

DONNELLY COLLEGE

ANNUAL PROGRAM ASSESSMENT REPORT

LIBERAL ARTS AND SCIENCES DEPARTMENT

ACADEMIC YEAR 2013-2014

I. GOALS

What are the overall goals for this program as identified in the Program Assessment Matrix? (Please recall, at least one goal must be related to student learning)

The Liberal Arts and Sciences Department oversees the majority of the courses that students take at Donnelly College. While many students begin their education in the LAS department, others start in the Preparatory, English as a Second Language, and Gateway programs before moving to the Liberal Arts and Sciences Program. Similarly, students who take courses in the Liberal Arts and Sciences Program sometimes move to the Health Occupations/Allied Health, Information Technology, Teacher Education, or Organizational Leadership programs before leaving Donnelly College.

It is the ultimate goal of Donnelly College that upon completion of a degree program, students will have acquired specific skills and proficiencies to include the following General Education goals:

1. **Communication Skills:** Students will demonstrate effective communication by employing clear organization, analysis, and the thoughtful and ethical evaluation and integration of outside source material.
2. **Technology and Information Literacy Skills:** Students will demonstrate proficiency and adaptability in technologies and information literacy skills that support academic work.
3. **Symbolic Problem Solving:** Students will demonstrate competency in qualitative and quantitative problem solving and the ability to understand and use scientific method.
4. **Analytical Thinking:** Students will employ reflective thinking to evaluate diverse ideas from the Liberal Arts and Sciences so as to integrate knowledge in the search for truth.
5. **Personal and Interpersonal Skills:** Students will recognize their own self worth and champion the dignity of the other in light of the transcendent destiny of every human person.

6. **Academic Inquiry:** Students will demonstrate an openness to exploration in the search for truth as accessed by faith and/or reason.
7. **Values:** In keeping with our Catholic identity, students will value excellence in the pursuit of truth, ethical behavior and the appreciation of the diversity of thought.

All courses at Donnelly College strive to include as many of these goals as is possible in their objectives. For example, Technology and Information Literacy skills are covered through the use of calculators in mathematics classes, microscopes in biology classes, and library databases in humanities classes; Analytical Thinking skills are included in the use of term papers in science and humanities classes; Personal and Interpersonal skills are incorporated in group lab work in science classes, and in discussions and group work in mathematics and humanities classes; Academic Inquiry skills are covered through reflection papers in Humanities classes; and Values are predominate in courses such as the sciences and humanities (especially philosophy and religion).

Of these seven goals, the two main goals the Liberal Arts and Sciences Program is currently concentrating on are Communication Skills and Symbolic Problem Solving. The Liberal Arts and Sciences Program uses the ETS Proficiency Profile Test as a final assessment instrument, and to validate/verify the data collected for these two goals. The goals are as follows:

- A. **Communication Skills:** Students will demonstrate effective communication by employing clear organization, analysis, and the thoughtful and ethical evaluation and integration of outside source material.
 - Students will demonstrate ability to read critically
 - Students will demonstrate ability to formulate effective writing
 - Students will demonstrate critical listening skills
 - Students will demonstrate effective use of technology
- B. **Symbolic Problem Solving:** Students will demonstrate competency in qualitative and quantitative problem solving and the ability to understand and use scientific method.
 - Students will demonstrate the ability to apply logical strategies and reasoning skills
 - Students will demonstrate the use of mathematics
 - Students will demonstrate the application of scientific methods
 - Students will demonstrate language usage
 - Students will demonstrate the use of technology

- C. **ETS Proficiency Profile Test:** While this is not a goal, it is used to discuss the validity of the assessment of the two goals.

For each goal, identify how it is being measured and assessed? (If not using a commercially available instrument, please also explain how validity and reliability have been addressed)

- A. **Communication Skills:** This goal is examined at admission, mid-point, completion and follow-up.

ACT Verbal test (18 and up), is used at *admission*; meaning the initial semester. The benchmark is placement into English Composition I. The results or data aggregation are sent to the head of Institutional Research

At *Mid-point* or following the year of admission, the students take EN 112 (Composition II). The benchmark is final exam requirement of English Composition II. All faculty use a standard rubric which includes all of the outcomes highlighted in Communication Skills. Students must pass the final exam in order to pass EN 112. The standard rubric is included in Appendix A. The results or data aggregation are sent to the head of Institutional Research.

At *completion* or October of the second year, Educational Testing Services Proficiency Profile exam is administered to all students toward the end of the sophomore year according to standardized rubrics. The benchmark is the last semester of program. The results are sent to the head of Institutional Research.

At *follow-up* which is 3 to 5 years beyond the AA degree, the benchmark is the tracking of academic persistence. This work is done by determining the courses beyond the AA degree. This tracking is performed by the head of Institutional Research. Results are sent to the Associate Dean of Liberal Arts and Sciences.

- B. **Symbolic Problem Solving:** This goal is examined at admission, mid-point, completion, and follow-up.

An ACT Mathematics or Compass score is used for placement into the initial mathematics course, subsequent placement is as a result of a grade of C or better in the prerequisite course or the Compass test. The Compass test is given at the end of MT080 Arithmetic, MT085 Basic Algebra, and MT 103 Intermediate Algebra. The results or data aggregation of all Compass scores and grades are sent to the head of Institutional Research.

MT 080 Arithmetic and MT085 Basic Algebra are considered preparatory classes (not for college credit), while MT103 Intermediate Algebra and above are considered college level. Previously MT 080 and MT 085 were part of the

Preparatory program. However, in order to promote a more cohesive progression of topics, they are now part of the Liberal Arts and Sciences program.

There is no placement test used for initial placement into a science course. Admission into subsequent science courses is based on completion of prerequisite courses, either science or mathematics, as is appropriate.

Thus there are three areas pertinent to achieving this goal. They are Preparatory Mathematics, College Level Mathematics, and Scientific Method. Each area has its own assessment tools.

Preparatory Mathematics: Students are placed using Compass or ACT scores at the time of enrollment. Admission into Preparatory Mathematics is enrollment into MT 080 Arithmetic. Mid-point is enrollment in MT 085 Basic Algebra. Completion is enrollment in MT 103 Intermediate Algebra. Follow-up is enrollment into any mathematics course with MT 103 Intermediate Algebra as a prerequisite. This could be MT 130 College Algebra. It could also be MT 106 Contemporary Mathematics, MT 121 Introduction to Statistics, or MT 136 Trigonometry. Depending upon the goals of the students and the degree program in which the student is enrolled, any of these courses could fulfill the mathematics graduation requirement.

It should be noted that, depending upon the program in which the students enroll, not all students take mathematics beyond MT 080 Arithmetic. Some of the health care programs do not require MT 130 College Algebra, and some of the Gateway students may also not complete through MT 130 College Algebra. We are currently working to determine the best way of tracking these students to acknowledge their accomplishments while minimizing their impact on the program as a whole.

College Level Mathematics: Admission into College Level Mathematics is enrollment into MT 103 Intermediate Algebra. Mid-point is enrollment into MT 130 College Algebra or any course with MT 103 Intermediate Algebra as a prerequisite. Completion is the completion of the mathematics courses required for graduation. With the addition of more baccalaureate programs, some of which do not require College Algebra, not all students take MT 130 College Algebra in order to graduate. Again, we are currently working to determine the best way of tracking these students.

Scientific Method: Admission into the science program is enrollment into BL 101 Principles of Biology, CH 100 General Chemistry, or SC 101 Physical Science. Several midpoint and endpoint classes were selected and assessed using the test. The midpoint classes selected for assessment were BL 101 Principles of Biology, CH 100 General Chemistry, or SC 101 Physical Science. The endpoint classes

selected for assessment were BL 201 Microbiology, CH 101 College Chemistry I and CH 102 College Chemistry II.

- C. **ETS Proficiency Profile Test.** The ETS Proficiency Profile Test is given each semester in RS/PH 225 Foundations of Theology. Students enrolled in this course should be in the final semester(s) before graduation, and, in theory, should have taken their communication and mathematics courses by this time.

If there has been any major changes in either the goals or measures used this academic year as compared to last year, please describe what changed and why.

In accordance with the College's admissions changes, we have moved from the AccuPlacer to Compass and ACT for placement. During the 2011 – 2012 academic year students were placed using AccuPlacer. The change from AccuPlacer to Compass/ACT occurred in October of 2012, so during the 2012-2013 academic year students were placed (depending upon when they applied for admission to the college) using either method. During the 2013-2014 year they were more commonly placed using Compass or ACT.

The Scientific Method Skills Test was modified to include more life science questions. Previously the test included more questions relevant to the physical sciences. The change was made to bring about a more balanced blend of questions.

II. DATA COLLECTION

- A. **Communication Skills:** The final exam is an in-class, handwritten, response-to-prompt essay in which students must offer a specific response to a piece of writing, quote from the piece, and cite it properly in MLA format. A passing grade on the final exam is dependent upon meeting these requirements. A sample rubric is included in Appendix A.

This year's data set includes 53 students who took the Proficiency Profile exam in the Fall of 2013 and Spring of 2014.

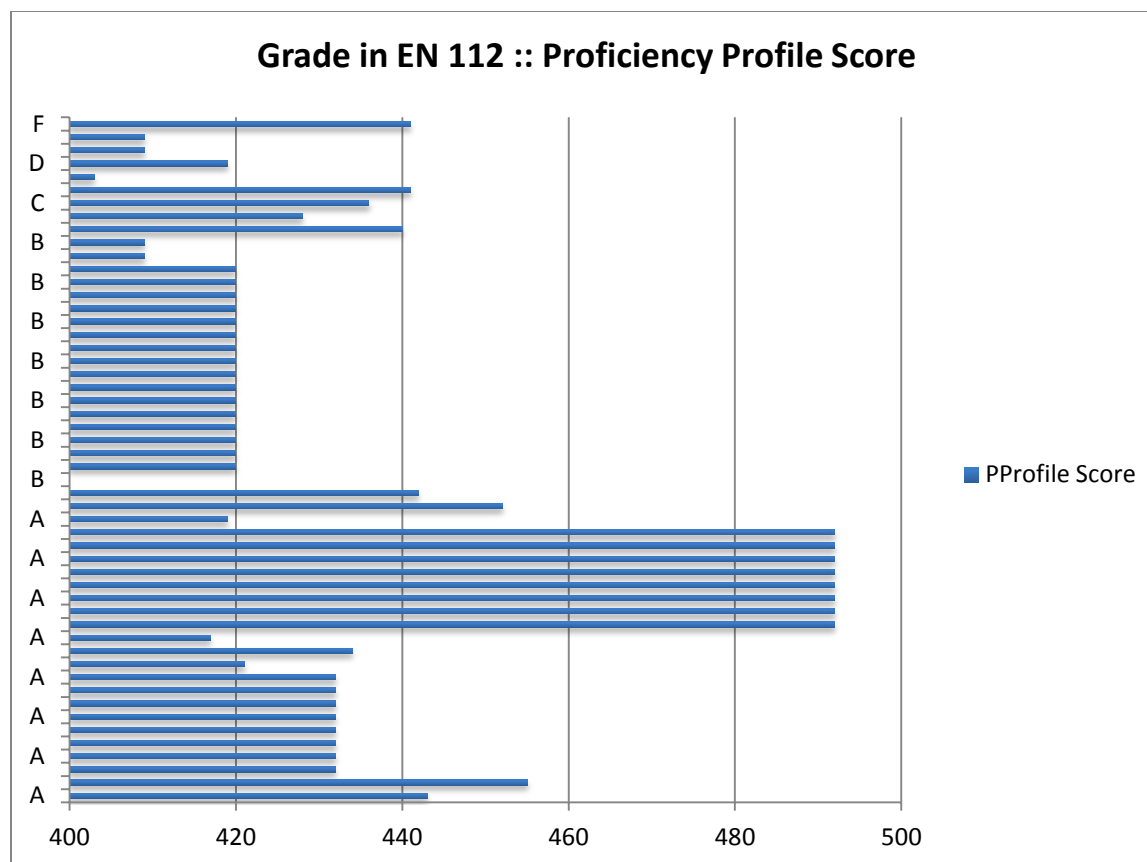


Chart C1

Note: The Donnelly College registrar has reported that, due to data entry inconsistencies, no placement test scores (ACT, Accuplacer or Compass) were available for this student set.

B. **Symbolic Problem Solving:** The current concern of the Mathematics faculty is whether the Compass cut-off scores are adequately placing the students into the proper mathematics course. Since Donnelly has not been using Compass long enough to see how students are doing in subsequent mathematics courses, the Mathematics faculty decided to compare the post-Compass scores with the grades. We selected three years to compare.

The 2011-2012 academic year had placement primarily by AccuPlacer. The 2012-2013 academic year had placement by AccuPlacer until October, and by Compass or ACT the rest of the year. Thus, students enrolling in the fall semester were placed by AccuPlacer while the students enrolling in the spring semester may have

been placed by either method, depending upon when the testing occurred. The 2013-2014 academic year had placement by Compass or ACT.

The placement scores for Accuplacer, Compass, and ACT are as follows:

Course	AccuPlacer	Compass	ACT
MT 080 Arithmetic	0 – 30	0 – 20	0 – 15
MT 085 Basic Algebra	31 – 70	21 – 45	16 – 18
MT 103 Intermediate Algebra	71 – 99	46 – 65	19 – 21
MT 106 Contemporary Mathematics MT 121 Introduction to Statistics MT 130 College Algebra MT 136 Trigonometry	100 – 120	66 – 100	22+

Regardless of method of placement, the Accuplacer was the test administered at the end of the semester for the 2011-2012 academic year, and Compass was the test administered at the end of the semester for the 2012-2013 and 2013-2014 academic years.

For each student enrolled in MT 080 Arithmetic, MT 085 Basic Algebra, or MT 103 Intermediate Algebra the Compass score was compared to the grade received by the student. The data is as follows:

Preparatory Mathematics:

2011 – 2012 MT 080 Arithmetic									
AccuPlacer Expected Score = 30									
Fall					Spring				
A	B	C	D	F	A	B	C	D	F
34	48	37	23	21	28		24		
	43	36	22		37		26		
	40	24					34		
	39	23					40		
	37								

2012 – 2013 MT 080 Arithmetic									
Compass Expected Score = 20									
Fall					Spring				
A	B	C	D	F	A	B	C	D	F
26	26	19	20		38	27	23		
24	22	18	18		26	26	19		
19	16		15		22	24			
16						21			

2013 – 2014 MT 080 Arithmetic									
Compass Expected Score = 20									
Fall					Spring				
A	B	C	D	F	A	B	C	D	F
35	37	47	22	49	24	21	57	26	19
33	36	35	21	21	23	19	26	25	19
25	28	27	18	17	22	18	23	21	18
24	27	25	18	16	19	16	18	18	18
24	27	25	15	16			17	16	16
24	24	24		16			16	16	16
23	24	23		16				15	16
20	24	17		15				15	16
20	21	17							15
	21	17							
	18	17							
	15	15							

2011 – 2012 MT 085 Basic Algebra									
AccuPlacer Expected Score = 70									
Fall					Spring				
A	B	C	D	F	A	B	C	D	F
106	107	71	72		75	93	93	65	84
105	106	69	63		70	88	71	55	38
100	82	66	46		67	84	71	35	27
98	75	57	38			69	60	33	21
96	71	53				67	56	23	
96	69	51					53	23	
85	54	45					49		
78	48	36					48		
78		21					48		
73							41		
							27		

2012 – 2013 MT 085 Basic Algebra									
Compass Expected Score = 45									
Fall					Spring				
A	B	C	D	F	A	B	C	D	F
73	46	42	33		63	61	40	22	
69	44	37	23		57	46	18		
59	28	36	23		56	44			
51	27	36	15		54	38			
47	24	34			47	36			
46		30			46	31			
45		29							
44		29							
41		27							
38		27							
		24							
		23							
		21							

2013 – 2014 MT 085 Basic Algebra									
Compass Expected Score = 45									
Fall					Spring				
A	B	C	D	F	A	B	C	D	F
72	47	36	21	23	75	58	41	54	25
71	45	33		20	59	42	39	29	22
68	44	31		16	50	42	33	23	21
66	37	29			22	41	31	22	19
66	34	28				38	30	21	
64	33	28				37	27	20	
56	30	25				35	25		
54	26	22				33	22		
52		20				24	21		
51		17					21		
50		17					20		
50							18		
48									
48									
46									
45									
45									
45									
43									

College Level Mathematics:

2011 – 2012 MT 103 Intermediate Algebra									
AccuPlacer Expected Score = 99									
Fall					Spring				
A	B	C	D	F	A	B	C	D	F
109	90	114	107	77	109	107	105	78	33
105		102	33	70	104	101	99	70	
103		100		55	102	91	80	63	
95		85		54	96	89	78	58	
93		79		38		81	78	48	
81		78				79	74	42	
		75				79	71	23	
		74				68	71		
		61					70		
							64		
							62		
							54		
							49		
							45		

2012 – 2013 MT 103 Intermediate Algebra									
Compass Expected Score = 65									
Fall					Spring				
A	B	C	D	F	A	B	C	D	F
65	68	53	37	32	74	39	54	31	33
61	68	53	33	30	71	38	48		
61	61	43	33		58		48		
57	55	41	22		57		44		
54	53	39			52		38		
52	52	37			47		35		
	49	31					35		
		26					33		
		25					31		
		24					31		
							28		
							27		
							26		
							25		
							22		

2013 – 2014 MT 103 Intermediate Algebra									
Compass Expected Score = 65									
Fall					Spring				
A	B	C	D	F	A	B	C	D	F
27	81	52	20	31	80	69	36	40	27
26	54	44			61	60	21	33	26
23	46	30			57	58		33	23
18	40	26			56	51		31	18
					51	49			
						47			
						44			
						40			
						31			

Scientific Method: The 2013-2014 assessment of the science program was done to evaluate the problem-solving and critical thinking skills of Donnelly students. Problem solving is one of the core goals of the Liberal Arts and Science program. The science instructors administered a Scientific Method Skills Test for the academic years of 2013 -2014.

The Liberal Arts and Science faculty structured the Scientific Method Skills Test to include more life science questions. This test evaluates student proficiency in problem solving abilities and critical thinking skills in the context of scientific method applications and procedures. The test consisted of a total of 25 scientific method skill questions and the students had approximately 20 minutes to take the test.

Several midpoint and endpoint classes were selected and assessed using the test. The midpoint classes selected for assessment were BL 101 Principles of Biology, CH 100 General Chemistry, and SC 101 Physical Science (Group 1). The endpoint classes selected for assessment were BL 201 Microbiology, CH 101 College Chemistry I and CH 102 College Chemistry II (Group 2). The test was given to a section each of CH 101 College Chemistry I and CH 102 College Chemistry II, (25 students total), two sections of BL 101 Principles of Biology (39 students total), two sections of CH100 General Chemistry, (13 students total), a section of SC 101 Physical Science (14 students), and a section of BL 201 Microbiology (11 students). There were a total of 102 students participating in the assessment process, during the 2013 – 2014 academic year.

The Group 1 courses had a combined average mean score of 12.7 and a combined median score of 13.1. The Group 2 courses had a combined average mean score of 15.9, and a combined median score of (16.6). Chart SM1 shows the mean scores and Chart SM2 shows the median scores. The mode for each group respectively

was the same – 15. The standard deviation for Group 1 was 2.40 and for Group 2 was 3.58. The range of scores for each group was 16, and 13, respectively.

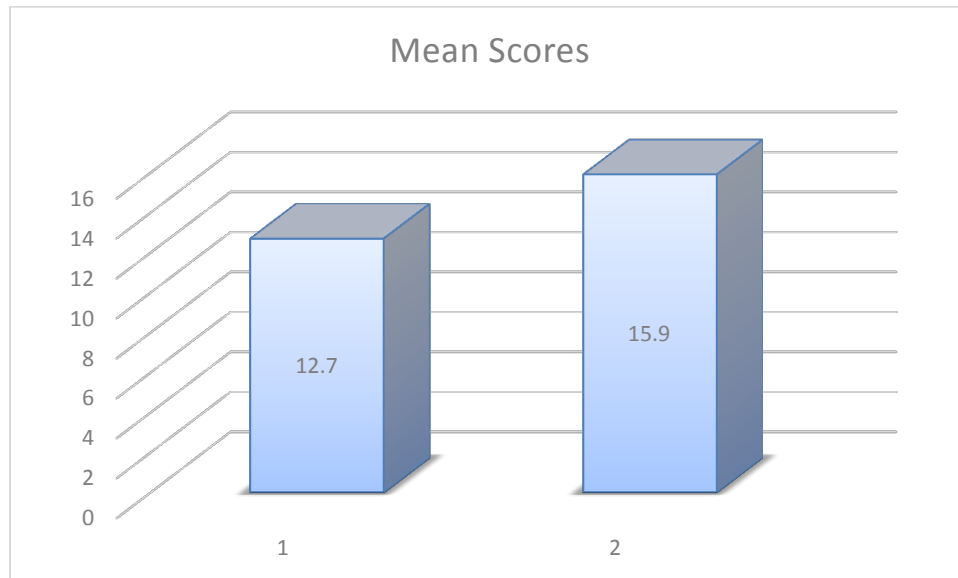


Chart SM 1: 1=Midpoint group, 2=Endpoint group

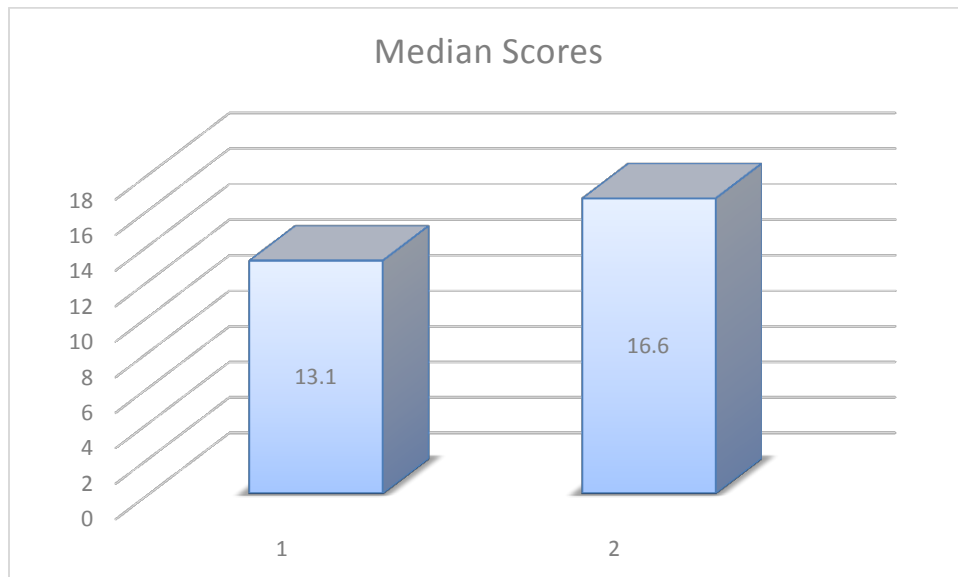


Chart SM 2: 1=midpoint group, 2=endpoint group

Science faculty also collected class scores to see if there were any overarching trends in GPA throughout its science programs. The class scores are listed below in the following tables.

CH 100 General Chemistry				
	2012 - 2013		2013 - 2014	
Grade	# of Students	Percent	# of Students	Percent
A	0	0%	3	17.6%
B	1	14%	10	58.8%
C	6	86%	3	17.6%
D	0	0%	0	0%
F	0	0%	1	5.8%
W	0	0%	0	0%
Totals	7	100%	17	100%

BL 101 Principles of Biology				
	2012 - 2013		2013 - 2014	
Grade	# of Students	Percent	# of Students	Percent
A	8	12%	4	7%
B	8	12%	13	23%
C	21	31%	21	36%
D	11	16%	11	19%
F	3	5%	2	4%
W	16	24%	6	11%
Totals	67	100%	57	100%

SC 101 Physical Science				
	2012 - 2013		2013 - 2014	
Grade	# of Students	Percent	# of Students	Percent
A	7	58%	0	0%
B	5	42%	4	100%
C	0	0%	0	0%
D	0	0%	0	0%
F	0	0%	0	0%
W	0	0%	0	0%
Totals	12	100%	4	100

CH 101/102 College Chemistry I & II				
	Fall 2013		Spring 2014	
Grade	# of Students	Percent	# of Students	Percent
A	1	5.2%	1	20%
B	9	47.4%	4	80%
C	7	36.8%	0	0%
D	2	10.5%	0	0%
F	0	0%	0	0%
W	0	0%	0	0%
Totals	19	100%	5	100%

BL136 Anatomy & Physiology				
	2012 - 2013		2013 - 2014	
Grade	# of Students	Percent	# of Students	Percent
A	0	0%	5	22%
B	15	57%	3	13%
C	7	27%	5	22%
D	0	0%	1	4%
F	2	8%	8	35%
W	2	8%	1	4%
Totals	26	100%	23	100%

- C. **ETS Proficiency Profile Test.** Upon completion of the Liberal Arts and Sciences program students should demonstrate proficiency in reading, critical thinking and mathematics. Information was gleaned from the ETS Proficiency Profile Test from the 2013-14 academic year. Toward the end of completion of the Liberal Arts and Sciences program students take this test during their last semester before graduation. See the ETS Proficiency Profile on the next page.

The range of possible scores is from 400 to 500. The overall mean was 434.91 and the overall median was 432. The highest score achieved by a student was 492 (achieved by 8 students). The lowest score was 400.

III. ANALYSIS

- A. Communication Skills:** According to the data above, the standardized final exam rubric in EN 112 is proving an effective assessment of student success.

80% of the students who took EN 112 in the 2013-2014 school year passed the course (earned a C or higher). Of that 80%, 25% scored in the 50th percentile or above on the Proficiency Profile test. Given our very small student sample size, this shows an acceptable correlation.

EN 112's required standardized rubric (Appendix A) requires proper quotation, citation, critical analysis and synthesis of a text and minimal grammatical and spelling errors in order to pass the course, it appears that EN 112 instructors are currently satisfactorily covering these topics in the course, based on the Proficiency Profile scores. We hope to continue using the standardized rubric to add to this data in future years.

- B. Symbolic Problem Solving:** Since the current concern of the Mathematics faculty is whether the Compass cut-off scores are adequately placing the students into the proper mathematics course, and we have not been using Compass long enough to see how students are doing in subsequent mathematics courses, we decided to compare the post-Compass scores with the grades to see if there was a correlation between the two and if it had changed significantly during the change from AccuPlacer to Compass.

We then looked at the average post-test score compared to the average grade for all students taking the post-test, for all students taking the post-test who were passing the course, and for all students taking the post-test who were making an "A" in the course.

Again, we selected three years to compare: 2011 – 2012 (placement and post-test with AccuPlacer), 2012 – 2013 (placement with AccuPlacer and post-test with Compass), and 2013 – 2014 (placement and post-test with Compass). The results of the comparison may be found in Appendix B.

To see if there was a difference we looked at the 2011 -2012 year where all testing was done with Accuplacer and at the 2013 – 2014 year where all testing was done with Compass.

Preparatory Mathematics: The following charts display the average post-test score as a percentage of the cut-off score for the next level in the sequence. The charts summarize the data when placement and post-testing was done using AccuPlacer in the 2011 – 2012 academic year and Compass in the 2013 – 2014 academic year.

Chart PM 1 shows all students enrolled in MT 080 Arithmetic. Chart PM 2 shows the passing students enrolled in MT 080 Arithmetic. Chart PM 3 shows the “A” students enrolled in MT 080 Arithmetic.

Chart PM 4 shows all students enrolled in MT 085 Basic Algebra. Chart PM 5 shows the passing students enrolled in MT 085 Basic Algebra. Chart PM 6 shows the “A” students enrolled in MT 085 Basic Algebra.

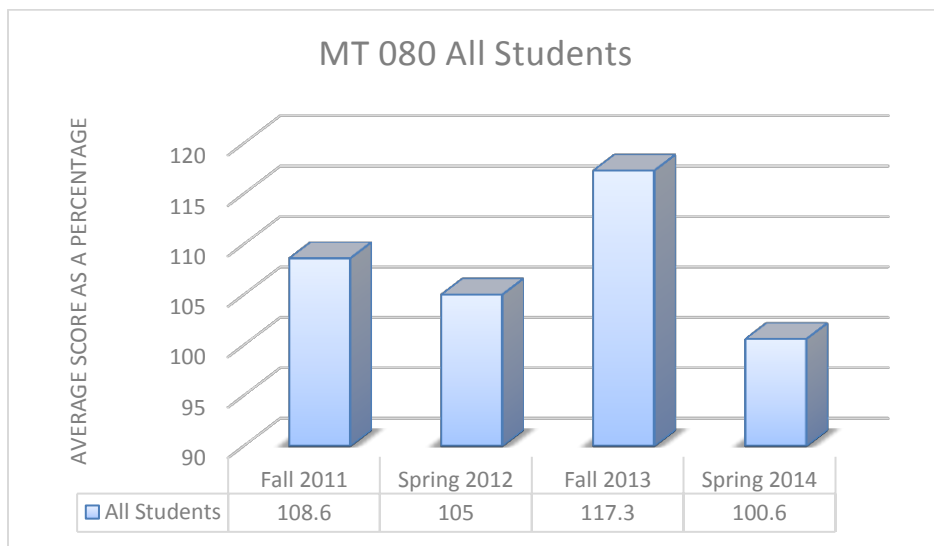


Chart PM 1

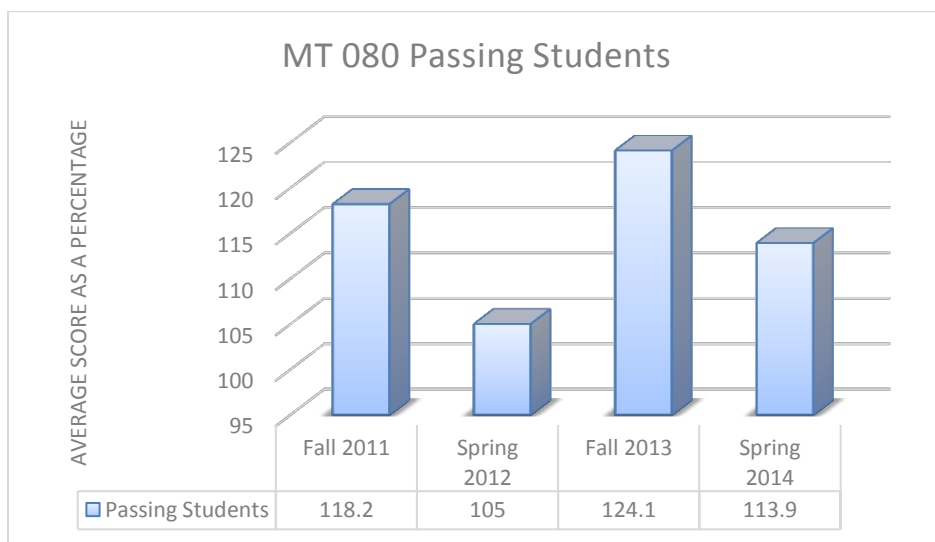


Chart PM 2

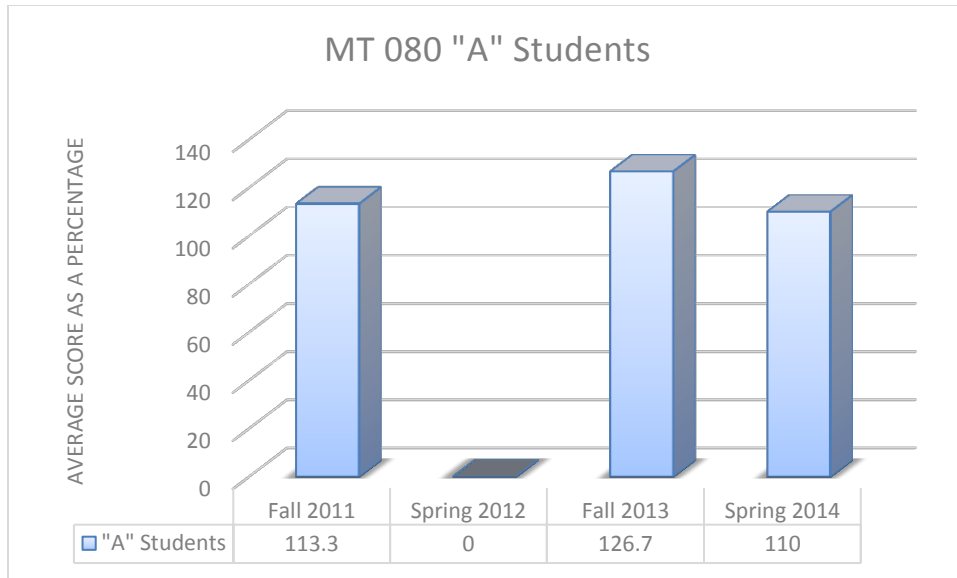


Chart PM 3

In general the students enrolled in MT 080 Arithmetic exceed expectations on the post-test. Variations between semesters can be attributed to class size and the influence of the students enrolled in the Gateway to College program.

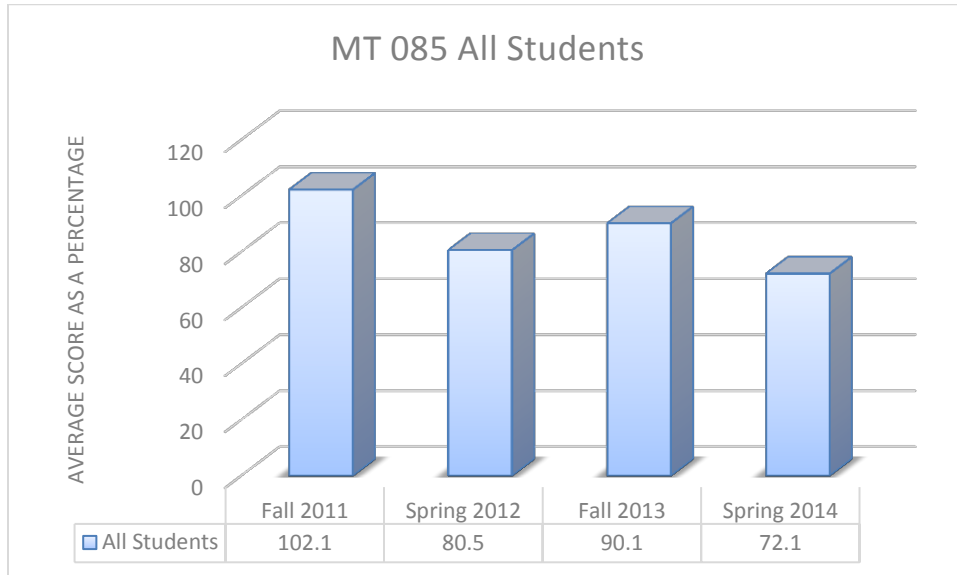


Chart PM 4

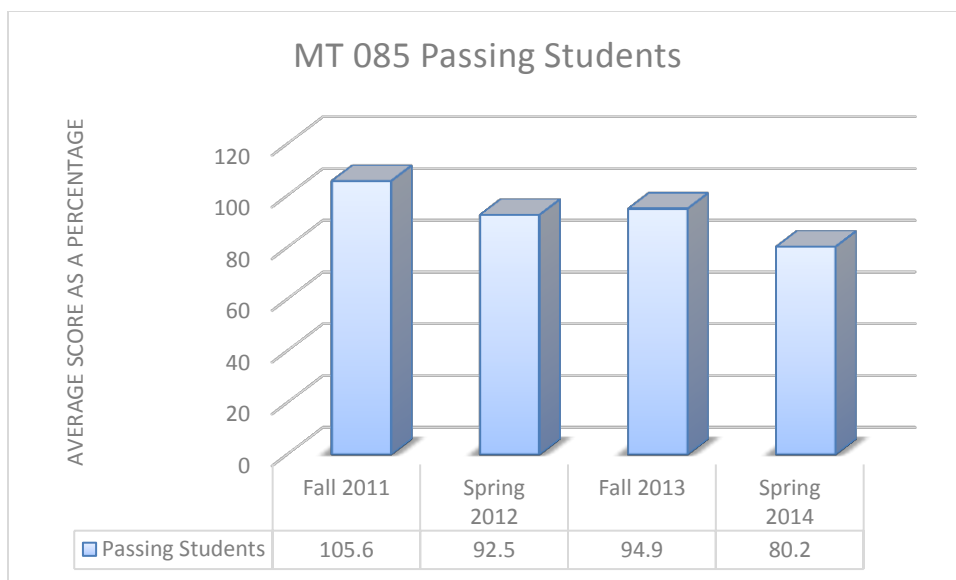


Chart PM 5

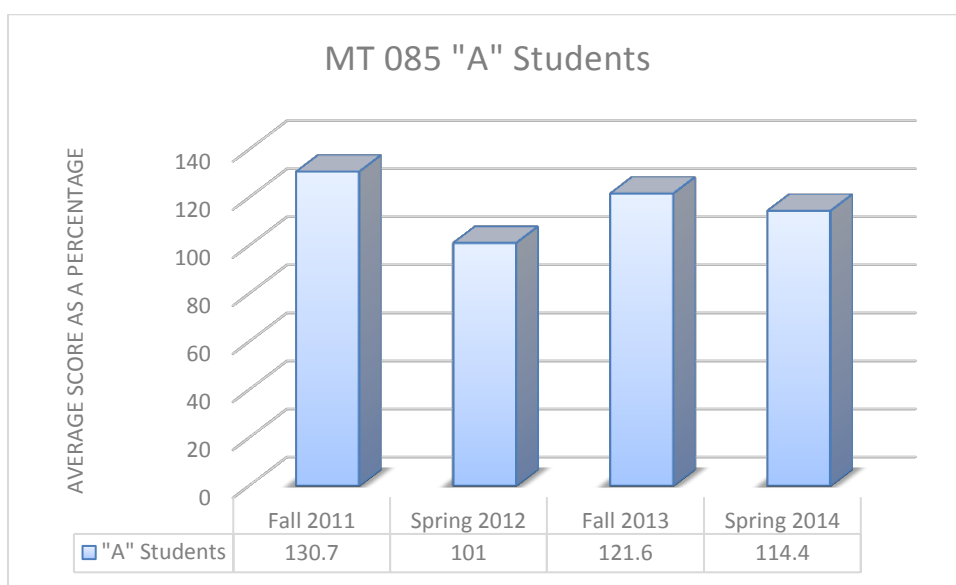


Chart PM 6

While post-test scores are not as high in MT 085 Basic Algebra, the scores do go up as the knowledge of the student as evidenced by their grade in class increases. Whereas almost all students are familiar with all the material covered in MT 080 Arithmetic, this may not be the case in MT 085 Basic Algebra. The mathematical maturity of the typical student enrolled in MT 085 Basic Algebra is usually greater than that of the typical student enrolled in MT 080 Arithmetic. There were also fewer Gateway to College students enrolled in MT 085 Basic Algebra.

College Level Mathematics: The following charts display the average post-test score as a percentage of the cut-off score for the next level in the sequence. The charts summarize the data when placement and post-testing was done using AccuPlacer in the 2011 – 2012 academic year and Compass in the 2013 – 2014 academic year.

Chart CL 1 shows all students enrolled in MT 103 Intermediate Algebra. Chart CL 2 shows the passing students enrolled in MT 103 Intermediate Algebra. Chart CL 3 shows the “A” students enrolled in MT 103 Intermediate Algebra.

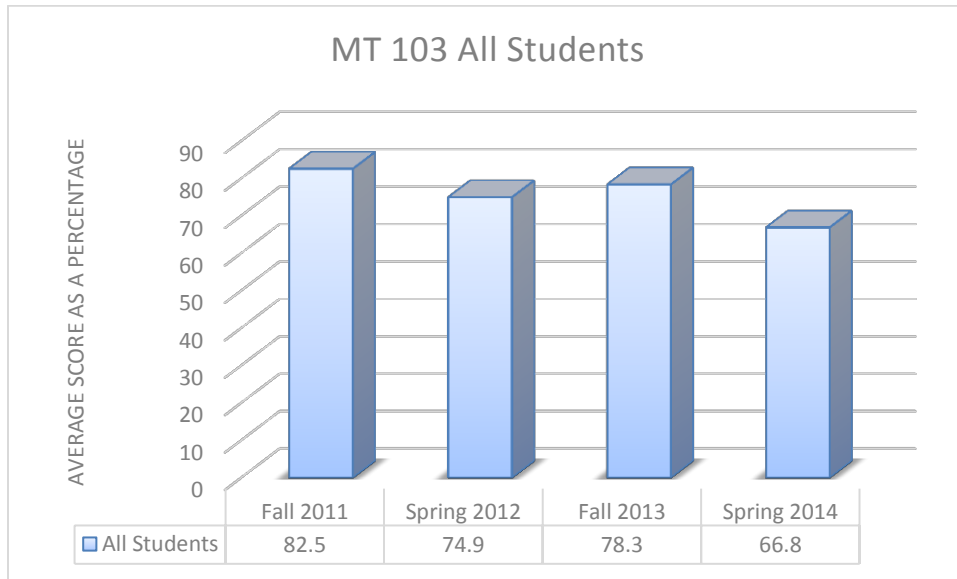


Chart CL 1

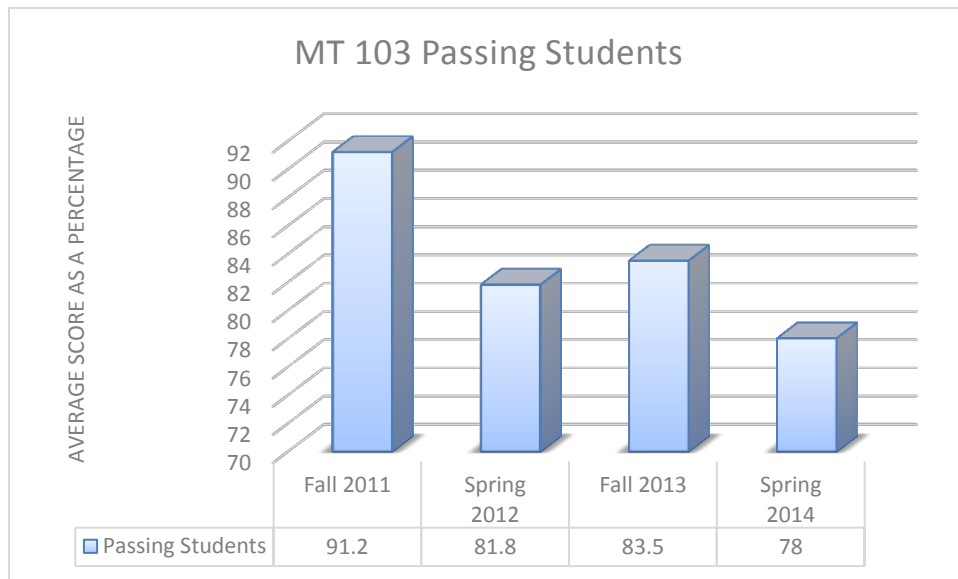


Chart CL 2

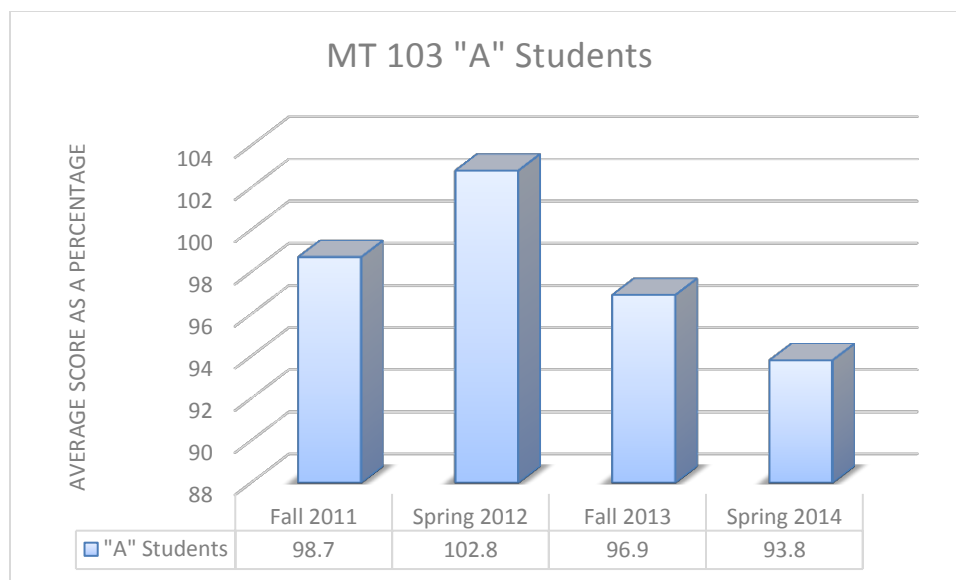


Chart CL 3

Several things happen in MT 103 Intermediate Algebra. This class meets three days per week while the preparatory mathematics courses meet five days per week. It often takes the student most of the semester to adjust to the faster pace. Since there is less class time the students are also expected to do more homework outside of class. This can also be challenging for some of the students.

Whereas most of the students in MT 085 Basic Algebra are familiar with most of the material covered in MT 085 Basic Algebra, this may not be the case in MT 103 Intermediate Algebra. While they may have been exposed to the concept in the previous class, the problems are more complex and require more problem solving skills. This is a class where good study habits may influence the grade more than understanding of the material.

Scientific Method: Liberal Arts and Sciences faculty evaluated test scores from freshman and sophomore science courses during the 2013 -2014 academic year. In comparing Group 1 (midpoint) and Group 2 (endpoint) scores, there seemed to be a meaningful difference in the average mean scores.

Initially, results show that endpoint courses had a higher average mean score than midpoint courses (15.9 vs 12.7). There was also a difference between these two groups and their median scores. Results of the Scientific Methods Skills Test for Group 1 courses showed a combined median score of 13.1 vs Group 2 courses with a combined median score of 16.6. These results suggest that sophomore students have obtained some level of improvement in their problem solving and critical thinking skills, but further evaluation needs to be done.

During the 2013-2014 academic year (106) students were enrolled in science courses. There were (88) students that successfully completed elective and non-elective science courses such as, Biology, Physical Science, Anatomy and Physiology, General Chemistry and College Chemistry I & II. That equates to (83%) of the students passing their sciences courses. Faculty identified talented students in both science and math and advised them on stimulating projects and career opportunities.

- C. **ETS Proficiency Profile Test.** In the past, the faculty of the Liberal Arts and Sciences Program recommended the school institute a standardized method of administering the Proficiency Profile test, and the results be tied to a grade to encourage students to take the test seriously. Since that recommendation, the test has been given in the following manner: the Director of Academic Support explained the nature of the test to RS/PH 225 students. Then, each student was required to make an appointment and take the Proficiency Profile any time from the beginning of the course to the midterm. Participation in the Profile is worth 10% of the final grade in the course.

The Proficiency Profile test provides five separate scores, each measuring a different area. The areas are as follows: Critical Thinking, Writing, and Mathematics. Each area will now be discussed.

Critical Thinking: The Liberal Arts and Sciences Faculty members, after reviewing the results of the Proficiency Profile in past years, have been concerned about low Critical Thinking scores. Faculty discussed ways to incorporate critical thinking in their coursework and will be tracking changes in the Critical Thinking score in the future. All Liberal Arts and Sciences faculty have worked to integrate critical thinking skills in to their curriculum in the past year. A non-exhaustive list of examples follows. Math faculty include word problems that entail applications of concepts learned in class, as well as real-life uses of material learned. Chemistry and Biology courses use hands-on activities that require students to reverse-engineer concepts learned in class or physically apply theories using conceptual experiments. Psychology students use concepts learned in class-applied case study examples. Language-based courses (English and Spanish) maintain an advantage of engaging critical thinking skills organically, through analysis and interpretation of readings and integration of those readings into the students' own work.

Writing: Responding to past concerns over Writing scores on the Proficiency Profile, all Liberal Arts and Sciences faculty have incorporated frequent low stakes writing assignments. Students are consistently required to transfer writing and research skills introduced in EN 111 and EN 112 in areas such as history, philosophy and psychology courses. An example of a math course low-stakes writing assignment is included as Appendix D.

Mathematics: The Mathematics faculty would like to compare the grades of the students who have completed a mathematics course with MT 103 Intermediate Algebra as a prerequisite to the Proficiency Profile scores. Since there are no mathematics prerequisites to the course in which the Proficiency Profile test is given, we are curious as to whether the students taking the test have taken (or passed) their mathematics courses. As of yet identifying information concerning the student so that this comparison can be made has not been available to the Mathematics faculty.

Analysis of the students taking the test in the Spring semester of 2014 reveals that of the 12 students taking the test, 2 students (or 17%) had not had MT 130 College Algebra. Of the 20 students taking the test in the Fall of 2014, 4 students (or 20%) had not had MT 130 College Algebra. Of these four students, one had yet to complete MT 103 Intermediate Algebra and one had yet to complete MT 085 Basic Algebra.

The Mathematics faculty are curious as to the correlation between the grades or post-test scores and the Proficiency Profiles scores. Does the nature of the questions on the test influence the correlation?

Since we do not “teach to the test” but cover material necessary for the next class in the mathematics sequence, and do not know what questions each student is asked, we’re not sure how to utilize the results to change the course to improve the results.

We have noticed that the questions on the Compass Placement test and the Proficiency profile test seem to involve a lot of words. Since for many of our students, English is not their first language, this may also contribute to the low scores.

IV. REFLECTION

Describe the process used to share results with professional colleagues. Who received findings?

The faculty of the Liberal Arts and Sciences Program meet weekly to develop and revise curriculum, develop department goals, share teaching and assessment strategies and improve student learning.

Our faculty then shares this information with

- Division 3
- Faculty Senate
- Assessment Committee
- Student Support Services
- Board of Trustees -- Education Committee
- Higher Learning Commission

V. INCORPORATION OF FINDINGS

Continuous Improvement: Based on the findings, are there any suggestions for changing the process, the data points, instruments used, etc. for next year?

A. Communication Skills: It should be noted that we were unable to do a full data analysis this year due to the lack of available placement scores (ACT, Accuplacer or COMPASS) for this group of students. In order for Liberal Arts & Sciences to accurately assess student progress, we must be able to access the data connected to the benchmarks.

Liberal Arts and Sciences faculty will continue to evaluate ACT scores and their use in placement, as well as student success in EN 112, as well as beyond EN 112 (including Proficiency Profile scores and success in advanced Liberal Arts classes and Bachelor's level courses that require Communication Skills).

In comparing midpoint and endpoint scores, we need to continue to collect meaningful data and identify large-enough sample sizes.

Faculty feels that in order to maintain some sort of consistency this assessment tool (the EN 112 final exam rubric) should be used for the next academic year to continue evaluating its effectiveness as an assessment tool.

B. Symbolic Problem Solving

Preparatory Mathematics: Based on the percentage of students who pass the course and achieve the Compass placement score for the next course in the sequence, it appears that the Preparatory Mathematics courses performing at or above expectations.

It has been observed that not all students placed into MT 080 Arithmetic belonged in that course. The Mathematics faculty developed a Diagnostic test to be administered to all students enrolled in MT 080 on the first or second day of the semester. Students who appeared to be misplaced were sent to the Testing Center to take the Compass test for possible replacement. Later it was discovered that the majority of the misplaced students were originally placed using the ACT score. Steps have since been taken to address this issue.

The Mathematics faculty are now expanding this Diagnostic test to include MT 085 Basic Algebra and MT 103 Intermediate Algebra. It is hoped that in time this test can also be used in the post-test venue. As a post-test the mathematics faculty would have more than a score. By being able to see which questions the students are getting right and which questions the students are getting wrong, appropriate changes in the course objectives or course emphasis so that students do learn the desired material.

As a diagnostic tool it could also help identify early on the students who may not be adequately prepared for the course in which they are enrolled. While they have the necessary prerequisite or placement score, it may have been some time since the prerequisite course was completed, or the placement score may have been on the low end. By identifying these students early on an early intervention program involving the advisors and the Tutoring Center can help improve the pass and retention rates.

The Mathematics faculty plans to continue to watch the progress of the students through the College Level Mathematics courses to see if additional changes are warranted.

College Level Mathematics: Historically, students have struggled to pass MT 103 Intermediate Algebra as well as MT 130 College Algebra – not only at this school but across the board. This is reflected in the data contained in Appendix B and Charts CL 1 – 3. The Mathematics faculty at Donnelly are aware of this challenge. They are currently taking steps to improve the situation. For example, they are looking at the course content to see if it can be strengthened, the number of contact hours should be increased, or the delivery method modified.

We have been developing a common comprehensive final for College Algebra and have piloted it several times. We are also developing a comprehensive diagnostic test to assist with placement and early detection of students in need of assistance

in passing the course. There is discussion of using the same questions on the diagnostic test on the comprehensive final to have a better understanding of what the students are understanding. Currently we only see the score the student receives on the Placement exam, and do not know which questions they are getting, and whether they are getting them right or wrong. It is therefore difficult to improve the course, and consequently the student performance on the post-test.

Scientific Method: Faculty felt more samples should be taken in order to obtain a more valid and reliable result. Liberal Arts and Sciences faculty decided that the Scientific Methods Skills Test could be given within various courses, as a pre- and post-test, to see how students problem solving and critical thinking skills change throughout a semester in an individual course. This might help in analyzing the Scientific Methods Skills Test as an assessment tool, and also help faculty evaluate course curriculum to see if more problem solving and critical thinking content should be incorporated into course curriculums.

Faculty felt in order to maintain the consistency of this assessment tool, it should continue to be used for the next academic year and then evaluated as an assessment tool at that time.

VII. INSTITUTION-WIDE ASSESSMENT-VALUES

The Donnelly College Assessment System recognizes that assessment of student learning begins with values.

Service is a value that has always played an important role in both the personal and professional lives of the faculty of the Liberal Arts and Sciences Program. Our faculty have often taken time to talk to prospective students touring the building, tutor students outside of class, attend new student orientation programs, and attend other functions designed to promote Donnelly College.

During the 2013 – 2014 academic year the value of “service” was incorporated in a variety of ways that benefited instructors, personnel and students at Donnelly College. Some service directly involving the students in 2013-2014 were projects piloted, steered or sponsored by faculty members.

The Liberal Arts and Sciences faculty chose to sponsor the donation for toiletries at Donnelly to “Giving the Basics” started by Teresa Hamilton. The department donated over 80 pounds of personal supplies to this organization.

Projects spearheaded by individual faculty members include a campus-wide recycling project. Under the direction of Karen Judy (who serves as sponsor), Phi Theta Kappa and the General Ethics class organized and participated in a campus-wide recycling project of aluminum, paper, and plastic. This project included power point demonstrations and information sessions conducted by the students for the faculty and the student body as their service project to raise awareness of the need to recycle.

Under Melissa Lenos's guidance, students participated in the extracurricular activity of submitting their literary compositions and artistic pieces for publication in *Dime*, the school publication. She designed the layout and oversaw the publishing and distribution of *Dime*. Dr. Lenos also arranged for the online voting for the Sister Mary Faith Schuster Awards. She organized and hosted the launch of *Dime* and the Awards ceremony. Melissa Lenos also served as organizer of the Multicultural Festival. She participated in the annual fundraiser, which is the Scholarship Dinner.

Leesa Pohl, Dave Cobb, Dhuha Shareef, Nicholas Adongo, and Sister Sharon Hamsa organized and implemented the Pi Day Event for the whole student body. This was designed to raise awareness and interest in the field of mathematics. Although sponsored by the Mathematics faculty, many faculty and staff from the Liberal Arts and Sciences Department and Donnelly College helped with posters or contributed pies and items to be awarded as prizes.

Joe Multhauf promoted service learning in his Chemistry courses. Here his students mentored elementary school students at Resurrection School. He also spear-headed the water analysis project with his students at Big Eleven Lake.

Recommendation and Review: The Liberal Arts and Sciences Faculty are inclined to work mostly as individuals on projects, either service or otherwise. There is limited collaboration on department projects. It is hoped that in the next year, faculty will see the need to become more collegial and collaborative on service projects as well as others. It is only in this way that we can really become a team and really learn from each other. The value for next year is "community."

Appendix A: EN 112 Final Exam Rubric

Student:

- I. Does the student have an acceptable and appropriate thesis statement? Is the thesis statement a statement (**NOT a question, not a fact**) and does it form an argument that pushes forward the entire paper? (Failure to fulfill these requirements will result in the loss of 100 points.)
- II. Does the student form **at least** three supporting points that work toward the thesis statement? (Failure to fulfill this requirement will result in the loss of 100 points.)
- III. Does the student make appropriate use of evidence, including **at least one** direct quote? (Failure to fulfill this requirement will result in the loss of 100 points.)
- IV. Does the student use proper citation, including signal phrases, proper citation punctuation and proper in-text citation format? (Failure to fulfill this requirement will result in the loss of 100 points.)
- V. Does the student include a properly formatted works cited page? (Failure to fulfill this requirement will result in the loss of 100 points.)
- VI. Is the paper mostly free from grammar, punctuation and syntax errors? Five points deducted for every three errors of this kind.

Total number of grammar, punctuation and syntax errors: _____

Total points deducted for errors: _____

Other Notes:

Final Exam Score:

_____ (name) PASSES FAILS (circle one) EN 112.

Appendix B: Preparatory Mathematics

MT 080 Arithmetic

	Fall 2011	Spring 2012	Fall 2012	Spring 2013	Fall 2013	Spring 2014
Enrollment	14	6	12	9	46	31
Correlation	0.7074	0.1202	0.4210	0.5504	0.2491	0.2329

All Students	Fall 2011	Spring 2012	Fall 2012	Spring 2013	Fall 2013	Spring 2014
Enrollment	14	6	12	9	46	31
Mean grade	2.29	2.67	2.67	3.11	2.20	1.24
Mean score	32.6	31.5	19.9	25.1	23.5	20.1
Score as % of cutoff	108.6	105	99.6	125.6	117.3	100.6

Passing Students	Fall 2011	Spring 2012	Fall 2012	Spring 2013	Fall 2013	Spring 2014
Enrollment	10	6	9	9	33	14
Mean grade	2.73	2.67	3.22	3.11	2.91	2.86
Mean score	35.5	31.5	20.67	25.1	24.8	22.8
Score as % of cutoff	118.2	105	103.3	125.6	124.1	113.9

“A” Students	Fall 2011	Spring 2012	Fall 2012	Spring 2013	Fall 2013	Spring 2014
Enrollment	1	2	4	3	9	4
Mean score	34	32.5	21.3	28.7	25.3	22
Score as % of cutoff	113.3	108.3	106.3	143.3	126.7	110

MT 085 Basic Algebra

	Fall 2011	Spring 2012	Fall 2012	Spring 2013	Fall 2013	Spring 2014
Enrollment	31	29	32	15	42	36
Correlation	0.6927	0.5784	0.7414	0.7734	0.8211	0.5800

All Students	Fall 2011	Spring 2012	Fall 2012	Spring 2013	Fall 2013	Spring 2014
Enrollment	31	29	32	15	42	36
Mean grade	2.77	1.90	2.66	3.13	2.93	2.03
Mean score	71.5	56.3	36.6	43.9	40.5	32.4
Score as % of cutoff	102.1	80.5	81.3	97.6	90.1	72.1

Passing Students	Fall 2011	Spring 2012	Fall 2012	Spring 2013	Fall 2013	Spring 2014
Enrollment	27	19	28	14	38	24
Mean grade	3.04	2.58	2.89	3.29	3.21	2.71
Mean score	73.9	64.7	38.5	45.5	42.7	36.1
Score as % of cutoff	105.6	92.5	85.5	101.1	94.9	80.2

"A" Students	Fall 2011	Spring 2012	Fall 2012	Spring 2013	Fall 2013	Spring 2014
Enrollment	10	3	10	6	19	4
Mean score	91.5	70.7	51.3	53.8	54.7	51.5
Score as % of cutoff	130.7	101.0	114	119.6	121.6	114.4

Appendix C: College Level Mathematics

MT 103 Intermediate Algebra

	Fall 2011	Spring 2012	Fall 2012	Spring 2013	Fall 2013	Spring 2014
Enrollment	23	34	29	25	17	24
Correlation	0.6285	0.7494	0.7650	0.7047	0.7357	0.8080

All Students	Fall 2011	Spring 2012	Fall 2012	Spring 2013	Fall 2013	Spring 2014
Enrollment	23	34	29	25	17	24
Mean grade	2.04	2.21	2.38	2.21	2.88	2.29
Mean score	81.7	74.1	45.3	41	50.9	43.4
Score as % of cutoff	82.5	74.9	69.8	63.1	78.3	66.8

Passing Students	Fall 2011	Spring 2012	Fall 2012	Spring 2013	Fall 2013	Spring 2014
Enrollment	16	26	23	23	15	16
Mean grade	2.81	2.62	2.83	2.61	3.2	3.19
Mean score	90.3	81	49.0	51.6	54.3	50.7
Score as % of cutoff	91.2	81.8	75.4	79.3	83.5	78.0

"A" Students	Fall 2011	Spring 2012	Fall 2012	Spring 2013	Fall 2013	Spring 2014
Enrollment	6	4	58.3	6	7	5
Mean score	97.7	102.8	89.7	59.8	63	61
Score as % of cutoff	98.7	103.8	89.7	92.1	96.9	93.8

Appendix D: Low Stakes Writing in Mathematics

Extra Credit Reflection Essay (5 test points)

The extra credit reflection essay: Write your opinions about this class. I will not read the paper until after final grades have been submitted. The 5 points will be awarded if you hand in the paper and it is not too long. Your paper should **NOT EXCEED** 2 pages (500 - 750 words) typed in the format of your choice. Your paper **COULD** address the following types of items:

1. What you liked the most, least about this class.
2. Did this class meet your expectations?
3. Would you recommend this class to your friends?
4. Something unusual you learned in this class.
5. What you would change about this class.
6. Activities that caused you to learn the most in this class.
7. Describe this class to a friend that was interested in finding out more about the class before enrolling in the class.
8. Opinions on the format of class: Technology or the lack of use of technology, homework as part of the grade etc.).
9. Quantity, length and difficulty of the following items: tests, homework.
10. Opinions on not having pre-assignments every day (if you know what they are).
11. **OTHER ITEMS OF YOUR CHOICE (related to this class).**