Mission/Purpose
The mission of the University of West Alabama Department of Mathematics is to prepare its students for successful careers in industry, teaching, and graduate school through classroom instruction, advising, and mentoring.

I. Goals and Student Learning Outcomes, With Any Associations and Related Measures, Achievement Targets, Findings, and Action Plans

A. Goal: Address the major educational issues of the region
Address the major educational, social, cultural, and economic issues of the region and in doing so promote a positive image of the institution and the area.

1. Outcome: Majors will demonstrate mastery of pure and applied mathematical skills
Mathematics majors will show an acceptable mastery of pure and applied mathematical skills.

   a. Measure: Majors will achieve above average scores on comprehensive final exams
   The MH 300 comprehensive final exam measures critical thinking skills and the ability to read and construct mathematical proofs.

   Source of Evidence: Academic direct measure of learning - other

   1. Achievement Target:
   75% of mathematics majors enrolled in MH 300 will score above average on the comprehensive final exam.

   2. Findings (2010-2011) - Achievement Target: Met
   88% of mathematics majors enrolled in MH 300 scored above average on the comprehensive final exam. Findings indicate a reasonable mastery of pure and applied mathematical skills. These skills will be beneficial to the student in subsequent courses.

2. Outcome: Majors will be prepared for graduate studies or careers in related fields
Mathematics majors will be prepared for graduate studies or careers in mathematics related fields by enhancing their skills in critical thinking, communication skills, and use of technology.

   a. Measure: Mathematics graduates who apply for graduate school will be accepted.
   Mathematics graduates who apply for graduate school will be accepted.

   Source of Evidence: Graduate/professional school acceptance rate

   1. Achievement Target:
   100% of mathematics graduates who apply for graduate school will be accepted.
2. **Findings (2010-2011) - Achievement Target: Met**
   Two students applied and were accepted to graduate school.

3. **Outcome: Students will use standard mathematical techniques to solve elementary problems.**
   Students will use standard mathematical techniques to solve elementary problems by successful completion of the developmental mathematics program.

   a. **Measure:** Developmental mathematics students will demonstrate proficiency in basic techniques of algebra and problem solving skills
   Developmental mathematics students in MH 080, MH 081, and MH 101 will demonstrate proficiency in basic techniques of algebra and problem solving skills. Comprehensive final exams in these courses measure these abilities.

   Source of Evidence: Academic direct measure of learning - other

   1. **Achievement Target:**
      Students in MH 081 will demonstrate proficiency on the comprehensive final exam by making a score of 70 or higher. Students in MH 101 will demonstrate proficiency on the comprehensive final exam by making a score of 70 or higher.

   2. **Findings (2010-2011) - Achievement Target: Partially Met**
      62% of students in MH 081 made a score of at least 70 on the final exam. 63% of students in MH 101 made a score of at least 70 on the final exam. This indicates that some students are not utilizing the services provided in the math lab, and perhaps more repetition of exercises is warranted.

   3. **Action Plan:**
      Increase repetition of exercises
      Developmental faculty will increase repetition of exercises in class and out of class assignments. Mandatory lab sessions will be monitored.
      **Established in Cycle:** 2010-2011
      **Implementation Status:** Planned
      **Priority:** High
      **Implementation Description:** Meet with faculty
      **Responsible Person/Group:** Developmental math faculty and chair.

II. Goals and Other Outcomes/Objectives, With Any Associations and Related Measures, Achievement Targets, Findings, and Action Plans

   A. **Goal:** Address the major educational issues of the region
   Address the major educational, social, cultural, and economic issues of the region and in doing so promote a positive image of the institution and the area.

   1. **Objective:** Employ a sufficient number of qualified faculty
      Employ a sufficient number of qualified faculty.

      a. **Measure:** Maintain current faculty
      Maintain current faculty

      Source of Evidence: Administrative measure - other

      1. **Achievement Target:**
         The department of mathematics will retain current faculty.
2. Findings (2010-2011) - Achievement Target: Partially Met
The department retained all math faculty from 2010-2011 except for one. It is
rethinking the need to create a new master's level position for teaching
developmental courses.

3. Action Plan:
   Decision and Action
   The department will determine whether a new master's level position is
   needed and act accordingly, and it will also advertise for a new Ph.D.
   position to replace the departed faculty member.
   Established in Cycle: 2010-2011
   Implementation Status: Planned
   Priority: High

2. Objective: Increase awareness of the department and its degree programs
The Department of Mathematics will, through a variety of means, promote an increased
level of awareness by the public of the department and its degree programs.

   a. Measure: Faculty members will participate in service projects.
      Awareness of the department of mathematics will be observed through the
      participation of faculty members in service projects.
      Source of Evidence: Activity volume

      1. Achievement Target:
         All faculty members will participate in at least one service project. The
department will also endeavor to take one recruiting trip per academic year.

      2. Findings (2010-2011) - Achievement Target: Met
         All faculty members participated in at least one service project as evidenced by
faculty service reports. The department did not take a recruiting trip during the
2010-2011 academic year. However, the department participated in the
Science Olympiad, which is a recruiting tool.

3. Objective: Provide majors with extracurricular activities
The Department of Mathematics will provide the opportunity for students to participate in
extracurricular activities through the UWA Math Club, MAA-UWA, and Kappa Mu
Epsilon (KME) Honor Society.

   a. Measure: Maintain regular meetings for extracurricular activities
      Both the UWA Math Club and KME will have regular meetings throughout the Fall
and Spring Semesters.
      Source of Evidence: Activity volume

      1. Achievement Target:
         Both the UWA Math Club and KME will have regular meetings throughout
the Fall and Spring semesters.

      2. Findings (2010-2011) - Achievement Target: Met
         Each of these organizations had regular meetings during the 2010-2011
academic year.
4. **Objective: Maintain Presence at Meetings**
The Department of Mathematics will strive to maintain a presence at mathematics meetings and conferences within the state of Alabama.

a. **Measure: Faculty will attend meetings and conferences**
Faculty will attend meetings and conferences. This can be assessed by a review of departmental travel and reimbursement records.

Source of Evidence: Document Analysis

1. **Achievement Target:**
10% of faculty will attend meetings and conferences.

2. **Findings (2010-2011) - Achievement Target: Met**
20% of faculty attended a meeting or conference.

### III. Other Plans for Improvement

A. **Continue faculty travel and development**
Continue faculty travel and development

- **Established in Cycle:** 2010-2011
- **Implementation Status:** Planned
- **Priority:** High
- **Implementation Description:** Continue and improve current fiscal support.
- **Budget Amount Requested:** $2,750.00

B. **Continue support of Alabama Journal.**
Continue support of Alabama Journal.

- **Established in Cycle:** 2010-2011
- **Implementation Status:** Planned
- **Priority:** High
- **Implementation Description:** Continue process currently in place.
- **Budget Amount Requested:** $0.00

C. **Continue upgrade of software as affordable.**
Continue upgrade of software as affordable.

- **Established in Cycle:** 2010-2011
- **Implementation Status:** Planned
- **Priority:** High
- **Implementation Description:** Seek funding.
- **Budget Amount Requested:** $2,000.00

D. **Employ a sufficient number of qualified faculty**
Employ a sufficient number of qualified faculty

- **Established in Cycle:** 2010-2011
- **Implementation Status:** In Progress
- **Priority:** High
- **Implementation Description:**
  2a. Retain current faculty.
  2b. Create new master’s level position for teaching developmental courses.
  2c. Replace the Ph.D. position vacated due to retirement.
  2d. Keep current Lecturer and Instructor positions.
  2e. Keep both Graduate Assistant positions.

- **Additional Resources Requested:** $0.00
- **Budget Amount Requested:** $36,234.00
- **Implementation Notes:**
  7/20/2011 All math faculty were retained from 2010-2011. The department is rethinking the need to create a new master’s level position for teaching developmental courses.
E. Improve comfort and appearance of the math lab
   Improve comfort and appearance of the Mathematics Lab.
   Established in Cycle: 2010-2011
   Implementation Status: Finished
   Priority: High
   Implementation Description: Paint and construct a soundproofing wall in BG 207C.
   Additional Resources Requested: Physical improvements - $3000 and soundproofing wall - $2000
   Budget Amount Requested: $5,000.00

F. Increase the number of mathematics majors
   Increase the number of mathematics majors.
   Established in Cycle: 2010-2011
   Implementation Status: Planned
   Priority: High
   Implementation Description: 1a. Schedule recruiting trips. 1b. Attend recruitment workshops. 1c. Identify undeclared majors within the University who may be interested in mathematics. 1d. Continue to establish and maintain lines of communication between the University and high schools and community colleges in the service area. 1e. Improve the UWA Mathematics Web Page.
   Additional Resources Requested: 1a. $0 1b. $0 1c. $0 1d. $350 1e. $400
   Budget Amount Requested: $750.00

G. Increase the rate of retention of math majors
   Increase the rate of retention of math majors
   Established in Cycle: 2010-2011
   Implementation Status: Planned
   Priority: High
   Implementation Description: 5a. Improve student advising. 5b. Improve departmental communication with math majors. 5c. Continue faculty involvement with UWA Math Club and KME.
   Budget Amount Requested: $0.00

IV. Analysis Answers
   A. What specific strengths did your assessments show? (Strengths)
      Strengths indicated by the assessment include strong faculty involvement, Math Club and KME were active, and students who applied to graduate school were accepted.

   B. What specific weaknesses or challenges did your assessments show? (Weaknesses)
      A percentage of our developmental students did not perform at the desired level on the final exams in MH 081 and MH 101.

   C. What plans were implemented?
      The department supported faculty development and travel and continued support of the Alabama Journal. It renewed the MATLAB site license for the computers in LAB BG 110. It advertised for a Ph.D. position and filled the position.

   D. What plans were not implemented?
      The department is assessing the need for a master’s level instructor to teach developmental courses.

   E. How will assessment results be used for continuous improvement?
      The department will continue to monitor performance in MH 300 and add repetition of exercises to the MH 081 and MH 101 courses.