

**ASSESSMENT RECORD FOR  
DEPARTMENT  
OF**

**Mathematics**

(Academic Department Name)

**June 1, 2006 – May 31, 2007**

**October 15, 2007**

(Assessment Period Covered)

(Date Submitted)

**Includes Assessment Reports for those Instructional Programs listed below:**

Title of Instructional Degree Program

Degree Level

(Associate, Bachelors,  
Master's, etc.)

Mathematics

BA

Mathematics

BS

Submitted By: William M. Sliva

(Departmental Chair or Faculty Assessment Representative)

# ASSESSMENT REPORT FOR

**Mathematics**

(Instructional Degree Program)

**BA**

(Degree Level)

**June 1, 2006 – May 31, 2007**

(Assessment Period Covered)

**October 15, 2007**

(Date Submitted)

## Expanded Statement of Institutional Purpose Linkage:

**Institutional Mission Reference:** As a university committed to the liberal arts as fundamental to education and committed to our affiliation with the Presbyterian Church (U.S.A.), Schreiner is dedicated to excellence in preparing students to live purposeful, humane and productive lives in their work, faith groups, families and communities.

**College/University Goal(s) Supported:** Schreiner is dedicated primarily to educating undergraduate students in the liberal arts, sciences, and professional disciplines, preparing them for entry into specific careers and graduate or professional programs.

**Purpose of the degree program:** The mathematics degree programs at Schreiner University are to prepare students for further study in mathematics and related fields, or to enter the working world. The purpose of the assessment program is to determine whether students are acquiring the skills needed for mathematical analysis and problem solving.

## Intended Educational (Student) Outcomes:

1. The student will be able to define, analyze, and solve mathematical problems.

2. The student will be able to interpret graphic information.

3. The student will be able to use technology for mathematical problem solving.

4. The student will be able to apply mathematical concepts to solving problems in other fields.

5. The student will acquire skills necessary for self-directed learning.

6. The student will be able to communicate mathematical understanding to others.

# ASSESSMENT REPORT FOR

**Mathematics**

(Instructional Degree Program)

**BS**

(Degree Level)

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**Mathematics**

(Instructional Degree Program)

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## Intended Educational (Student) Outcome:

*NOTE: There should be one form C for each intended outcome listed on form B. Intended outcome should be restated in the box immediately below and the intended outcome number entered in the blank spaces.*

3. The student will be able to use technology for mathematical problem solving.

## First Means of Assessment for Outcome Identified Above:

**3a. Means of Program Assessment & Criteria for Success:** All students will complete MATH 3330: Applied Statistics, MATH 3425 Differential Equations, and/or MATH 4326: Numerical Analysis with a grade of C or higher.

**3a. Summary of Assessment Data Collected:** One of the two students successfully completed MATH 3330. Two of the three students successfully completed MATH 3425. Seven out of the seven students successfully completed MATH 4326.

**3a. Use of Results to Improve Instructional Program:** The one student who was unsuccessful in MATH 3330 was experiencing personal problems. The one unsuccessful student in MATH 3425 did not commit the time and energy into the course to be successful. All of the mathematics faculty strive to encourage their students to do well.

## Second Means of Assessment for Outcome Identified Above:

**3b. Means of Program Assessment & Criteria for Success:** Surveys of instructors teaching courses where technology is utilized will be compiled to provide additional assessment. The Applied Statistics students will complete a portfolio project with a grade of C or higher. All students will complete one or more technology based project(s) in each of Differential Equations and Numerical Analysis with a grade of C or higher.

**3b. Summary of Assessment Data Collected:** Both students successfully completed the portfolio project in MATH 3330. All three students successfully completed the technology project in MATH 3425. All seven students successfully completed the technology project in MATH 4326.

**3b. Use of Results to Improve Instructional Program:** Since all of the students successfully completed their portfolio and/or technology projects, no major revisions are planned at this time.

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## Intended Educational (Student) Outcome:

*NOTE: There should be one form C for each intended outcome listed on form B. Intended outcome should be restated in the box immediately below and the intended outcome number entered in the blank spaces.*

5. The student will acquire skills necessary for self-directed learning.

## First Means of Assessment for Outcome Identified Above:

**5a. Means of Program Assessment & Criteria for Success:** All students will create a satisfactory Capstone Notebook which will include an overview of all college-level mathematics courses taken.

**5a. Summary of Assessment Data Collected:** Four out of the five students successfully completed their Capstone Notebook. One student who did not successfully complete the notebook submitted an incomplete notebook to the instructor.

**5a. Use of Results to Improve Instructional Program:** Students will be required to work on their Capstone Notebooks incrementally. Each instructor will set deadlines for the completion of the Capstone Notebook.

## Second Means of Assessment for Outcome Identified Above:

**5b. Means of Program Assessment & Criteria for Success:** Students who complete MATH 4399: Senior Project will do so with a grade of C or higher.

**5b. Summary of Assessment Data Collected:** Four out of the four students successfully completed their Senior Project.

**5b. Use of Results to Improve Instructional Program:** Since these students successfully completed their Senior Project, no revisions are planned at this time.

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3. The student will be able to use technology for mathematical problem solving.

## First Means of Assessment for Outcome Identified Above:

**3a. Means of Program Assessment & Criteria for Success:** All students will complete MATH 3330: Applied Statistics, MATH 3425 Differential Equations, and/or MATH 4326: Numerical Analysis with a grade of C or higher.

**3a. Summary of Assessment Data Collected:** The one student successfully completed MATH 4326.

**3a. Use of Results to Improve Instructional Program:** Since the one student successfully completed MATH 4325, no major revisions are planned at this time.

## Second Means of Assessment for Outcome Identified Above:

**3b. Means of Program Assessment & Criteria for Success:** Surveys of instructors teaching courses where technology is utilized will be compiled to provide additional assessment. The Applied Statistics students will complete a portfolio project with a grade of C or higher. All students will complete one or more technology based project(s) in each of Differential Equations and Numerical Analysis with a grade of C or higher.

**3b. Summary of Assessment Data Collected:** The one student successfully completed the technology project for MATH 4326.

**3b. Use of Results to Improve Instructional Program:** Since the one student successfully completed technology project for MATH 4325, no major revisions are planned at this time.

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## **Intended Educational (Student) Outcome:**

*NOTE: There should be one form C for each intended outcome listed on form B. Intended outcome should be restated in the box immediately below and the intended outcome number entered in the blank spaces.*

5. The student will acquire skills necessary for self-directed learning.

## **First Means of Assessment for Outcome Identified Above:**

**5a. Means of Program Assessment & Criteria for Success:** All students will create a satisfactory Capstone Notebook which will include an overview of all college-level mathematics courses taken.

**5a. Summary of Assessment Data Collected:** There were no students who completed the Capstone Notebook for the Bachelor of Science degree.

**5a. Use of Results to Improve Instructional Program:** Although there were no students who completed the Capstone Notebook, students will be required to work on their Capstone Notebooks incrementally. Each instructor will set deadlines for the completion of the Capstone Notebook.

## **Second Means of Assessment for Outcome Identified Above:**

**5b. Means of Program Assessment & Criteria for Success:** Students who complete MATH 4399: Senior Project will do so with a grade of C or higher.

**5b. Summary of Assessment Data Collected:** There were no students who completed MATH 4399: Senior Project for the Bachelor of Science degree.

**5b. Use of Results to Improve Instructional Program:**