

DELTA STATE UNIVERSITY: ACADEMIC ANNUAL REPORT
Academic Year 2005-06

I. Unit Title: Mathematics Department

School or College: Arts and Sciences

Unit Administrator: Rose Strahan

II. Educational Program Learning Outcome Assessment Plan

These are Learner Outcomes identified for the **current** year.

Outcomes for the B. S. Degree with a Major in Mathematics

Learning Outcome	Data Collection and Analysis	Results of Evaluation	Use of Evaluation Results																											
<p>General Education Outcome</p> <p>Demonstrate proficiency in basic knowledge of College Algebra topics.</p>	<p>The final examination in MAT 104 College Algebra will be used to determine the level of mastery of the topics in College Algebra. The examination is written each semester by a committee of faculty members who do not teach the course during that particular semester, and the examination material covers specific course objectives which have been defined by a committee of departmental faculty. All college algebra students take this common final exam during an exam period that is dedicated solely to this course. Following the administration of the final exam, an item analysis will be performed to determine areas of weakness and strength.</p>	<p>Analysis of fall 2005 semester grades is shown in the following table.</p> <p>The objective number corresponds to the published objectives for College Algebra (MAT 104). The final exam questions were matched to these 8 objectives. The number of students that demonstrated mastery of each objective was computed. (See appendix for the objectives.)</p> <table border="1" data-bbox="1020 943 1497 1429"> <thead> <tr> <th data-bbox="1020 943 1178 1130">Objective Number</th> <th data-bbox="1178 943 1346 1130">Mastery Percentage</th> <th data-bbox="1346 943 1497 1130">Number of exam questions for that objective</th> </tr> </thead> <tbody> <tr> <td data-bbox="1020 1130 1178 1166">1</td> <td data-bbox="1178 1130 1346 1166">55%</td> <td data-bbox="1346 1130 1497 1166">2</td> </tr> <tr> <td data-bbox="1020 1166 1178 1201">2</td> <td data-bbox="1178 1166 1346 1201">47%</td> <td data-bbox="1346 1166 1497 1201">6</td> </tr> <tr> <td data-bbox="1020 1201 1178 1237">3</td> <td data-bbox="1178 1201 1346 1237">55%</td> <td data-bbox="1346 1201 1497 1237">3</td> </tr> <tr> <td data-bbox="1020 1237 1178 1273">4</td> <td data-bbox="1178 1237 1346 1273">75%</td> <td data-bbox="1346 1237 1497 1273">3</td> </tr> <tr> <td data-bbox="1020 1273 1178 1308">5</td> <td data-bbox="1178 1273 1346 1308">72%</td> <td data-bbox="1346 1273 1497 1308">5</td> </tr> <tr> <td data-bbox="1020 1308 1178 1344">6</td> <td data-bbox="1178 1308 1346 1344">58%</td> <td data-bbox="1346 1308 1497 1344">11</td> </tr> <tr> <td data-bbox="1020 1344 1178 1380">7</td> <td data-bbox="1178 1344 1346 1380">65%</td> <td data-bbox="1346 1344 1497 1380">1</td> </tr> <tr> <td data-bbox="1020 1380 1178 1429">8</td> <td data-bbox="1178 1380 1346 1429">45%</td> <td data-bbox="1346 1380 1497 1429">1</td> </tr> </tbody> </table>	Objective Number	Mastery Percentage	Number of exam questions for that objective	1	55%	2	2	47%	6	3	55%	3	4	75%	3	5	72%	5	6	58%	11	7	65%	1	8	45%	1	<p>Since 11 questions matched with objective number 6, this objective may be too general. A committee from the faculty will examine this objective to decide if it should be made into several specific objectives. One question for each objective 7 and 8 is not enough to judge mastery; however, not much course time is devoted to these two objectives.</p> <p>Since objective 2 is a big part of the course and the mastery rate is low, review sessions will be held during the time that the content of objective 2 is being covered in class.</p>
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<p>Major Field Outcomes</p> <p>Demonstrate understanding of fundamental ideas, concepts, and applications of mathematics.</p>	<p>In 1995-96 a capstone course, MAT 490 for 1 semester hour credit, was added as a means of assessing the effectiveness of the B. S. degree program.</p> <p>ETS Major Field Test</p> <p>Content areas:</p> <ol style="list-style-type: none"> 1. calculus 2. algebra (linear & abstract) 3. additional topics: advanced Calculus, real analysis, discrete, probability & statistics, dynamical systems, point-set topology, geometry, differential equations, numerical analysis complex analysis 	<p>Strengths and weaknesses in the program were determined through the performance of the students in the class.</p> <p>Two students took the online version of the test in May 2006. The mean score was 159.5.</p>	<p>Two years later the number of credit hours was changed to 3 semester hours as the department realized the number of contact hours needed to be increased for the course to be effective.</p> <p>The course content is revised each year to emphasize the connections among the different areas within the discipline.</p> <p>In addition to the capstone course the department will require completion of a major field test in mathematics.</p> <p>The department will determine a more appropriate time for the students to take the test. Currently we do not have sufficient information regarding the test content nor enough data from our students to determine a target score for our students. We also plan to offer review sessions prior to the testing date next year.</p>
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<p>Demonstrate the ability to communicate mathematics.</p>	<p>In each of the 400-level mathematics content courses, the students will read an article from the area of content covered in the particular course. This article will be chosen by a committee of faculty members who teach the 400-level content courses. The student will write a synopsis and critique of the article. Approximately 50-75% of the paper should be devoted to the synopsis of the article which should demonstrate that the reader understands the purpose of the article as well as the major mathematical concepts present in the article. The remainder of the writing will be devoted to a critique of the article. The grading of this paper will be done by a committee of faculty members who teach the 400-level content courses as prescribed by a rubric developed by the faculty members on this committee. The results will be analyzed by the mathematics faculty.</p>	<p>The committee used a rubric to evaluate the writing and reached consensus on the scores. On a scale of 1 to 5, the scores ranged from 1 to 4 with 8 students scoring 3 or better and 8 scoring below 3. (See the appendix for the rubric.)</p>	<p>The department will continue this type of writing assessment by gathering data in all 400-level courses in fall semester. We will track those who made below 3 on the first assessment and look for improvement in later assignments. From the data already gathered, we are now planning to use this assignment in all 300-level courses.</p>
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B.S.E. Degree with a Major in Mathematics Education

Learning Outcome	Data Collection and Analysis	Results of Evaluation	Use of Evaluation Results																											
<p>General Education Outcome</p> <p>Demonstrate proficiency in basic knowledge of College Algebra topics.</p>	<p>The final examination in MAT 104 College Algebra will be used to determine the level of mastery of the topics in College Algebra. The examination is written each semester by a committee of faculty members who do not teach the course during that particular semester, and the examination material covers specific course objectives which have been defined by a committee of departmental faculty. All college algebra students take this common final exam during an exam period that is dedicated solely to this course. Following the administration of the final exam, an item analysis will be performed to determine areas of weakness and strength.</p>	<p>Analysis of fall 2005 semester grades is shown in the following table.</p> <p>The objective number corresponds to the published objectives for College Algebra (MAT 104). The final exam questions were matched to these 8 objectives. The number of students that demonstrated mastery of each objective was computed. (See the appendix for the objectives.)</p> <table border="1" data-bbox="1020 833 1491 1321"> <thead> <tr> <th>Objective Number</th> <th>Mastery Percentage</th> <th>Number of exam questions for that objective</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>55%</td> <td>2</td> </tr> <tr> <td>2</td> <td>47%</td> <td>6</td> </tr> <tr> <td>3</td> <td>55%</td> <td>3</td> </tr> <tr> <td>4</td> <td>75%</td> <td>3</td> </tr> <tr> <td>5</td> <td>72%</td> <td>5</td> </tr> <tr> <td>6</td> <td>58%</td> <td>11</td> </tr> <tr> <td>7</td> <td>65%</td> <td>1</td> </tr> <tr> <td>8</td> <td>45%</td> <td>1</td> </tr> </tbody> </table>	Objective Number	Mastery Percentage	Number of exam questions for that objective	1	55%	2	2	47%	6	3	55%	3	4	75%	3	5	72%	5	6	58%	11	7	65%	1	8	45%	1	<p>Since 11 questions matched with objective number 6, this objective may be too general. A committee from the faculty will examine this objective to decide if it should be made into several specific objectives. One question for each objective 7 and 8 is not enough to judge mastery; however, not much course time is devoted to these two objectives.</p> <p>Since objective 2 is a big part of the course and the mastery rate is low, review sessions will be held during the time that the content of objective 2 is being covered in class.</p>
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<p>Major Field Outcomes</p> <p>Demonstrate understanding of</p>	<p>Praxis Math Content Test</p>	<p>The state department for licensure of teachers determines the passing score which is currently 123. Five</p>	<p>The department will assist students in reviewing the content of courses taken early</p>																											

<p>fundamental ideas, concepts, and applications of mathematics.</p>	<p>ETS Major Field Test</p> <p>Content areas: 1.calculus 2.algebra (linear & abstract) 3.additional topics: advanced Calculus, real analysis, discrete, probability & statistics, dynamical systems, point-set topology, geometry, differential equations, numerical analysis complex analysis</p>	<p>students took the content test with 3 of the 5 passing on the first attempt with scores of 131, 125, and 134. The other two were not successful until the third attempt with scores of 141 and 145.</p> <p>The same five students took the online version of the test in May 2006. The timing was bad as the students were preparing for examinations and three students were finishing student teaching. The mean score was 132.</p>	<p>in their program prior to the taking of the test.</p> <p>The major field test will also be required to provide data for the department.</p> <p>The department will determine a more appropriate time for the students to take the test. Currently we do not have sufficient information regarding the test content nor enough data from our students to determine a target score for our students. We also plan to offer review sessions prior to the testing date next year.</p>
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III. Division/Department Goals for 2005-06

This is a report on progress towards goals for the **current year**. These are operational goals for the unit that are NOT tied directly to student learning outcomes which are reported in the table above. An example might be the implementation of a development campaign in conjunction with the DSU Foundation to raise monies for faculty research and travel.

A. Goal # 1: To improve the writing skills of all mathematics majors

1. QEP Institutional Goal #3 which was supported by this goal:

DSU students will gain knowledge and practice in a variety of communication skills by having these skills reinforced in all courses.

2. Evaluation Procedure(s): An improvement in the pass/fail rate on the Writing Proficiency Exam and on the writing component of the Praxis.

3. Actual Results of Evaluation: In 2004-2005 of the 8 students taking the WPE only 3 received credit. One of the 2 students taking the Praxis I Writing test passed. In 2005-2006 of the 6 students taking the WPE 5 passed. Praxis I Writing test results are not available at this time.

4. Use of Evaluation Results: The mathematics department will continue to make a concerted effort to implement the following plans to try to improve the writing ability of our students.

1. Each faculty member will include at least one question on each test in both upper and lower level classes that requires students to provide written explanations of concepts. Evaluation of the answers to such questions will include mathematical content and also spelling, grammar, and sentence construction. An evaluation rubric will be created by the mathematics faculty and shared with the students prior to any writing assignment.

2. All classes above the 100 level that are taken by mathematics majors will require writing in the form of written projects and essay portions of the exams. The written projects will concern an important concept in the course and may include reading and summarizing mathematics articles. Students should turn in a rough draft, receive feedback from the instructor, and then turn in a final draft. These projects will be graded for content and writing.

B. Goal # 2: Prepare students to teach using appropriate technology and prepare students who will enter the work force in non-teaching jobs to function in today's technology dependent society.

1. QEP Institutional Goal #2 which was supported by this goal: DSU will increase the use of technology and web-based communication in classroom activities and assignments.

2. Evaluation Procedure(s): Graduates should be able to use appropriate technology including graphing calculators, computers, and computer accessories in the classroom and as a means of presenting and storing information. Technology skills are incorporated into courses that our majors will take in their program.

In Teaching Secondary School Mathematics (CUR 487), the content methods course for the BSE majors, the students create their portfolios with technology. These portfolios are evaluated using STAI Domain I indicator 3 and STAI Domain III indicator 25 rubrics (4 high to 1 low).

Individual homework problems assigned in MAT 322 constitute 50% of the grade in the class. Due to the nature of the problems assigned in this class, the verification of answers to homework questions often entails tedious computations involving derivatives and algebraic processes. Students are required to verify answers to homework problems before submitting them for grading. For students

who fail to verify answers and who consequently get incorrect answers, papers are returned to the student with no credit awarded. The student then gets the opportunity to resubmit a corrected version of the problem for a maximum of 80% credit.

Students in MAT 300 are expected to use Excel to: construct frequency tables and graphs, perform probability simulations, simplify normal distribution and Student's t distribution applications, estimate confidence intervals for population means, and perform hypothesis testing (single means, difference of means for independent samples and for matched pairs, correlation and regression analysis). For each of the MAT 300 Excel applications, the students are shown a real-world example and are then given an assignment to complete. The assignment is graded on both the use of Excel and in the analysis of the results (since results are meaningless if the student doesn't understand them). Additionally, students are asked questions on the section tests similar to the lab assignments. On these questions, the students explain, in general, how to do a procedure(s) in Excel and how to analyze the findings. In MAT 205, the students must use Excel or some other spreadsheet to process and graph numerical data within written projects as part of the course requirements. The projects are graded on mathematical content and accuracy as well as on communication ideas.

In MAT 207, the students must use *DERIVE*, a computer algebra system, to graph three-dimensional functions and surfaces. The students must complete an assignment which requires the use of the graphing capabilities of *DERIVE*.

3. Actual Results of Evaluation:

In CUR 487 no student received a rating below 3. They demonstrated that they can present and organize information with technology, select appropriate technology for the 7-12 classrooms, and conduct lessons that use technology.

Even though *DERIVE 5* has the capability of solving differential equations in MAT 322, students are not allowed to use the software for this purpose. Students must show every detail of the work involved in solving the differential equations. They use *DERIVE 5* to verify their answers to homework problems and must also indicate on each problem exactly how the answer was verified. When the technology is used and an answer cannot be verified, this is an indication to the student that there are errors in the problem solution. At this point, students are forced to analyze their work and employ critical thinking and problem solving skills to find the errors and correct them.

For MAT 300, the lab assignments are graded and are counted as quizzes. Similarly, the test questions related to the labs are graded as part of the tests.

In Fall 2005, the MAT 205 class average on the written projects was 73.7%.

In spring 2006, all students in MAT 207 completed the assignment at or above the 70% level of proficiency.

4. Use of Evaluation Results:

The use of technology in the preparation of the teaching portfolios (CUR 487) will continue as a requirement. This method continues to be a wonderful improvement over the hand written version of a few years ago. These skills carry over to their student teaching semester where each student is expected to include technology rich lessons in their plans.

The students in the MAT 322 class have indicated that the use of this software has been very valuable to them not only in terms of verification of solutions to homework problems, but in general understanding of all aspects of the problem. As the semester has progressed much interest was generated in the use of *DERIVE 5* to assist with work in other courses as well, especially the courses in the calculus sequence.

For MAT 300, the lab assignments are graded. If there are several students making the same type of mistake (either in Excel or in the analysis), the mistake and correction are discussed in class. Otherwise, the student is expected to either figure out how to correct any mistakes on their own or ask the instructor how to correct them. This is necessary as the section tests have questions related to the labs. If the student makes mistakes on the section tests regarding lab-type work, they should still see the instructor to figure out their mistake, as the final exam also has questions of this nature.

Student performance on the MAT 205 projects gave the instructor opportunities to work with individual students to increase proficiency in the use of the software.

Because the MAT 207 students found the software to be easy to use, the instructor encouraged the students to explore other features of the package which are useful in solving more advanced problems.

C. Goal #3: Host an annual Mathematics Tournament to be held each spring on our campus and sponsored by the Mathematics Department.

1. Strategic Plan Institutional Goal #2 which was supported by this goal:

Students will enroll in greater numbers and a larger percentage will persist to graduation.

2. Evaluation Procedures: Analysis of the data from the previous year's tournament to compare the number of students participating and the number seniors who choose to attend DSU.

3. Actual Results of Evaluation: In 2005, there were 16 schools, 26 teams, with 104 students participating. Of the 104 participants, 40 were high school seniors. 23 of the 40 (57.5%) attended DSU in 2005-2006. In 2006, the number of schools

increased to 19, the number of teams to 30, and the number of students to 120. Ten students who were not on a team also attended to observe.

4. Use of Evaluation Results:

We have increased the role of DSU mathematics majors in tournament activities so the high school student has more contact with the university mathematics majors. The DSU students wrote questions, monitored the written test and assisted with the grading, assisted with the ciphering and relay activities, and served as campus guides. The DSU students also wrote personal notes to all high school students who attended.

The Mathematics Department will follow-up with the seniors having the highest scores, especially the scholarship winners, to encourage them to attend DSU.

IV. Data and information for department:

Note: The Department has no active degree granting graduate program, however, graduate hours are offered through institutes and special courses.

	Sp 05	S 05	F 05	Sp 06
Total credit hours, undergraduate	1780	240	2357	1797
Total credit hours, graduate	0	114	0	0
Totals	1780	354	2357	1797
Number of Majors				
Mathematics	16	3	19	18
Mathematics education	27	7	33	25
Total	43	10	52	43
Grade distribution				
A	96	24	99	61
B	120	15	138	122
C	97	22	166	132
D	85	11	88	84
F	169	19	203	168
W	27	4	63	29
Other (I, AU)	4	1	2	3

There are two courses that are taught in the mathematics department that do not appear on the print out of faculty load or credit hour production--MAT 099 and CUR 487. The following table indicates the enrollment in those courses for spring 2005 through spring 2006.

Enrollment	Sp 05	S 05	F 05	Sp 06
MAT 099	41		110	26
CUR 487	0		6	0

Number of Graduates

	Sp 05	F 05	Sp 06
BS degree	2	0	1
BSE degree	1	1	4

Advisees per Faculty Member

	2005-2006
Hebert	1
Norris	9
Strahan	14
Wear	12
Wingard	16

Writing Proficiency Exam

	Sp 05	S 05	F 05
Credit	2	0	3
No credit	1	0	0

Praxis

	Sp 05	S 05	F 05
PPST	Pass Fail	Pass Fail	Pass Fail
Math	1		
Reading	1		
Writing	1		
PLT	1		1
Math content area test	1		3 2

External Funding/Grants

Summer Institute 2005—*Integrating Algebra and Geometry: Institute for Teachers of Grades 5-8* funded by IHL through the No Child Left Behind Title II: Improving Teacher Quality Program. Grant total was \$80,487.

The institute for mathematics teachers of grades 5 through 8 was held on Delta State University campus on June 3 through 30. Participants received 6 hours of graduate credit for MAT 532 Special Topics in Mathematics-Algebra/geometry.

All of the 19 teachers who participated taught in public schools. The grade levels taught ranged from fourth grade mathematics through high school geometry with most teaching at least two levels of mathematics.

The participants had a broad range of educational backgrounds with only two having attained a major in mathematics education and teacher certification in mathematics for grades 7- 12. Although there were vast differences in the mathematical knowledge of the participants, they learned much from each other and were a very congenial group.

Participants wrote lesson plans, presenting a teaching activity on a topic for their grade level, presented problems and solutions to the group, read and critiqued 5 journal articles, and participated in journal writing. There were two content tests--mid-term and final-- that were also a part of the grade. Each person earned 6 semester hours credit with the grades distributed as follows: A--14, B--3, C--2.

Each participant also took a pre and post content test, which was not used in computing the grade but was used to evaluate change. Each participant also completed a pre and post attitude test. To establish the significance of these data, a *t-test* was performed on the Algebra/geometry content and the attitude tests. In each case, there was a significant difference ($\alpha = 0.05$) between the pre- and post-test results (Algebra/geometry content: $t = 5.3163$, $df = 18$, $p = 0.0000$, one-tailed with critical $t = 1.7341$; attitude: $t = 2.0156$, $df = 18$, $P = 0.0295$, one-tailed with critical $t = 1.7341$).

The academic year follow-up sessions were held on September 10 and February 18.

For additional information about the institute visit our web site at

<http://www.deltastate.edu/academics/artsci/math/summerinst.html>

V. Personnel:

Noteworthy activities and accomplishments:

David Hebert was one of the writers for the new version of the Mississippi Mathematics Framework. He also conducted a workshop last June in Jackson for middle school teachers with geometry as the focus.

David Hebert and Stella Wear are co-chairs of a major NCATE Committee.

Paula Norris serves as corresponding secretary and Rose Strahan serves as faculty adviser for Kappa Mu Epsilon, a national mathematics honorary society for students.

Lee Virden and Paula Norris were speakers at the annual meeting of the Mississippi Council of Teachers of Mathematics in Jackson in November. The title of their presentation was *Correlation Revelation* and focused on the use of Excel and the TI-83 calculator.

Lee Virden was the instructor for the mathematics activities in Kids' College in Summer 2005 and will do that again in June 2006.

Rose Strahan and Stella Wear made a presentation entitled *Too Few Questions = Missed Opportunities* at the annual conference of the National Council of Teachers of Mathematics in St. Louis, MO. They also presented a workshop entitled *Building An Integrated Community: Geometry and Algebra Navigating Together* at the annual meeting of the Mississippi Council of Teachers of Mathematics in Jackson in November.

Rose Strahan and Stella Wear were Co-Directors of an IHL funded summer institute for teachers entitled *Integrating Algebra and Geometry: Institute for Teachers of Grades 6--Geometry*. They are co-writers and directors of a No Child Left Behind \$119,840

grant from IHL for a 2006 summer institute for teachers of mathematics in grades 5-8. This is the sixth consecutive year to have a funded grant through IHL. At an IHL meeting in Jackson in March, they shared their institute design with other recipients of No Child Left Behind grants for Summer 2006 institutes.

Rose Strahan is serving as Senior College Vice-President on the Board of the Mississippi Council of Teachers of Mathematics.

Stella Wear is a member of the tenure and promotion committee for the Social Work Department.

Clifton Wingard conducted a workshop entitled *Introducing Calculus Topics* at the annual meeting of the Mississippi Council of Teachers of Mathematics in Jackson in November. He also conducted a workshop entitled *Investigating Elementary Concepts of Calculus* at the annual meeting of the National Council of Teachers of Mathematics in St. Louis in April.

Clifton Wingard served as newsletter editor of the LA/MS Section of the Mathematical Association of America for 2005-2006.

The Mathematics Department hosted the Sixth Annual Mathematics Tournament for high school students in February. Under the direction of Stella Wear all members of the department faculty served on committees to plan and implement the tournament. The effort was very successful with 120 students participating. DSU mathematics majors wrote letters to all high school participants encouraging them in their study of mathematics and also encouraging them to attend DSU. Plans have already begun for next year's tournament. Statistics from the 2005 tournament indicate that 40 of the participants were high school seniors and 23 of those 40 (approximately 57.5%) are now attending DSU.

New position(s) requested, with justification:

None requested.

Recommended change of status:

No recommendations.

VI. Degree Program Addition/Deletions and/or Major Curriculum Changes:

Changes made in the past year

During the past year the department approved a new requirement that all seniors must take the Educational Testing Service Major Field in Mathematics.

Recommended changes for the coming year(s)

Establish a minimum score requirement for the major field test based on data collected.

VII. Division/Department Goals for 2006-07

A. Goal # 1: To improve the writing skills of all mathematics majors

1. QEP Institutional Goal #3 which was supported by this goal:

DSU students will gain knowledge and practice in a variety of communication skills by having these skills reinforced in all courses.

2. Expected Results:

We expect to see improvement in the writing skills as we stress the importance of writing in our classes and as we collect writing samples for multiple years from our majors.

3. Evaluation Procedure(s):

Comparison of the samples collected in the classes to determine if individual students are improving.

4. Use of Evaluation Results:

If there is no improvement, we will work with the writing lab to try to assist students.

B. Goal # 2: Prepare students to teach using appropriate technology and prepare students who will enter the work force in non-teaching jobs to function in today's technology dependent society.

1. QEP Institutional Goal #2 which was supported by this goal: DSU will increase the use of technology and web-based communication in classroom activities and assignments.

2. Expected Results: We expect students to be able to use the most recent technology available for mathematics and for statistics.

3. Evaluation Procedure(s):

Paper incorporating advanced topics from mathematics or statistics will be submitted by students and will indicate the successful use of the appropriate technology.

4. Use of Evaluation Results:

Assignments will be revised, if necessary, to require students to become more proficient in using the appropriate technology—DERIVE, Geometer's Sketchpad, statistical packages, etc.

C. Goal #3: Host an annual Mathematics Tournament to be held each spring on our campus and sponsored by the Mathematics Department.

1. Strategic Plan Institutional Goal #2 which was supported by this goal:

Students will enroll in greater numbers and a larger percentage will persist to graduation.

2. Expected Results: Actively encourage all regional high schools to participate.

3. Evaluation Procedure(s):

Did some regional high schools that have never participated send a team in 2007?

4. Use of Evaluation Results:

Continue to encourage high schools to participate and share the success having we are having with the tournament.

ADDENDIX

Objectives for College Algebra (MAT 104):

1. Simplify algebraic expressions.
2. Solve and graph linear and quadratic equations and expressions.
3. Solve applied problems.
4. Describe and define a function.
5. Find the equation for a linear function satisfying given conditions.
6. Identify the domain and range, sketch the graph, find the zeros, and compute the inverse of functions.
7. Evaluate exponential and logarithmic functions.
8. Solve systems of equations.

Rubric for Scoring Student Learning Outcome 3:

- | | |
|---|--|
| 5 | demonstrates knowledge of all main ideas; ideas are carefully explained, applied, extended, and appropriate connections made |
| 4 | demonstrates knowledge of most of main ideas |
| 3 | demonstrates knowledge of some main ideas with something relevant to effective teaching explained |
| 2 | demonstrates little knowledge of main ideas, disconnected ideas, or idea does not apply to article |
| 1 | demonstrates no understanding of main ideas |
| 0 | no response |

Note: Mistakes in grammar and spelling will be applied to each level.