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APRU/CPR - BHES Division



Name of Dean/Administrator: Anita Muthyala-Kandula

Dean's/Administrator's Comments: The Biological, Health and Environmental Sciences (BHES) division is comprised of the Biology, Environmental Sciences and Studies, Health Technologies, Medical Laboratory Technology, and Nursing Departments. As a division we are dedicated to ensuring that our students' succeed in their college goals whether that be transferring to a 4-year university, vocational and job training and/or life long learning. Consistent with this mission, we are absolutely committed to equity and diversity in our pursuit of excellence.

The division is dedicated to improving access and retention to our courses and program as well as and success in students' career and educational goals. Working together we strive towards exploring and utilizing strategies that continue to narrow the equity gaps in our programs.

Multiple CTE areas in the BHES division have been recognized by the California Community Chancellor's Office as Strong Workforce Stars for demonstrating outcomes based on Strong Workforce Program LaunchBoard data:

- An increase in earnings by 50% or more, based on a match to the state wage file, for students who were last enrolled in 2015-16
- Attainment of the regional living wage by 70% or more, based on a match to the state wage file, for students who were last enrolled in 2015-16
- 90% or more are employed in a job similar to their field of study, according to the CTE Outcomes Survey, for students who were last enrolled in 2014-15

The CTE areas of Environmental Technology, MLT, HTEC and Nursing all received recognition.

Enrollment:

Enrollment trends in the BHES division are declining in small amounts following the overall college and district trend of falling enrollment. The one department that has shown growth is Biology. The Anatomy and Physiology (Bio 40) classes, Health 21 classes and Biology Major (Bio 6) series are especially showing strong enrollment. Careful and ongoing review and consideration of enrollment trends has allowed us to continue to show growth in

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these areas. Regular and comprehensive review of ongoing enrollment patterns allows us to divert FTEF from areas that are showing declines to areas that are actually showing growth. Student demand for online classes has seemed to reach a plateau despite faculty interest in teaching. We will continue to monitor this situation and with thoughtful and deliberate planning hope to grow these course offerings while also putting in place the resources and tools to ensure student retention and success.

The Energy and Facility Management and Building Science program under enthusiastic leadership has continued to grow. We have offered a new certificate and degree in response to advice from the advisory board and labor demands and are seeing the corresponding growth in enrollment. Our allied health programs remain healthy as the job market continues to look very opportunistic for graduates in these fields.

The Biology departments has seen a loss in available Full time faculty due to sabbaticals and this has caused us to offer fewer sections in these areas despite increased student demand and wait lists. We continue to see an increased demand for sections in our Bio 40 and Bio 6 series. In response we hired a FT faculty in Anatomy and Physiology and have also increased the FTEF in the biology majors. As we continue to adjust FTEF, we hope to offer more sections of high demand classes and anticipate recuperating lost student enrollment.

Retention and Success rates:

Our Division Counselor is going a long way in addressing our goal of continued work in decreasing the equity gap. We work as a team to identify - early on - and provide both the tools for faculty as well as the guidance and mentoring for students who may need additional assistance to succeed in the classroom

As a STEM division, we do show persistently high retention and success rates in both targeted and non-targeted student groups, out-performing the over-all 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 increasing success rates in this population group. Success rates in non-targeted groups, also strong, have showed small gains as well. We would like to see more resources allocated to our departments and programs if we want to continue 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. As a stem division almost all of our courses are

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associated with lab courses. These lab courses require supplies and equipment in order to be offered. B budgets and lotteries are not adequate to cover these expenses and which start accumulating from day one of the academic year. In all departments additional resources are needed for recruitment, early student intervention, mentoring and guidance by faculty as well as peer tutoring.

Equity and Access:

The success rates in under-represented student groups can be credited to dedicated resource centers for the students in Environmental Science/Studies, Nursing, and Biology 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 access, retention and success and in closing the equity gap. These resource centers are content-specific areas 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. Biology students continue to ask for increased hours in the Biology Science Resource Center either through weekend or evening access for students.

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. Energy management and building science had 100% job placement and was recognized by the CCC Chancellor’s office for this achievement. Our Allied Health programs have partnerships with

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many clinical affiliates in the area including Stanford Hospitals and Clinics, Palo Alto Medical Foundation, Good Samaritan Hospital, Kaiser San Jose and Santa Clara, El Camino Hospital, and Spectra Laboratories. These sites provide externship opportunities as well as potential future job opportunities for our students.

Division Needs:

Areas of immediate concern are the lack of needed budgetary support in the Biology department. With the increasing enrollment in Biology classes – majors and Anatomy and Physiology, 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 budgetary funding.

Our allied health classes such as phlebotomy absolutely need the presence of specialist and tutors to help with student retention and success. We could not run these labs without these specialist who are supported with funding from the SWP and Perkins.

SLOs/PLOs:

The BHES faculty continue to engage in assessing student-learning outcomes at the course and program level. Their progress has been great with most programs at or very near to 100% completion. Departments have had meaningful discussions on student learning objectives & assessments, streamlining of curriculum and have reflected on these outcomes. These conversations are often a required part of CTE program accreditation. Peer tutoring, laboratory, and equipment needs were consistently identified as limiting factors in achieving desired outcomes. Increasing budgetary funding would go a long way in addressing these concerns.

Vision for the Future:

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

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and a great vehicle for upward mobility for our socioeconomically disadvantaged populations.

Recently De Anza College has taken on the role of host college for the Deputy Sector Navigator for Health. As a division we are hoping to leverage this access to look for opportunities to grow our pool of clinical affiliates and partner with high schools and adult education centers to grow a pipeline for new students and industry partners.

Anita Muthyala-Kandula
4.12.2019

Reviewed by Division Dean: Yes