

RE:



CHEM 1A/1AH to BIOL 1A, 2014 to 2018/19

Overview

Biology faculty have noticed a decrease in their BIOL 1A enrollments starting in 2017. In an effort to reverse the trend, they want to assess the enrollment behaviors of students prior to enrolling in BIOL 1A. The following questions were provided to Institutional Research and Planning:

1. [As CHEM 1A/1AH is the prerequisite, how many CHEM 1A/1AH students enroll in BIOL 1A?](#)
2. [How long does it take for CHEM 1A/1AH students to enroll in BIOL 1A?](#)
3. [For potential marketing, what other courses do students take prior to enrolling in BIOL 1A?](#)

Methodology

For questions 1 and 2, CHEM 1A/1AH students were assigned to the academic year in which they first enrolled in the course. Students whose first CHEM 1A/1AH attempt occurred between 2014-15 and 2018-19 were selected and tracked to CHEM 1A/1AH completion and first BIOL 1A enrollment. Data was tracked through the most recent end of term (winter 2020) and therefore, students who started CHEM 1A/1AH in 2014-15 will have more time to enroll in BIOL 1A than students who started in 2018-19. Any student who enrolled in BIOL 1A before they completed CHEM 1A or enrolled in BIOL 1A even though they did not complete CHEM 1A (on A, B, C, or P grades on file) were excluded from this report, 62 students over the five year period were omitted for question 3. BIOL 1A students were assigned to the academic year in which they first enrolled in the course. Students whose first BIOL 1A enrollment occurred between 2014-15 and 2019-20 were selected and their enrollments in the term immediately preceding their first BIOL 1A enrollment were examined. In this report, wherever CHEM 1A is mentioned, it is inclusive of CHEM 1AH.

Summary

- x Each year, there are 451 first-time CHEM 1A enrollees and 27% (N=122) continue onto BIOL 1A.
- x More than half of them (61% or N=75) enrolled in their first BIOL 1A within two terms after enrolling in their first CHEM 1A course.
- x Asians, females, and those who are not low income or first-generation college students are more likely to continue onto BIOL 1A than their counterparts.
- x The 10 courses students enrolled in more frequently prior to their first BIOL 1A enrollment are listed below. More recently, first-time BIOL 1A enrollees in 2019 are also enrolling in ENGL 1A and MATH 10.
 - f NCBS 405 and NCLA 406 (tutoring)
 - f CHEM 1A/1B/1C
 - f ENGL 1B
 - f MATH 1A/1B and MATH 48B/48C

Q1: How many CHEM 1A students enroll in BIOL 1A?

- x There are about 451 students who enrolled in CHEM 1A for the first time each year between 2014-15 and 2018-19.
- x The majority of them (78%) eventually completed CHEM 1A with grades A, B, C or P.
- x Among the 350 completers, 299 (85%) completed CHEM 1A on their first attempt. The remaining students completed in 2 terms (7%), 3 terms (3%) and 4 or more terms (4%).

Table 1: Time to CHEM 1A/1AH Completion

- x There are about 122 CHEM 1A completers who eventually enrolled in BIOL 1A. While not all 122 students enrolled in BIOL 1A in the same academic year as their first CHEM 1A enrollment, as the data in the next section will reveal, most CHEM 1A completers enroll in BIOL 1A sooner rather than later.

Table 2 CHEM 1A/1AH Completers Who Continued to BIOL 1A

Q2: How long does it take for CHEM 1A students to enroll in BIOL 1A?

- x Overall, 61% CHEM 1A completers (N=75) enrolled in their first BIOL 1A course within two terms after enrolling in their first CHEM 1A course.
- x When the number of

Table 3 Time to First BIOL 1A Enrollment, 2014-15 to 2018-19 (5-Year Average)

Students Likely to Enroll in BIOL 1A

Table 4 provides the demographics of CHEM 1A and which student groups are more likely to complete CHEM 1A as well as more likely to enroll in BIOL 1A.

- x CHEM 1A enrollees comprise of Asians (41%), Whites (25%), males (53%), and those who self-reported they are not low income (78%) nor first-generation college (82%) students. These student groups are more likely to complete CHEM 1A as well. Student groups who are more likely than their counterparts to continue to BIOL 1A are Asian, female, not low income and not first-generation college students.

Table 4 CHEM 1A to BIOL 1A Enrollees by Demographics, 2014-15 to 2018-19 (5-Year Average)

- x The student groups who are less likely to enroll in BIOL 1A are denoted in red font in Table 4

- (35%) than males (21%). To increase their BIOL 1A enrollment rate to 27%, 16 additional males would need to enroll.
- f Similarly, an additional two to four students from each subgroup (Filipinx, Latinx, Native American, White, low income and first generation college) would need to enroll in BIOL 1A in order for each group to achieve a 27% enrollment rate.

Q3: What other courses do students take prior to enrolling in BIOL 1A?

- x Before enrolling in their first BIOL 1A course, the top 10 courses students enrolled in one term prior to BIOL 1A include the following:

- | | | |
|--------------|--------------|--------------|
| 1. NCBS 105. | 5. MATH 1A | 9. MATH 48C |
| 2. CHEM 1A | 6. MATH 1B | 10. MATH 48B |
| 3. CHEM 1B | 7. CHEM 1C | |
| 4. ENGL 1B | 8. NCLA 406B | |