

**ASSESSMENT RECORD FOR
DEPARTMENT
OF**

Sciences and Mathematics
(Academic Department Name)

2007-2008
(Assessment Period Covered)

October 22, 2008
(Date Submitted)

Includes Assessment Reports for those Instructional Programs listed below:

Title of Instructional Degree Program

Degree Level

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

Biochemistry

Bachelor's

Submitted By: Robert Holloway

(Departmental Chair or Faculty Assessment Representative)

ASSESSMENT REPORT FOR

Biochemistry

(Instructional Degree Program)

Bachelor's

(Degree Level)

2007-2008

(Assessment Period Covered)

October 22, 2008

(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.

Intended Educational (Student) Outcomes:

1. Upon graduating with a major in biochemistry a student will be able to design and perform experiments.

2. Upon graduating with a major in biochemistry a student will be able to analyze the current research literature and use it to communicate effectively in written scientific research papers and oral presentations.

3. Upon graduating with a major in biochemistry a student will be able to perform statistical analyses of data.

4.

5.

ASSESSMENT REPORT FOR

Biochemistry

(Instructional Degree Program)

2007-2008

(Assessment Period Covered)

Bachelor's

(Degree Level)

October 22, 2008

(Date Submitted)

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.

 1 Upon graduating with a major in biochemistry a student will be able to design and perform experiments.

First Means of Assessment for Outcome Identified Above:

 1 **a. Means of Program Assessment & Criteria for Success:** Students must pass their capstone experience with a passing grade (course is pass/fail). [At this time we no longer regard this criterion for success as adequate. See below.]

 1 **a. Summary of Assessment Data Collected:** 2007-2008 Capstone pass rate: 100%

 1 **a. Use of Results to Improve Instructional Program:** We expect to use performance grades in the biochemistry lab course BIOC 3406L each time it is taught in the future. A grade of C or better demonstrates achievement of the intended outcome.

Second Means of Assessment for Outcome Identified Above:

 1 **b. Means of Program Assessment & Criteria for Success:** Students have an overall GPA of 2.0 or higher. [At this time we regard this criterion as irrelevant to the intended outcome.]

 1 **b. Summary of Assessment Data Collected:** Students have GPA's from 2.15 to 3.92

 1 **b. Use of Results to Improve Instructional Program:** This means of assessment will not be used in the future.

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Intended Educational (Student) Outcome:

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 2 Upon graduating with a major in biochemistry a student will be able to analyze the current research literature and use it to communicate effectively in written scientific research papers and oral presentations.

First Means of Assessment for Outcome Identified Above:

 2 **a. Means of Program Assessment & Criteria for Success:** The final paper in Biology 3350 is designed to require biochemistry majors to analyze the current research literature and to write a research paper. A "B" or better on this paper signifies satisfactory achievement of this goal.

 2 **a. Summary of Assessment Data Collected:** 2007-2008 Final paper: 80 %.

 2 **a. Use of Results to Improve Instructional Program:** No changes are planned at this time.

Second Means of Assessment for Outcome Identified Above:

 b. Means of Program Assessment & Criteria for Success: Biology 3350 (Writing and Research) is also designed to enable biochemistry majors to learn to give well organized oral presentations. Their second oral presentation in this course is the best indicator that they have achieved proficiency at this skill ("C" or better)

 b. Summary of Assessment Data Collected: Oral presentation: 94.1%

 b. Use of Results to Improve Instructional Program: No changes are planned at this time.

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Bachelor's

(Degree Level)

October 22, 2008

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Intended Educational (Student) Outcome:

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 3 Upon graduating with a major in biochemistry a student will be able to perform statistical analyses of data.

First Means of Assessment for Outcome Identified Above:

 3 a. **Means of Program Assessment & Criteria for Success:** A statistics exam is regularly administered during Biology 3350 (Writing and Research). This course is required of all biochemistry majors. One of the purposes of this course is make sure that biochemistry majors are able to perform statistical analyses of data. Satisfactory performance on this exam ("C" or better) signifies accomplishment of the goal.

 3 a. **Summary of Assessment Data Collected:** 2007-2008 – Statistics exam 94.1% of students scored C or better

 3 a. **Use of Results to Improve Instructional Program:** No changes are planned at this time.

Second Means of Assessment for Outcome Identified Above:

 b. **Means of Program Assessment & Criteria for Success:**

 b. **Summary of Assessment Data Collected:**

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