

IBHE Short Progress Report

- 1. Reporting Institution:** Eastern Illinois University
- 2. Program Reviewed:** B.S. in Biochemistry (CIP 40.0501)
- 3. Date:** January 29, 2021
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5. Summary of Program Goals and Objectives and Progress at Meeting Them

Purpose of New Program:

A separate Biochemistry B.S. degree would be more appealing to undergraduates since "Biochemistry" will appear on their diploma, giving a better description of their training. Additionally, this will allow Biochemistry to be listed in the "Choose My Major" list and other locations within Admissions web sites and recruiting materials. Feedback from both prospective and current students has been that the present perception is that an undergraduate Biochemistry major is not available in any form since the Chemistry – Biochemistry Concentration does not appear on many Admissions materials or lists of majors. It is hoped that this change will lead to improved recruiting of students to EIU and to the Chemistry and Biochemistry department, specifically.

Student Participation:

The program first appeared in the Fall 2017 Undergraduate Catalog. To date, four students have successfully graduated with this degree. (On average, our dept graduates 7-15 students an academic year, and lately this has been on the lower end of the scale). There were 3 students during this period (2017-2020) who graduated with the older BS in Chemistry: Biochemistry concentration, due to curricular differences between the programs that would have retarded their progress to degree completion.

BS in Biochemistry Graduates.

Name	Degree Conferred	Details
Kathyrn Bridges	Spring 2020	Kathyrn was a Presidential Scholar and Honors student, graduating summa cum laude in 4 years. After exploring several different opportunities, she has returned to EIU to earn a MS in Biology.

Sydney Davis	Spring 2020	Sydney graduated in 4 years, coming to EIU after Lakeland CC. She did 4 semesters of research, and has stayed on to earn a MS in biology.
Katelynn Fuller-Svarz	Spring 2020	Katelynn was an Honors student, graduating summa cum laude in 4 years after a year of CC. She did 4 semesters of research, and is one of our first accelerated BS/MS students.
Seth Stutzman	Spring 2018	Seth was a nontraditional student, and started solely as a BS Bio major. It took him 5 years to complete both degrees, but part of this was due to being behind in the chemistry. After a 4-month job testing water and soil samples, Seth has been the program coordinator for the OSF ARCHES research and development program.

All but one of these students (Sydney) did at least one semester of research with a biochemist in our Dept, and Katelynn received our prestigious Richard and Ellen Keiter Summer Research Fellowship.

As of FA20 enrollment data, there are 18 current students majoring in Biochemistry, with 5 of them (Jessica Clearwater, Claire Kennedy, Samuel Knebel, Forrest Baumgartner, and Joel Talley) on track to graduate within the next 3 semesters.

As can be seen in the table below of showing program choices of new freshman/transfer students, not only has the Biochemistry major option been a popular one (averaging 30% since the program started), but also the percentage of majors interested in biochemistry has risen significantly. (Note the BS Biochemistry replaced the BS Chemistry: Biochemistry concentration.)

AY	BS Biochem	BS Chem	BS Chem Biochem Conc	% Biochem
2013-2014	-	22	6	21
2014-2015	-	18	3	14
2015-2016	-	15	4	21
2016-2017		11	1	8
2017-2018	6	15	-	28
2018-2019	10	6	-	63
2019-2020	7	8	-	47
Fall 2020	6	8	-	43

The same trend is seen in the number of applicants (82 out of 161 in AY 19-20 and 61 out of 109 in AY 20-21).

Assessment:

Our Department collects valuable information from the student's perspective by both exit surveys and exit interviews, conducting in their last semester. These are completely voluntary, and involve two faculty members leading the student through a set of prompts to elicit information on different parts of the program / their experience. Students are told that they can be completely honest and bring up their own topics / comments, and that the transcripts of their interview will be kept confidential.

Overall the four BS Biochemistry graduates seemed quite pleased with the program and curriculum (which allows for the greater focus on the biochemical / biology end of things and frees them from some traditional chemistry courses). Although we did see some early growing pains in terms of various registration issues that were resolved (see comments below).

- Seth Stutzman was the first program graduate, and was also doing a double degree with a BS in Biology. In his exit interview, he did bring up problems with enrolling in courses / meeting pre-requisites in the programs, but other than that he was very enthusiastic in his studies.
- Katy Bridges had "no issues with completing the prerequisites" or other course scheduling issues, and said that she "just followed the 4-year plan for the degree"

Summary:

This program has been very popular with students, and is often asked about at recruiting sessions. Likewise, there has been increased visibility of this option, as Biochemistry now shows up as a separate entity on multiple webpages. Both enrollment and application data document this interest.

Our evidence suggests that students have been successful in the program, and are able to complete it within a reasonable time frame and without major difficulties (aside from some registration issues that were present early in the program's launch). These students are succeeding in the program and early indications are that they will succeed post-graduation in the field.

Since this program has started, our Dept has added an additional Unit A hire (to replace a faculty member who left during the budget impasse). This professor has been well received by the students in terms of their teaching, and has been very active in research. Additionally, our 2 biochemists are regularly evaluating this program and looking for problems or ways to improve things, as well as being very active in grant writing and mentoring undergraduate researchers.

Dean's Comment:

Overall, the BS in Biochemistry is off to a good start. As of fall 2020, there were 18 students enrolled in the program and since its inception in fall 2017, four students have graduated with the B.S. in Biochemistry degree. The program seems to have been successful in attracting students with a primary interest in Biochemistry. The program actively engages in assessment, in part through instruments such as an exit survey and interview process. Early evidence suggests student satisfaction with the program.

We recommend a decision of **Program in Good Standing**.

6. Academic Affairs Decision:

Program in Good Standing

Program flagged for Priority Review

Program Enrollment Suspended

6.2 Explanation of Decision

The Biochemistry program's launch and first three years have been marked by stable enrollments and significant prospective student interest. For that reason, it is anticipated that the program will exceed the IBHE's APEER benchmark for degrees awarded per year. Beyond enrollment, the program and faculty assessment efforts are noted and much appreciated. Further, the report documents outstanding high quality student outcomes relative to the recent graduates and underscores the faculty's commitment to student-centered excellence. Based on the data and trajectory, the program is in "good standing" at Year 3.

Jay Gatrell

Provost & VPAA