

Biology Strategic Plan

Strategic Goals 2020

1: academic excellence, academic integration, student success

Unit Goals	Unit Actions/Strategies	Measurable Outcomes	Persons responsible	dates for review
1. Advance critical thinking skills, mastery of content areas, effective communication and effective use of technology (tie to Goal 5)	<p>1. Continue regularly scheduled academic outcomes assessment and undergraduate/graduate program review while integrating the results to promote improvement of the curriculum and instructional delivery systems</p> <p>Assessment report and revised plan turned in August 2018. No budget considerations at this time. Currently gathering data for the outcomes assessment report due next fall. This will include more information about how the stratetgic plan has resulted in improvements.</p> <p>2. Integrate student research as a HIP as part of curriculum (courses, independent research, capstone)</p> <p>Continuing to include research in lower level courses and the Senior research capstone project. Working on curriculum mapping to determine which courses include development of skills needed for research and course work. Budget considerations indicated under Goal #5 Technical Advancement & Innovation (laptops and cart)</p>	<p>See outcomes assessment plan. Report results. Meets criteria set in outcome assessments.</p> <p>Research is integrated into the curriculum map (introduced, reinforced, mastered). Students communicate results professionally and to the community.</p>	<p>Department outcomes assessment coordinator</p> <p>Department faculty</p>	<p>Fall 2018</p>
2. Advance knowledge in the sciences and professions via research and scholarly activity in conjunction with educational opportunities	1. Develop a plan for procedures/criteria for reassigning time (25%) for faculty with grants	A plan is developed for reassigning time for faculty with grants.	Department Chair, Department Faculty	Annually

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	2. Support professional development for grant writing, maintaining grants	Coordinate with the ORSP and other STEM departments to develop a STEM grant professional development program. Regular interdepartmental communication related to opportunities for PD. Interdepartmental agreement reached. Faculty participation each semester	INBRE liaison and active researchers in department	Annually
	3. provide professional development for student research mentorship	Faculty members participate in mentoring workshop in conjunction with CTE.	Graduate Coordinator	Annually
	4. Support Animal Facilities	Report created on all the costs and requirements associated with the facility.	Department members actively involved in research using animal facilities and IACUC	Spring (initially), Annually (thereafter)
	A budget plan was developed to include funding from the biology budget and from Dr. Snow's AHA grant.			
		First year: increase funding in biology budget to cover all supplies for animal research facility. Animal facilities funded as part of Univeristy infrastructure. Partnership between researchers, facilities, ORSP.	Department members actively involved in research using animal facilities and IACUC	Spring 2019
3. Curriculum development linked to current professional schooling, STEM environment at NMHU and job market demands	1. Yearly department meeting to revise curriculum in cooperation with ARMAS and CTE	1. Admissions rates of former students to professional schools, graduate schools, jobs. Diversity of jobs obtained... Outcomes assessment job placement data used.	Department Chair, Department Faculty	Annually
	Note: CTE activities were suspended while searching for a new director.			
	2. Compare student performance against national standards to identify need for improved student content support	Compare available tests. Select a test that provides comparison to national standards and data challenges.	Capstone course instructor	Fall 2018

A major field test from the national testing service ETS was administered in Fall 2018. The tests were purchased with the biology budget. The results indicated that we had made progress in preparing our students since the last time the test was administered in fall 2017. We interpret this as support for the reorganization of our curriculum.

Evaluate improvement of our students' performances versus national standards and data challenges. Capstone course instructor Fall 2018

3. Develop a database of Biology majors to track job/school placement after graduate (tie to Goal 5) with the goal of improving employability (social media will be used to track graduates). Database has been established and 50% of graduated majors from the last 2 years accounted for. Update database twice a year. Department chair, department webmaster Annually

The database continues to be developed. The main difficulty is in obtaining the information needed to track students. No budget considerations.

4. Gather information about employability through contacts with relevant employers. Employability data will be incorporated into curriculum. Department faculty Annually

A field trip in the genetics class to Integrated Genetics in Santa Fe provided the students with the opportunity to see the facilities and meet with students from NMHU who are employed there. The funds for the trip were provided from the biology budget.

4. Support success for underrepresented students in STEM

1. Provide high impact learning activities for students, including internships and professional development opportunities for underrepresented students in STEM Summer internships and PD is available each year for STEM students (report numbers). Opportunities are communicated back and forth with ARMAS. All faculty communicate opportunities to students and ARMAS Annually

Currently have more than 10 students involved in State and Federal internships including those associated with USGS, NIH and NSF.

	5. Develop a PULSE/AAAS Vision and Change Recognition Program in Biology	1. Grant 25% release to a Biology faculty member to partner with PULSE program in determining priorities for attaining PULSE Recognition	One faculty member has been given 25% release time by Fall 2017 to determine standing using PULSE Program Inventory Rubrics. Department has obtained PULSE recognition by Fall 2018	PULSE Coordinator	Fall 2018
	Ongoing activity				
2: Strategic enrollment management	1. Integrate high impact practices in biology courses to improve retention and increase enrollment	1. Collaborate with ARMAS and CTE to provide PD in high impact practices, including iterative training	Biology faculty attend PD workshops and adapt lesson plans to include HIPS	Department chair	Fall 2018
		2. Focus on integrating HIPS in 100-200 level courses	All 100-200 level courses have 2 or more HIPS incorporated	Department faculty	Fall 2018
	See information under Strategic Goal #1, Action #2				
	2. Increase recruitment of students to biology program	1. Grant 25% release each Fall and Spring semester for a Biology faculty member to develop a recruitment strategy and coordinate recruitment activities for the department	Recruitment strategy is developed; Increase/improve partnerships with schools, colleges and centers; number of visits to local institutions; overall observed increase in students enrolled in biology program.	Faculty member assigned to recruitment	Spring 2019
	2. Improve recruitment for local community including high schools; improve retention of dual enrollment students	Biology student numbers from local community increases by 5% -10%.	Faculty member assigned to recruitment	Fall 2018	
	3. Review/develop transfer agreements with Santa Fe Community College, Luna Community College, UNM Taos to ensure ease of transfer credits	Track number of transfer students enrolled annually. Revised transfer agreements with SFCC and LCC. UNM Taos transfer agreement in place.	Faculty member assigned to recruitment	Spring 2019	
	4. Identify new recruitment partnerships with schools/colleges	One or more new partnerships are identified and activities are developed each year	Faculty member assigned to recruitment	Spring 2019	

3: Vibrant campus life	1. Support linked clubs including Sigma Xi, Conservation Club, and International Service Group	<p>1. Working with Luna Community College STEM director on transfer and recruiting activities. 2. Participated in Rio Mora STEM recruitment event. 3. Participated in Rio Mora recruitment event. 4. Participated in UNM -Taos recruitment event.</p>	1. Support visiting guest lectures including Science Cafes for the public	Guest scientists and professionals visit and give lectures, honorarium funded in part by Biology Dept	Faculty member/Sigma Xi representative	Spring 2019
			2. Promote community projects among Biology students and faculty using social media.	Community events are well-attended (faculty and students)	Club advisors	Fall 2018
			<p>The Conservation Club set up an educational presentation at the HU at the Zoo event at the Albuquerque Zoo.</p>			
			3. Encourage student participation in cross-disciplinary activities on campus	Faculty regularly inform students of dynamic on-campus activities	All faculty	Fall 2018
4: Community partner	1. Identify and strengthen partnerships in the community		Inventory current partnerships; Students and faculty participate in community science events	Summarized calendar of community events per semester; communicate events to students and public	All faculty	Annually
			<p>1. Faculty and students participated in the regional science fair and the New Mexico Academy of Science Paper Competition 2. Faculty involved in hands-on learning activities with Girl Scouts from troops in northern New Mexico 3. Faculty member involved in a high altitude balloon project with West Las Vegas High School</p>			
	2. Improve student activities in the community including local professional organizations and institutions		Identify job shadowing, internships available in the community; invite student participants to give peer presentations yearly	List of local job shadowing/internship opportunities; list of students who have completed these activities; students share experience with peers	Department Chair	Annually

5: Technical advancement & innovation

<p>1. Utilize existing technology and communication infrastructure (Banner, D2L, DegreeWorks) to track enrolled student progress and provide iterative feedback with students</p>	<p>1. All faculty in biology are trained in cooperation with CTE in NMHU technology infrastructure (D2L, Banner, DegreeWorks, Zoom)</p>	<p>1. Percentage of faculty actively using technology platforms</p>	<p>Department Chair</p>	<p>Annually</p>
<p>This goal has been met since all faculty are currently using the infrastructure. However, the activities are ongoing since more technology may become available and there may be changes in the infrastructure.</p>				
<p>2. Students are trained in state-of-the-art Biology technology critical to career success</p>	<p>1. Develop technological resources including a mobile computer lab for biology majors for data collection, simulation, analysis A budget request for the FY 20 budget for \$8000 for a mobile computer lab (laptops and carts) was made, but was not funded. Participated in writing the proposal for the Sherman Fairchild Equipment Grant. The proposal has advanced to the next step with a visit planned for next fall.</p>	<p>2. New faculty participate in newly developed D2L Certificate training program</p>	<p>Department Chair</p>	<p>Annually</p>
		<p>1. Create proposal, plan, and identify resources to procure computer lab</p>	<p>All faculty</p>	<p>Fall 2018</p>
		<p>2. Mobile computer lab for biology is established; computer lab integrated in biology coursework</p>	<p>All faculty</p>	<p>Annually</p>
	<p>2. Develop a Biology outcomes assessment item to measure our technology training and student proficiency</p>	<p>1. Technology outcomes assessment item included</p>	<p>Department outcomes assessment coordinator</p>	<p>Annually</p>
	<p>3. Reassess technology training in the Biology curriculum during curriculum development and mapping during yearly sessions that comply with AAAS Vision and Change guidelines (Goal 1)</p>	<p>1. Prescribe a course of action to meet AAAS guidelines.</p>	<p>PULSE Coordinator</p>	<p>Fall 2018</p>

			2. Technology training is improved incrementally on a yearly basis based on current AAAS guidelines.	PULSE Coordinator	Annually
6: Communication efficiency	1. Fully utilize technology infrastructure on campus to communicate student progress, outcomes, grades, etc.	1. Improve record keeping procedures in Degree Audit	1. All biology majors meet every semester with advisor, tracked in Degree Audit	Department Chair, All faculty	Annually
		<p>Ongoing activity</p> <p>2. Provide access to a biology faculty member to reassign biology majors advisors and maintain an active list of biology majors</p> <p>All biology majors have been assigned advisors for the active list of biology majors.</p>	2. Advisor assigned to each biology major is accurate in Degree Audit and every student has an advisor.	Department Chair	Annually
	2. Maintain web presence for Biology Dept.	1. Evaluate current website and improve online information for biology students and faculty	Current website contains up to date information each semester.	Department Webmaster	Annually
		<p>The web site will be updated once the new web platform is completed. The poster listing required and elective courses is currently being updated with the new course numbers and names. The poster will be put on the department web site and placed on a bulleting board in the science building. No budget considerations</p>			