation class switched to a CD ROM driven curriculum called the TAPS series certification.

We allocated in the budget to install a smart classroom in the restaurant class to better facilitate the technology of power point, internet projection capabilities, CD's and audio visual presentations.

The Hotel program finished out the year with 21 certification tests administered and 19 successful completions at a rate of 91%. Our new smart classroom was a welcome addition to this program. The Hotel industry has changed tremendously with the advent of online reservations and advertising and marketing. Students used this new capability to enhance their project presentations. The instructors appreciated the power point, visual presenter, projection capabilities, and high speed internet connectivity. Outdated equipment was removed and more room was afforded the Mystic grill dining room.

Internships are a requirement in the Hospitality Management Program with the current evaluation process being very encouraging. 28 employer assessments were received with 27 overall ratings at very good to excellent. One student received an average rating.

This process is to develop a sense of professionalism within the individual student. Most of the students are involved in a work setting where there are either physical demands such as speed in preparation, ability to stay organized, follow direction, etc. or routine guest service such as front desk operations. We had 2 students qualify for Disney World internships. They moved to Florida and successfully completed the full internship program before returning and Graduating from BSC.

The students of the Hotel-Restaurant Management program, through the Hospitality Club, get involved in community activities as well. Such projects as the President's Club Annual Recognition Banquet, Christmas in April, Chamber of Commerce functions, Charles Hall Youth Works Down Home Country Christmas, are designed to teach the importance of community involvement in the business world as

well as develop a professional approach to the workplace by communicating ability levels to those who may need them.

Learning Outcomes Assessment

Summary Report for 2005-2006

Allied Health Program Faculty Group

Bismarck State College

Assessment of the Allied Health Programs

Introduction

The Allied Health faculty group consists of all faculty members teaching any program courses included in any of the following programs:

> EMT-Paramedic
> Medical Lab Technology
> Phlebotomy
> Practical Nursing
> Associate Degree Nursing
> Surgical Technology
> Human Services
> Fire Technology
> Criminal Justice
> Administrative Assistant- Medical

A listing of all full-time and part-time faculty members in the above programs is included in Appendix A.

The courses in the Allied Health programs are listed in Appendix B.

Matrices used in Allied Health Program Assessment

In past years, there were separate assessment forms submitted to narrate each portion of the assessment process. This year, the four forms have been combined into one, in order to ease the task of reporting. The Assessment Implementation Plan, Program Curriculum Matrix, Composite Multiple Measures Matrix, and Faculty Group Assessment Report can be found on the same document. Each of the four parts of this document continue to be due to the faculty group leader at different time intervals throughout the academic year.

Faculty members submit an Assessment Implementation Plan that identifies program objectives, competencies, assessment methods, and the planned timing of all assessment activities. The Implementation Plans for the 2005-2006 academic year was due September 15.

The Curriculum and Multiple Measures Matrices have been combined and are reported in the Courses Assessed In portion of the form, which was submitted by October 31, and indicates which courses emphasize the objectives identified in the Implementation Plan.

In the fall of the following academic year, a Faculty Group Assessment Report is submitted. This report includes results gathered from the various assessment tools used.

Proposed changes to the programs and their assessments are included in this report. The reports for the 2005-2006 academic year are attached as Appendix C.

SUMMARY OF ALLIED HEALTH ASSESSMENT FOR 2004-2005

EMT-Paramedic Program

The program established competencies and used indirect measures from the National Registry exam for assessment of this program. The results of the assessment measures were not submitted for this year.

No results were submitted from F-M Ambulance.

Revisions will be made to the curriculum after analyzing the strengths, weaknesses and validity of the current entrance process of the program. The assessment results were compiled and are on file with the Assessment Coordinator.

Medical Lab Technology

With the retirement of the Program Coordinator of the MLT/CLT program, time was taken to reassess the assessment activities in this program. Therefore, no results will be reported for the program this year. The students however, did take the ASCP Board of Registry Examination. All areas of the program are being reevaluated, with changes being made where needed and are on track to be reported in next year's assessment report.

Phlebotomy

With the retirement of the Program Coordinator of the Phlebotomy program, time was taken to reassess the assessment activities in this program. Therefore, no results will be reported for the program this year. The students however, did take the ASCP Board of Registry Examination. All areas of the program are being reevaluated, with changes being made where needed and are on track to be reported in next year's assessment report.

Practical Nursing Program

Changes in faculty and curricula during the past year have put the assessment process on hold in the Nursing Programs. All areas of the programs are being reevaluated, with changes being made where needed and are on track to be reported in next year's assessment report.

Associate Degree Nursing

Changes in faculty and curricula during the past year have put the assessment process on hold in the Nursing Programs. All areas of the programs are being reevaluated, with changes being made where needed and are on track to be reported in next year's assessment report.

Surgical Technology

For the 2005-2006 academic year, the program faculty combined 3 of the 9 competencies used the previous year, to come up with a total of 6. The measures of these competencies included Performance Demonstrations, Pre and Post Tests, Skills Evaluations, Employers Surveys and finally, the Program Assessment Exam which has been established by the National Surgical Technology Association. Only 8 of the 12 graduating students passed this standardized test, compared to 10 out of 10 the previous year. Students fell short in the following areas; Intra Operative Sterile, Surgical Procedures, and Biomedical Science. It is difficult to compare the percentages on the data from the previous year due to the combination of some of the competencies. The faculty is planning more review during the 1 hour didactic portion of the clinical rotation, in hopes of increasing student knowledge in these areas. 100 % of students that took the National Certifying Exam passed it, but it is no longer used as an assessment measure, because it is a voluntary credential and not required by all employers.

Human Services

No results were reported.

Fire Technology

No results were reported.

Criminal Justice

No results were reported.

Administrative Assistant- Medical

No results were reported.

Appendix A – Faculty Members

EMT-Paramedic – Collaborative faculty
F-M Ambulance Program
David Haverland
Jodi Holston
Ron Lawler
Sherm Syverson
St. Alexius Program
Mark Haugen
Part Time
Jennifer Davis

Medical Lab Technology/Phlebotomy
Full Time
Angela Uhlich
Part Time
Tracy Hoke
Kenneth Irmen
Cathy Janikowski
Tracie Laine
Stephanie Longie
Laurie Metzger
Anastasia Schlafman
Renae Sticka
Bernice Wegener
Kristi Ziegler
Jessie Fisk
Stacey Ahmann

Nursing
Full Time
April Hall
Suzie McShane
¾ Time
Greta Knoll
Part Time
Joan Auch

Lynn DeKrey
Ann Longnecker (LRSC)
Suzie McShane
Linda Tharp (WSC – Program Director)
Pam Pranke (LRSC)
Sandra Sund (MiSU-Bottineau)

Surgical Technology
<u>Full Time</u>
Jean Hinton
Trudy Riehl
<u>Part Time</u>
Vanessa Masseth
Sally BeuLac

Human Services
<u>Full time</u>
Lisa Hoynes
<u>Part time</u>
Carol Cartledge
Steve Huebschwerlen
Barbara Gitter
Marella Krein

Fire Technology
<u>Part Time</u>
Brian Reinke

Criminal Justice
<u>Full Time</u>
Joe Ellefson
<u>Part Time</u>
Penny Blotsky-Criminal Justice
Academic Achievement: BS Criminal Justice
Ronald E. Crouse - Criminal Justice
Academic Achievement: MS Criminal Justice
Romi Leingang – Criminal Justice
Academic Achievement: BS Criminal Justice
Ross Munns – Criminal Justice
Academic Achievement: MS Public Administration

Carol Nitschke - Criminal Justice
Academic Achievement: BS Social Work
Darrell Nitschke - Criminal Justice
Academic Achievement: Masters in Management
Cathy Schuh - Criminal Justice
Academic Achievement: BS Criminal Justice
Cathy Schweitzer – Criminal Justice
Academic Achievement: BS Criminal Justice
Dennis R. Rohr - Criminal Justice
Academic Achievement: BS Criminal Justice
Michael Wardzinski - Criminal Justice
Academic Achievement: Masters in Management

Administrative Assistant- Medical

Appendix B – Required Courses in Allied Health Programs

EMT-Paramedic
Anatomy & Physiology
Introduction to Advanced Pre-Hospital Care
Emergency Pharmacology/Fluid Therapy
Airway Management and Ventilation
Comprehensive Patient Assessment
Hospital Clinical I
Field Internship I
Trauma Management
Respiratory Emergencies
Cardiac Emergencies I
Hospital Clinical II
Field Internship II
Cardiac Emergencies II
Medical Emergencies
Special Considerations
Hospital Clinical III
Field Internship III
EMS Operations
ACLS
PALS
PHTLS
CPR Instructor
Hospital Clinical IV
Field Internship IV
17 General Education Credits (Required for the AAS only)

Medical Lab Technology
Phlebotomy
Anatomy & Physiology I and II/Labs **OR** Human Structure and Function
Chemistry and Lab
Introduction to Organic and Biochemistry and Lab
Introduction to Medical Laboratory Science
Introductory Microbiology and Lab
Immunology
Hematology
Clinical Chemistry I

Clinical Microbiology I
Clinical Internship I
Immunohematology
Clinical Chemistry II
Clinical Microbiology II
Clinical Internship II
Clinical Internship III
27 General Education Credits

Phlebotomy
Elementary Anatomy & Physiology
Medical Terminology
Phlebotomy
Organizational Behavior
Phlebotomy Internship
6 General Education Credits

Nursing
College Composition I
Introductory Chemistry and Lab
Anatomy & Physiology I and II and Labs
Introduction to Psychology
Foundations of Nursing
Practical Nursing I
Clinical Practice I
Developmental Psychology
Introduction to Pharmacology
Practical Nursing II
Clinical Practice II
Practical Nursing III
Clinical Practice III
Professional Role Development
Alterations in Health I
Maternal Child Nursing
Clinical Application I
Introductory Microbiology and Lab
Alterations in Health II
Health Promotion and Psychosocial Nursing
Clinical Application II
Communications elective (3 credits)

Surgical Technology
Anatomy & Physiology I and II and Labs
General Pathology
Medical Terminology for Surgical Technology
Introduction to Surgical Technology
Introduction to Operating Room Procedures and Lab
Introduction to Operating Room Materials and Lab
Introductory Microbiology and Lab
Introduction to Pharmacology for Surgical Technology
Special Surgical Procedures
Surgical Procedures Lab
Professional Skills for the Surgical Technologist
Operating Room Clinical Internship
12 General Education Credits

Human Services
Introduction to Human Services
Introduction to Helping Skills
Introduction to Addictions
Human Services Internship
Minority Relations or Cultural Diversity or Native American Studies
Introduction to Psychology
Introduction to Sociology

12 CREDITS FROM THE FOLLOWING
Eligibility Worker:
TANF
Food Stamps
Medicaid
Childcare Assistance
Development of Social Welfare
Mental Health:
Personal and Social Adjustment
Introduction to Behavior Modification
Developmental Psychology
Abnormal Psychology
Criminal Justice:
Introduction to Criminal Justice
Juvenile Delinquency

Juvenile Justice System
Introduction to Corrections
Community Based Corrections
Generalist:
Gerontology
Family
Current Social Issues: Death and Dying
15 General Education Credits
12 Elective Credits

Fire Technology

Criminal Justice
AA Degree
American Government
College Composition I and II or Introduction to Professional Writing
Fundamentals of Public Speaking
History (101, 102, 103 or 104)
Introduction to Psychology
Introduction to Sociology
Math Elective (103 or higher)
Criminal Law
Criminology
Developmental Psychology
Introduction to Criminal Justice
Laboratory Science
Math/Science/Technology Elective
Enrichment
Arts and Humanities Electives (6 Credits)

Plus One of the Following:
Law Enforcement Option
Introduction to Policing
Police Administration
Criminal Investigation
Criminal Evidence
Corrections Option
Juvenile Delinquency
Introduction to Corrections
Community Based Corrections

Juvenile Justice System
Security Option
Introduction to Security
Internal Theft and Investigation
Business and Retail Security
Criminal Justice Elective

AAS Degree
Introduction to Criminal Justice
Criminal Law
Administration of Justice
Field Experience and Internship
Introduction to Sociology
Social Problems
Ethics

Plus One of the Following:
Law Enforcement Option
Introduction to Policing
Police Administration
Criminal Investigation
Criminal Evidence and Procedure
Community Support Option
Juvenile Delinquency
Juvenile Justice System
Introduction to Corrections
Community Based Corrections
15 General Education Credits

Administrative Assistant- Medical
Medical Terminology
Elementary Anatomy and Physiology
Medical Transcription I
Keyboarding II
Medical Terminology
Elementary Anatomy and Physiology
Computer Software Applications- Word
Microcomputer Database
Business Math
Business Communications

Medical Transcription II
15 Suggested Elective Credits
15 General Education Electives (Required for the AAS only)

Appendix C – Faculty Group Assessment Reports

EMT-Paramedic
Academic year – 2005-06

Program Goals: Our goal is to prepare students to be competent entry-level EMT-Paramedic practitioners. Students shall be prepared to function in a variety of settings and be able to formulate a general impression and management plan during patient encounters.

Program Objectives	Program Competencies	Assessment Methods	Courses Assessed In	Implementation Plan	Measure Results	Changes Planned	Follow-up Requirements
Student will demonstrate the technical proficiency in all the skills necessary to fulfill the role as EMT-P Practitioners. (Psychomotor Domain)	Demonstrate the principles of pharmacology, safe access to venous circulation, and safe administration of medications.	Skill Verification	EMTP 210	Demonstrations will be completed by the last week of the course.			
	Demonstrate the ability to formulate a field impression and implement a management plan for all age groups.	Skill Verification	EMTP 297b	The final skill verification will be offered at the end of the course.			
	Demonstrate the ability to establish and maintain a patent airway, oxygenate, and ventilate a patient.	Skill Verification	EMTP 212	Demonstrations will be completed by the last week of the course.			
	Demonstrate a patient assessment.	Skill Verification	EMTP 214	Demonstrations will be completed by the last week of the course.			
	Demonstrate the ability to assess, manage, and treat various types of medical emergencies.	Preceptor Evaluations	EMTP 297b	Preceptor evaluations for the Field Internship IV will be averaged at the end of the course.			
	Demonstrate the ability	Preceptor	EMTP 297b	Preceptor evaluations			

Comment [AC40]: Enter your results here. What did your assessment show for results for the individual competencies?

Comment [AC41]: What changes are planned to address your assessment measure results for the individual competencies?

Comment [AC42]: What follow-up or action is needed, after the changes have been made and implemented?

	to assess, manage, and treat various types of trauma emergencies.	Evaluations		for the Field Internship IV will be averaged at the end of the course.			
Students will demonstrate the ability to comprehend, apply and evaluate classroom and clinical information. (Cognitive Domain)	Demonstrate a basic knowledge of anatomy and physiology.	Post-test	EMTP 201	The post-test will be given at the end of the Anatomy & Physiology course.			
	Demonstrate effective communication skills with patients and other practitioners.	Post employer survey	EMTP 214	The survey will be sent out 6 months after graduation.			
	Practice within the ethical and legal framework for the Paramedic.	Preceptor Evaluations	EMTP 208	Preceptor evaluations for the Field Internship IV will be averaged at the end of the course.			
	Demonstrate the principles of pharmacology, safe access to venous circulation, and safe administration of medications.	Preceptor Evaluations	EMTP 297b	The final preceptor evaluation will be used at the end of the course.			
	Demonstrate the ability to formulate a field impression and implement a management plan for all age groups.	Preceptor Evaluations	EMTP 297b	Preceptor evaluations for the Field Internship IV will be averaged at the end of the course.			
	Demonstrate the knowledge of airway anatomy, physiology, and systems	Final Exam	EMTP 212	The final will be offered at the end of the course.			
	Demonstrate the ability to assess, manage, and treat various types of medical emergencies.	OSPE	EMTP 222	The OSPE will be offered at the end of the last semester of the program.			
	Demonstrate the ability	OSPE	EMTP 216	The OSPE will be			

OOOOOO

	to assess, manage, and treat various types of trauma emergencies.			offered at the end of the last semester of the program.			
Students will demonstrate personal behaviors consistent with professional and employer expectations for the EMT-P Practitioner (Affective Domain).	Demonstrate effective communication skills with patients and other practitioners.	Employer and Graduate Surveys; Preceptor Evaluations	EMTP 297b	The surveys will be sent out 6 months after graduation. Preceptor evaluations for the Field Internship IV will be averaged at the end of the course.			
	Demonstrate the ability to formulate a field impression and implement a management plan for all age groups.	Employer and Graduate Surveys; Preceptor Evaluations	EMTP 297b	The surveys will be sent out 6 months after graduation. Preceptor evaluations for the Field Internship IV will be averaged at the end of the course.			

Implementation Plan Submitted Date: September 26, 2005
Person responsible for program assessment: Mark Haugen, Rick Cameron

Please submit this matrix to your group leader upon completion of the Implementation Plan. This form will be resubmitted upon completion of program assessment no later that two weeks after completion of the academic program year.

PPPPPP

Assessment Plan
Surgical Technology
Academic year – 2005-2006

Program Goals: Upon completion of the Surgical Technology Program at Bismarck State College, students will be able to demonstrate the mechanical, technical and communication skills necessary to gain entry-level employment as a surgical technologist.

Program Objectives	Program Competencies	Assessment Methods	Courses Assessed In	Implementation Plan	Measure Results	Changes Planned	Follow-up Requirements
Upon completing the Surgical Technology Program, students should be able to demonstrate mechanical skills outlined in the competency areas.	2. Demonstrates knowledge of aseptic technique and basic surgical case preparation skills.	Pre/Post Test	SRGT 120 and SRGT 130	The Pre-test is given the first week of SRGT 120 & SRGT 130 and the post test is given the last week of the semester.	**SRGT 120-** 100% failed the pre-test and 84% passed the post-test. **SRGT 130-** 100% failed the pre-test and 89% passed the post-test.	Pre and Post Tests will continue to be given to assess the students' progress.	
		Performance Demonstration	SRGT 250, SRGT 260, SRGT 120L, and SRGT 280	Students will demonstrate skills throughout the semester in SRGT 250, at midterm in SRGT 260 and in the final weeks of SRGT 120L & SRGT 280.	**SRGT 250-** All students passed the final skills evaluation in this class. **SRGT 260-** **SRGT 120L-** All students passed the final skills evaluation in this class. **SRGT 280-** All students passed the Clinical Rotation.	The skills demonstrations for **SRGT 250, 260, and 120L** will continue to be evaluated for this competency because it is the basis for clinical practice. The skills demonstrations for **SRGT 280** will continue to be evaluated for this competency because it is the basis for graduation and job readiness.	

QQQQQQ

	Program Assessment Exam (PAE)	SRGT 280	This exam is given in the final week of SRGT 280	All 12 students passed this area of the PAE exam with an average of 81.25%.	This meets the benchmark of 70-85% by the national accrediting agency.	More review is planned during the Friday meetings of this class.
	Employer Survey	Entire Program	6 Months after graduation	Completed six months after graduation, the class of 2005 received high ratings from all employers. 100% of surveys returned rated graduates at meets or exceeds expectations.	This exceeds the benchmark of 70-85% by the national accrediting agency.	
3. Demonstrates knowledge of basic instruments, supplies, and equipment.	Pre/Post Test	SRGT 120 and SRGT 130	The Pre-test is given the first week of SRGT 120 & SRGT 130 and the post test is given the last week of the semester.	**SRGT 120-** 100% failed the pre-test and 84% passed the post-test. **SRGT 130-** 100% failed the pre-test and 89% passed the post-test.	Pre and Post Tests will continue to be given to assess the students' progress.	
	Performance Demonstration	SRGT 250, SRGT 120L, and SRGT 280	Students will demonstrate skills throughout the semester in SRGT 250 and in the final weeks of SRGT 120L, & SRGT 280.	**SRGT 250-** All students passed the final skills evaluation in this class. **SRGT 120L-** All students passed the final skills evaluation in this class. **SRGT 280-** All students passed the Clinical Rotation.	The skills demonstrations for **SRGT 250 and 120L** will continue to be evaluated for this competency because it is the basis for clinical practice. The skills demonstrations for **SRGT 280** will continue to be evaluated for this competency because it is the basis for graduation and job readiness.	
	PAE	SRGT 280 and SRGT 240	This exam is given in the final week of SRGT 280	All 12 students passed this area of the PAE exam with an average of 73.81%.	This meets the benchmark of 70-85% by the national accrediting agency.	More review is planned during the Friday meetings of this class.
	Employer Survey	Entire Program	6 Months after graduation	Completed six months after	This exceeds the benchmark of 70-85%	

RRRRRR

					graduation, the class of 2005 received high ratings from all employers. 100% of surveys returned rated graduates at meets or exceeds expectations.	by the national accrediting agency.	
Upon Completing the Surgical Technology Program, students should be able to demonstrate technical skills outlined in the competency areas.	1. Demonstrates knowledge of basic science.	Pre/Post Test	SRGT 105	The Pre-test is given the first week of SRGT 105 and the post test is given the last week of the semester.	100% failed the pre-test. 85% passed the post-test.	Pre and Post Tests will continue to be given to assess the students' progress.	
		Performance Demonstration	SRGT 250, SRGT 260, SRGT 120L, and SRGT 280	Students will demonstrate skills throughout the semester in SRGT 250, at midterm in SRGT 260 and in the final weeks of SRGT 120L, & SRGT 280.	**SRGT 250**- All students passed the final skills evaluation in this class. **SRGT 260**- **SRGT 120L**- All students passed the final skills evaluation in this class. **SRGT 280**- All students passed the Clinical Rotation.	The skills demonstrations for **SRGT 250, 260, and 120L** will continue to be evaluated for this competency because it is the basis for clinical practice. The skills demonstrations for **SRGT 280** will continue to be evaluated for this competency because it is the basis for graduation and job readiness.	
		PAE	SRGT 280 and SRGT 240	This exam is given in the final week of SRGT 280	All 12 students passed the Related Science area of the PAE exam with an average of 78.67% and the Basic Science area with an average of 70.68%. 8 students did not pass the Biomedical Science area,	The scores in the Related and Basic Science areas meet the benchmark of 70-85% by the national accrediting agency. The Biomedical Science curriculum will be re-evaluated to improve this area in next year's exam.	More review is planned during the Friday meetings of this class.

SSSSSS

	Employer Survey	Entire Program	6 Months after graduation	averaging 67.19%. Completed six months after graduation, the class of 2005 received high ratings from all employers. 100% of surveys returned rated graduates at meets or exceeds expectations.	This exceeds the benchmark of 70-85% by the national accrediting agency.	
4. Demonstrates knowledge of frequently used surgical procedures, including the role of first scrub on all.	Performance Demonstration	SRGT 250, SRGT 120L, and SRGT 280	Students will demonstrate skills throughout the semester in SRGT 250 and in the final weeks of SRGT 120L, & SRGT 280. & 280.	**SRGT 250**- All students passed the final skills evaluation in this class. **SRGT 120L**- All students passed the final skills evaluation in this class. **SRGT 280**- All students passed the Clinical Rotation.	The skills demonstrations for **SRGT 250 and 120L** will continue to be evaluated for this competency because it is the basis for clinical practice. The skills demonstrations for **SRGT 280** will continue to be evaluated for this competency because it is the basis for graduation and job readiness.	
	PAE	SRGT 280 and SRGT 240	This exam is given in the final week of SRGT 280	8 students did not pass the Intra OP Sterile area of the PAE exam, with an average of 69.70%. 4 students did not pass the Procedures area with an average of 69.64%.	SRGT 240 has been modified with a new project assignment to help increase this result on next year's exam.	More review is planned during the Friday meetings of this class.
	Employer Survey	Entire Program	6 Months after graduation	Completed six months after graduation, the class of 2005 received high ratings from all employers. 100% of surveys returned rated graduates at meets or exceeds expectations.	This exceeds the benchmark of 70-85% by the national accrediting agency.	
Upon Completing	5. Demonstrates	Performance	SRGT 260, SRGT	Students will demonstrate	**SRGT 260**- All	The skills	

TTTTTT

the Surgical Technology Program, students should be able to demonstrate communication skills required to successfully act as an entry-level surgical technologist.	knowledge of patient care skills.	Demonstration	120L, and SRGT 280.	skills at midterm in SRGT 260 and in the final weeks of SRGT 120L & SRGT 280.	students passed the final skills evaluation in this class. **SRGT 120L**- All students passed the final skills evaluation in this class. **SRGT 280**- All students passed the Clinical Rotation.	demonstrations for **SRGT 260 and 120L** will continue to be evaluated for this competency because it is the basis for clinical practice. The skills demonstrations for **SRGT 280** will continue to be evaluated for this competency because it is the basis for graduation and job readiness.	
		PAE	SRGT 280	This exam is given in the final week of SRGT 280	All 12 students passed this area of the PAE exam with an average of 82.29%.	This meets the benchmark of 70-85% by the national accrediting agency.	More review is planned during the Friday meetings of this class.
		Employer Survey	Entire Program	6 Months after graduation	Completed six months after graduation, the class of 2005 received high ratings from all employers. 100% of surveys returned rated graduates at meets or exceeds expectations.	This exceeds the benchmark of 70-85% by the national accrediting agency.	
6. Demonstrates responsible behavior as a health care professional, including knowledge of patients' rights, ethical standards, legal aspects of practice, and knowledge of occupational hazards.		Pre/Post Test	SRGT 215	The Pre-test is given the first week of SRGT 215 and the post test is given the last week of the semester.	100% failed the pre-test. 99% passed the post-test.	Pre and Post Tests will continue to be given to assess the students' progress.	

UUUUUU

Performance Demonstration	SRGT 250, SRGT 120L, and SRGT 280	Students will demonstrate skills throughout the semester in SRGT 250 and in the final weeks of SRGT 120L & SRGT 280.	**SRGT 250**- All students passed the final skills evaluation in this class. **SRGT 120L**- All students passed the final skills evaluation in this class. **SRGT 280**- All students passed the Clinical Rotation.	The skills demonstrations for **SRGT 250 and 120L** will continue to be evaluated for this competency because it is the basis for clinical practice. The skills demonstrations for **SRGT 280** will continue to be evaluated for this competency because it is the basis for graduation and job readiness.	
PAE	SRGT 280	This exam is given in the final week of SRGT 280	All 12 students passed this area of the PAE exam with an average of 80%.	This meets the benchmark of 70-85% by the national accrediting agency.	More review is planned during the Friday meetings of this class.
Employer Survey	Entire Program	6 Months after graduation	Completed six months after graduation, the class of 2005 received high ratings from all employers. 100% of surveys returned rated graduates at meets or exceeds expectations.	This exceeds the benchmark of 70-85% by the national accrediting agency.	

Implementation Plan Submitted Date: November 20, 2005
Person responsible for program assessment: Jean Hinton and Trudy Riehl

Please submit this matrix to your group leader upon completion of the Implementation Plan. This form will be resubmitted upon completion of program assessment no later that two weeks after completion of the academic program year.

Competencies:
1. Demonstrates knowledge of basic science.
2. Demonstrates knowledge of aseptic technique and basic surgical case preparation.
3. Demonstrates knowledge of basic instruments, supplies, and equipment.
4. Demonstrates knowledge of frequently used surgical procedures, including the role of first scrub on all basic surgical cases.
5. Demonstrates knowledge of patient care skills.

Courses:
A. SRGT 105 Medical Terminology
B. SRGT 110 Introduction to Surg Tech
C. SRGT 120 Intro to Surgical Procedures
D. SRGT 120L Procedures Lab
E. SRGT 130 Intro to Surgical Materials
F. SRGT 130L Materials Lab

VVVVVV

6. Demonstrates responsible behavior as a healthcare professional, including knowledge of patients' rights, ethical standards, legal aspects of practice, and knowledge of occupational hazards.

G. SRGT 240 Specialty Surgical Procedures
H. SRGT 250 Surgical Procedures Lab
I. SRGT 260 Professional Skills
J. SRGT 280 Clinical Internship
K. SRGT 215 Pharmacology for Surg. Tech.

WWWWWW