

**Biological, Health & Environmental Sciences Division**  
**Dean's APRU Summary**  
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The Biological, Health and Environmental Sciences (BHES) division is comprised of the Biological Sciences, Environmental Sciences/Environmental Studies, Health Technologies, Medical Laboratory Technology, and Nursing Departments. The BHES division aspires to excellence in teaching, career preparation and job training. Our mission is to educate and mentor transfer students, students in vocational programs, life-long learners and members of our community. Consistent with this mission, we are committed to equity and diversity in order to ensure excellence.

**Enrollment:**

Enrollment trends in the BHES division continue to be strong. Student enrollment in the division has continued to grow by 1.3 % over the last four academic years and overall enrollment within the BHES division remains robust. Careful and ongoing review and consideration of enrollment trends has allowed us to continue to show growth in these areas. We have responded to student demand for online classes with thoughtful and deliberate planning, increasing course offerings while also putting in place the resources and tools to ensure student retention and success.

We work as a cohesive team – faculty, staff, counselor and administrator – and we are all dedicated to improving access to our services; retention in our courses and programs; and helping our students be successful in their career and educational goals. Working together we strive towards exploring and utilizing strategies that continue to narrow the equity gaps in our programs.

The Environmental Studies/Environmental Science (ES/ESCI) department has seen a sharp increase in enrollment at 8.9% over the last four years. With the hiring of 2 new full time faculty, including a growth position, we are better able to serve students. Enrollment has gone from 4993 in 2012 - 2013 to 5436 students in 2015 -2016.

The Medical Laboratory Technician (MLT) department has also seen a growth in enrollment of 1.7 % over the past three years.

The HTEC department has seen a growth in enrollment of 0.5 % over the past three years. HTEC enrollment has gone from 2335 in 2013-2014 to 2349 students in 2015 - 2016.

The Biology departments has seen a loss in available Full time faculty due to sabbaticals and Article 18 and this has caused us to offer fewer sections in these areas which has also led to decreased enrollment, despite increased student demand and wait lists. We are seeing an especially high demand in the areas of our Biology 6 series and Biology 40 series. We hope to be hiring new faculty, as we will be losing FT faculty to retirement and transfer this year. With the hiring of new faculty and no planned sabbaticals for the upcoming year we

hope to offer more sections of high demand classes and anticipate recuperating lost student enrollment.

### **Retention and Success rates:**

This science intensive division has persistently high retention and success rates in both targeted and non-targeted student groups, out-performing the overall college every year in these numbers. We have seen continued growth in enrollment in targeted student populations within the division over the past three academic years. This has been accompanied by solid but consistent success rates in this population group. Success rates in non-targeted groups, while also strong, have remained consistent.

We will need to see more resources allocated to our departments and programs if we want to increase the success rates of both targeted and non-targeted students groups and more importantly work on continuing to sustain the decrease in the equity gap. In all departments additional resources are needed for early student intervention, mentoring and guidance by faculty as well as peer tutoring. With the addition of a dedicated Division Counselor we are hoping to continue to see a decrease in the equity gap as we seek to identify - early on - and provide guidance/resources for students who may need additional assistance to succeed in the classroom

### **Equity and Access:**

The success rates in under-represented student groups can be credited to dedicated resource centers for the students in Biology, Nursing and Environmental Studies, where students can get more hands on experience, practice and exposure to course materials.

Our CTE programs in Environmental Studies, Health Technologies, Medical Laboratory Technician and Nursing have strong connections with industry and clinical sites, enabling them to offer impressive externships, internships and job placement opportunities for our students.

The Science Resource Center, Stewardship Resource Center and the Cheeseman Environmental Study Area are essential in tackling the issues of student retention and success and in closing the equity gap. These resource centers are content-specific regions where students can go, outside of regular class time, to review course materials, look at specimens, microscopes, models etc., to continue their exposure to scientific content as well as create communities of learning. The Cheeseman Environmental Study Area also serves as a powerful equity tool as it provides an on-campus field studies alternative to off-campus field trips.

### **CTE labor trends:**

Our CTE programs are all supported by labor reports that show increased job demands in their fields: Energy Management Building Science employment

opportunities are projected to grow by 26.7%; HTEC employment opportunities are projected to grow by 27.7 %; MLT employment opportunities show a growth rate of 22%; and in Nursing there are projected to be 1.1 million new jobs by 2022.

### **Division Needs:**

Since the 2008 – 2009 academic year all departments in the BHES-WE division have seen years of budget cuts, the budgets have never returned to that level of allocation. Our enrollments, however, have continued to show strong growth. This data continues to support the reality that we have all been persistently doing more with fewer resources. This trend will eventually impact our ability to foster student success in our programs and affect our ability to continue to narrow the equity gap.

Areas of immediate concern are replacing FT faculty in the Biology department as we lose 2 faculty due to retirement and transfer, as well as the lack of needed budgetary support in the Biology department. With the increasing enrollment more lab sections are being offered without any increase in B budget funding. The ability to stock our classrooms and lab rooms with supplies and technology is essential to continue to support the growth in enrollment. As we see more students in the class sections, equipment like microscopes and models face increased wear and tear and refreshing and replacing equipment is crucial to meeting curriculum demands. It also provides our students with the skills and expertise needed to be competitive in their future educational goals. The strong enrollment growth in the department must be supported by an increase in B budget funding.

The Science Resource Center should be available to our students in the evenings and possibly on weekends to foster learning communities and access to course materials.

There is also a lack of budgetary support in the Health Technologies and Medical Laboratory Technology program. The low department B budgets can not sustain the growth in these programs. There is an increased demand for classes in medical communications, transcription and office management; and growth here is limited by access to computer labs and needed equipment. The HTEC department is seeking a computer classroom or computers to address this growing demand for courses in a rapidly expanding health care industry. The MLT department is also looking to update classroom instructional and laboratory equipment. The lack of staff in the MLT department has limited the growth of this program, despite an increased student demand.

### **SLOs/PLOs:**

The BHES division's progress in establishing and assessing student learning outcomes at the course and program level has been great. Departments have had meaningful discussions on student learning objectives & assessments, relevance of course offerings, streamlining of curriculum and have reflected on

these outcomes. Technology, laboratory, and equipment needs were consistently identified as limiting factors in achieving desired outcomes. Increasing B budget funds will go a long way in addressing these concerns.

### **Vision for the Future:**

As access to higher education continues to be a challenge for many of our students due to a multitude of socioeconomic factors - community college will remain a viable and often superior option for students as they seek employment through our career technical education programs or continue to 4 year institutions in order to advance in their educational and career goals. We need as a division, to continue to find ways and resources to better serve these students

Based on hiring prospects, unemployment rates, average salaries, and job satisfaction, careers in the life sciences, health care and laboratory science, energy and resource management and pollution prevention fields continue to be extremely popular and a great vehicle for upward mobility for our socioeconomically disadvantaged populations.

The BHES division wants to play an active role in this process and anticipates increased demand for our all our courses – both traditional and CTE - and continued strong growth in student enrollment.