



Student Enrollment and Success Plan: 2014-2017

Department: Biology

Department Chair: Diana Hews

Department Mission: The mission of the Department of Biology at Indiana State University is to nurture the academic potential of every student, advance knowledge through quality research, and serve the university and broader communities. Through experiential learning both within and outside the classroom, we motivate our students to become critically thinking, informed citizens with a heightened interest in science. Through one-on-one mentoring, we engage both undergraduate and graduate students in the excitement and challenge of original research. Through research and outreach education, we make valuable contributions at both local and national scales to the scientific community and the well-being of the general public.

Department Enrollment Goal(s):

1. We need to understand current large increases in biology majors (annual increases of 59%, 34%, and 20% from 97 majors enrolled Fall 2010 to 218 enrolled in Fall 2013), as this growth is substantially larger than the overall growth at the university level. Our goal is to effectively manage current and future growth projections so we can deliver the instruction that will be required.
2. Maintain modest growth, commensurate with ability to deliver all programs within the department, by increasing recruitment efforts, especially for students from the Wabash Valley.

Action Steps (with dates & person(s) responsible):

- A. Survey current Biology majors to determine what factors were key in their decision to come to ISU and to become a Biology Major. [Fall 2014 develop survey instrument, implement Spring 2015, Undergraduate Affairs Committee].
- B. Create a Biology Department Facebook page to assist in recruitment. This page will make available information on current information about classes, research, awards, deadlines, and news. [Fall 2014, Dr. Hews, Interim Chair and Dr. O'Keefe].
- C. Create a promotional packet and/or presentation on departmental programs and activities to be delivered to students in Vigo County high schools. [Fall 2015, Undergraduate Affairs Committee].
- D. Create promotional video for the department to be used by Admissions and posted on web [Fall 2015, Undergraduate Affairs Committee].

Total Enrollment Benchmarks

Fall 2013 Baseline:
218 (majors enrolled)
data from AVP

Fall 2014:
222 (2% growth)

Fall 2015:
226 (2% growth)

Fall 2016:
231 (2% growth)

Fall 2017:
236 (2% growth)

Other Enrollment Related Benchmarksⁱ

None

Department Retention Goal(s):

1. Move the 1-year retention rate (finished in the department) to $\geq 75\%$ over the next four years. In the past two years this number has varied between 71% and 86%. When we have data for a longer period, we will be able to create a more informed target.
2. Measure and increase retention of minority students.

Action Steps (with dates & person(s) responsible):

- A. Require students in core (Bio 350 and 374) and selected upper division (e.g. Bio 428, 485) courses with significant writing or math components to visit the Math and Writing Center at least once per semester the class is taught. [Fall 2014, Mitchell; Spring 2015, Dannelly; Fall 2015, O'Keefe]
- B. Post all scores on student course work for all biology courses on the course Blackboard site by 4th week of semester. [Fall 2014, All faculty]
- C. Increase use of SIs and training of SIs in all Biology courses: create list of best practices used by SIs; use multiple SIs for large courses (mostly for freshmen and sophomores); recruit minority students to serve as SIs; identify the resources needed to implement such activities. [Fall 2014, all faculty]
- D. Use our bi-monthly meetings between instructors that teach Bio 101 to (a) develop a list of best practices for our students; (b) identify at-risk students at several points during the semester and identify correlated data available from IR to assist in early detection of such students in the future; (c) develop a list of potential early interventions. [Fall 2014 and Fall 2015, Mitchell, Lima; Spring 2015 Hughes]
- E. Work with Career Center to develop procedures to expose Biology majors to Biology careers in their first year; require first year students to visit Career Center [Fall 2014, Hews]
- F. Develop mechanisms to enhance the undergraduate majors' sense of community, especially for their class cohort (Social Media, enhance Tri-Beta undergraduate honors club activities; promoting gatherings by class and with visiting scientists). [Fall 2014 Dr. Dannelly, Dr. Mitchell; Spring 2015, Dr. Gonser, Dr. Hews]
- G. Continue collaboration with Department of Chemistry & Physics to identify funding and peer-tutoring mechanisms that will enable full implementation of the Chemistry-Physics-Biology Tutoring Center on the 1st floor of Science building (room scheduled for renovation Summer 2014). [Fall 2014, Dr. Hews, Interim Chair]
- H. Develop mechanism to obtain data on minority status to determine retention rates for minorities, and enhance minority interest in and involvement in the community of biologists on the ISU campus. [Fall 2015, Undergraduate Affairs Committee]

Retention Benchmarks

Fall 2013 Baseline:

72% (1 year finished in Dept. rate)

Fall 2016:

75%

Fall 2014:

73%

Fall 2017:

75%

Fall 2015:

74%

Other Retention Related Benchmarks

Once identified, seek improvement in the rate for 1st-year finish in department for minority students.

Department Completion Goal(s):

1. Maintain or increase our already high finished-in-department 6-year graduation rate.
2. Identify the 6-year finished in department graduation rate for minority students, and then set goals.

Action Steps (with dates & person(s) responsible):

- A. Develop mechanisms, which will include using tools now on campus (MAP Works), to track the success of students enrolled in Bio 101 through graduation [Fall 2015, Bio 101 Instructors, IR assistance, UC staff].

- B. Increase motivation of biology majors to complete their degree by disseminating information on post-graduate successes of former majors (e.g., social media, web pages and weekly e-mails) [Spring 2014, Dr. Hews, Undergraduate Affairs Committee]
- C. Identify methods to track success of minorities; increase involvement of minorities in departmental activities, including participation in several biology student organizations, visiting speakers series, etc.; identify the resources needed to implement such activities. [Fall 2015, Undergraduate Affairs Committee]

<i>Completion Benchmarks</i>	Fall 2013 Baseline:	Fall 2014:	Fall 2015:
	58% (6-year graduation rate, finished in dept.)	58%	59%
	Fall 2016:	Fall 2017:	
	60%	61%	

Other Completion Related Benchmarks

Identify finished in department 6-year graduation rates for minorities.

Post-College Achievement Goal(s) (e.g., employment & graduate school):

Increase the percentage of majors who enter into a major-related career within 1 year post-graduation by 1% annually.

Action Steps (with dates & person(s) responsible):

- A. Work with ISU Alumni Office to develop mechanisms to track alumni and to develop benchmarks on post-graduate success [Fall 2014, Hews].
- B. Work with Career Center and regional employers to enhance career skills and identify employment and internship opportunities for students [Fall 2014, Hews].
- C. Invite business professionals to interact with students in courses (e.g., Freshwater Biology class) and various Biology Clubs (e.g., Tri Beta Honors Society) [Fall 2014, O'Keefe; Dannelly]

<i>Employment & Graduate School Benchmarks</i>	Fall 2013 Baseline:	Fall 2014:	Fall 2015:
	N/A	Baseline Set	+1%
	Fall 2016:	Fall 2017:	
	+1%	+1%	

Other Goal(s) and Action Stepsⁱⁱ:

GOAL: Develop tracking mechanism(s) for experiential learning activities for majors.

ACTION: Develop quantitative mechanisms (e.g., co-curricular transcripts) to track research engagement and other types of experiential learning activities in which our majors are involved, and identify resources needed to implement such tracking. [Spring 2015, Undergraduate Affairs Committee]

ⁱ *Note on Other Enrollment, Retention, and Completion Benchmarks:* Departments are encouraged to develop other benchmarks as may be relevant to measuring progress toward goal achievement.

ⁱⁱ Departments may have other goals that do not fit into the four areas previously indicated or adequately subsumable as an action step within one of the four goal areas. They may be placed here.