This form is used by departments and programs to request new or unfilled faculty positions relying on

Position Requested: Cellular/Molecular Biology Instructor  Contact Person: Michal Shuldman  Discipline/Division: STEM Starting Term: Fall X Spring This form requires the use Enrollment Management Tool data, which can be found at the following link: http://www.laspositascollege.edu/researchandplanning/FacultyPrioritization.php (If you have any questions about the data, please contact Rajinder Samra 925-424-1027 or rsamra@laspositascollege.edu) or your Dean. The data will be verified by the Dean. Do not attach data spreadsheets.  Check if position is a: Replacement or New Darrow Darcy Ernst Darcy Ernst Step 1 Same of the person being replaced: Darcy Ernst Darcy Ernst Dare Retirement/Resignation is Board Approved (optional): If position is categorically funded, indicate source and duration of funding: CRITERIA  1. Number of Full-Time Faculty currently in Discipline: If requesting more than one position, add 1 to this number for each subsequent position requested.  2. Percentage of FTEF taught by full-time faculty as load for the past six semesters, and projected for one year assuming a successful hire. (Use data from link above. If requesting more than one position, see Rajinder Samra to determine the projected numbers.)  Fall 2017 Spring 2018 Fall 2018 Spring 2019 Fall 2019 Spring 2020 Fall 2021 Spring 2022 [31] [31.4]  3. a. For Instructional Faculty: WSCH per FTEF for the past six semesters (use data from link above): Fall 2017 Spring 2018 Fall 2018 Spring 2019 Fall 2019 Spring 2020 [46.4] [31.5]  Spring 2018 Fall 2018 Spring 2019 Fall 2019 Spring 2020 [45.0]  Fall 2017 Spring 2018 Fall 2018 Spring 2019 Fall 2019 Spring 2020 [46.4] [46.9] [	Program Review and/or other justifications. Submit one form for each position requested. For multiple positions, indicate priority of request (e.g., Subject Position 1, Subject Position 2, etc.). Forms are due to Division Deans by September 11, 2020.					
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Name of the person being replaced:    Darcy Ernst     1 semester	http://www.laspositascollege.edu/researchandplanning/FacultyPrioritization.php (If you have any questions about the data, please contact Rajinder Samra 925-424-1027 or <a href="mailto:rsamra@laspositascollege.edu">rsamra@laspositascollege.edu</a> ) or your Dean. The data will be verified by the Dean. Do not attach data spreadsheets.					
Length of time position(s) unfilled:  Date Retirement/Resignation is Board Approved (optional):  If position is categorically funded, indicate source and duration of funding:  CRITERIA  1. Number of Full-Time Faculty currently in Discipline:  If requesting more than one position, add 1 to this number for each subsequent position requested.  2. Percentage of FTEF taught by full-time faculty as load for the past six semesters, and projected for one year assuming a successful hire. (Use data from link above. If requesting more than one position, see Rajinder Samra to determine the projected numbers.)  Fall 2017 Spring 2018 Fall 2018 Spring 2019 Fall 2019 Spring 2020 Fall 2021 Spring 2022  3 a. For Instructional Faculty: WSCH per FTEF for the past six semesters (use data from link above):  Fall 2017 Spring 2018 Fall 2018 Spring 2019 Fall 2019 Spring 2020	•					
<ol> <li>Number of Full-Time Faculty currently in Discipline: 6         <ul> <li>If requesting more than one position, add 1 to this number for each subsequent position requested.</li> </ul> </li> <li>Percentage of FTEF taught by full-time faculty as load for the past six semesters, and projected for one year assuming a successful hire. (Use data from link above. If requesting more than one position, see Rajinder Samra to determine the projected numbers.)         <ul> <li>Fall 2017 Spring 2018 Fall 2018 Spring 2019 Fall 2019 Spring 2020 Fall 2021 Spring 2022</li> <li>31 38.6 31.1</li> </ul> </li> <li>a. For Instructional Faculty: WSCH per FTEF for the past six semesters (use data from link above):         <ul> <li>Fall 2017 Spring 2018 Fall 2018 Spring 2019 Fall 2019 Spring 2020</li> </ul> </li> </ol>	Length of time position(s) unfilled:  Date Retirement/Resignation is Board Approved (optional):					
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Fall 2017	Fall 2017 Spring 2018 Fall 2018 Spring 2019 Fall 2019 Spring 2020 Fall 2021 Spring 2022					
	3. a. For Instructional Faculty: WSCH per FTEF for the past six semesters (use data from link above):					

Full-Time Faculty Request Form 2021-22: FHPC Revisions May 3, 2012, Sept. 18, 2012, April 30, 2013, December 4, 2015, March 21, 2018; Presented to Academic Senate-January 27, 2016, April 11, 2018, April 27, 2019, May 13, 2020

(If requesting more than one position, see Rajinder Samra to determine the projected numbers).  Projected Fall 2017 Spring 2018 Fall 2018 Spring 2019 Fall 2019 Spring 2020 Fall 2021 Spring2022				
Fall 2017 Spring 2018 Fall 2018 Spring 2019 Fall 2019 Spring 2020 Fall 2021 Spring 2022				
Program Characteristics:				
a. List the courses taught and/or work performed in the discipline. (Be brief and specific. Use your Program Review to complete this section.)				
Courses taught in discipline: Anatomy, Botany, Bioinformatics, Cell Biology, General Biology, Human Biology, Humans and the Environment, Introductory Biology, Introduction to Healthcare, Marine Biology, Microbiology, Human Physiology, and Zoology.				
Biology is the largest science department. We serve pathways for transfer, CTE, and Allied Health as well as General Education. Faculty must stay current in a rapidly changing discipline, and have expertise in laboratory pedagogy that is safe, engaging, and meets Student Learning Outcomes and industry standards.				
b. Total number of primary sections as identified in data taught in the discipline in each of the last six semesters (use data link from page 1):				
Fall 2017 Spring 2018 Fall 2018 Spring 2019 Fall 2019 Spring 2020  35 42 42 39 39 41 41 44 43				

4.

c. Student enrollments (FTES) in the classes taught (use data link from page 1)or number of students served in each of the last six semesters:

Fall 2017	Spring 2018	Fall 2018	Spring 2019	Fall 2019	Spring 2020
199	225	223	226	261	256

- d. List special characteristics of the discipline such as: (Be brief and specific. Use your Program Review to complete this section.)
  - Mandated class size limits due to state, contract, and accreditation standards.
  - Facilities
  - Number of courses out of the total number of courses in the discipline that meet General Education Requirements
  - Number of courses out of the total number of courses offered that are required as part of an associates degree, certificate or transfer
  - Discipline provides basic skills courses
  - Discipline provides mandated and specialized services to students
  - If position is categorically funded please add source and duration of funding
  - Other

Mandated class size: Courses with labs are typically limited to 24 students, reflecting the number of lab stations available and ensuring safety and adequate and efficient student access to reagents, equipment, etc.

Facilities: Biology labs require specialized wet lab facilities, equipment, instrumentation, and safety protocols to deal with biological and chemical hazards. Faculty must be qualified to safely handle potentially dangerous materials and to ensure the safety of students working with these materials.

Courses that meet General Education requirements: 12 of our 14 courses satisfy AA/ AS GE requirements and CSU and UC transfer requirements. The remaining 2 courses (Bio 55: Orientation to Healthcare and Bio 70: Field Biology) qualify for CSU GE and transfer.

5. Describe how courses and/or services in this discipline impact other disciplines and programs. (Be brief and specific. Use your Program Review to complete this section.)
Students taking Biology classes directly increase enrollments in related fields (e.g., Chemistry , Physics, Math). Continued growth of both the Biology majors and Allied Health pathways ha s resulted in several new sections of Chemistry and higher enrollment in Physics.
Biology courses are required in 5 AA degrees (e.g. Biology, Psychology, Social Work and Human Services) and 7 AS degrees (e.g., Biology, Environmental Science, Horticulture, Viticulture). Biology courses are also options for 6 AA/
AS degrees (Kinesiology, Nutrition and Dietetics, Occupational Safety and Health). Additionall y, biology courses are required for Certificates of Achievement, and other Career Certificates (Sports Medicine) and preparation for transfer for CSU and UC programs (Viticulture, Enology, Chemistry, and Environmental Studies).

	If this is the first full-time position in the discipline, discuss: (Be brief and specific. Use your Program Review to complete this section.)
	<ul><li>a. Justification for the position.</li><li>b. Projected start-up costs for equipment, facilities, and support staff for the first three years.</li><li>c. Projected enrollment growth for the next three years, starting with the first semester of the projected faculty hire.</li></ul>
7.	What are the impacts on students, the discipline and the college of NOT filling this faculty position? What are the programs/courses/services that have not been or cannot be offered due to the vacancy? (Be brief and specific. Use your Program Review to complete this section.)
	See attached page

8. Any additional information that addresses justification of the position. If multiple positions are being requested, this is an opportunity to differentiate the justifications for additional positions.

In addition to all of the impacts to the students, discipline, and college, the future plants of the Biology majors program require the expertise of a full-time faculty member with cellular and molecular biology skills.

Computational Biology Certificate and degree: We have developed this certificate as recommended by the Bioscience Advisory Board and supported by the Strong Workforce Program. It required a faculty member with specialization in molecular and cellular biology to work with industry. We will be one of the very few institutions to offer a certificate at this level.

Science Building - Measure A: When developing new science facilities, we will require faculty with expertise in state-of-the-art molecular, computational, and synthetic biology. This may include areas such as genomics, nanotechnology, proteomics, etc. We do not have a full-time faculty member who can adequately advise in these areas.

Signatures:  Requestor	9/11/2020 Date		
Man H 9/24/20			
Dean	Vice President		

#### **Question 7**

Biology is the largest science department on campus and has a high transfer rate to 4-year universities. Our students present independent research at scientific conferences, obtain competitive internships (e.g. at Sandia National Lab), and participate in partnerships with the community. Many of our partnerships require a lead faculty member with expertise in cellular and molecular biology. We have already committed to and obtained funding for programs and activities that require oversight and expertise in cellular and molecular biology (e.g. Biotech Boot Camp, National Science Grant focused on Biotechnology Career Pathways). Currently we have no full-time faculty members with the specific expertise to teach Cellular and Molecular Biology (Bio 1C). This class makes up 1 out of 3 of our Biology Majors classes. It will be impossible to maintain the level of quality we currently provide our students without another full-time Major's Biology faculty member to sustain and develop the program.

### **Impacts to Students**

<u>Biotechnology and Experimental Design Project</u>: The biology majors program has a capstone course that includes a detailed hands on laboratory component, where students design their own experiments using industry standard skills and techniques (bioinformatics, tissue and RNA extraction and reverse transcription, PCR and quantitative PCR). These skills are extremely marketable to industry and academic labs. This 6-week experiment could not be offered with a part-time faculty member teaching the class. Comprehensive knowledge and the time and consistency on campus is required to manage a project of this magnitude with 24 students each semester.

<u>Student Independent Laboratory Research</u>: Full-time Biology majors faculty members typically supervise multiple honor's projects and independent study projects each semester (2 - 7 students). This level of advising will be lost for Molecular and Cellular Biology (Bio 1C). These projects are a critical step to student success in transferring to 4-year schools, obtaining jobs in industry and academia, and succeeding in applications to graduate school and medical school.

<u>Advising</u>: Historically the majority of the members of the Beta Beta Biological Honor Society and the Biology Club were students majoring in Biology. A faculty member who knows a student's strengths inside and outside of class can provide a greater level of advising and support. It will be impossible to maintain this level of advising without another full-time faculty member.

<u>Career Goals</u>: Our full-time Biology major faculty members typically write many recommendation letters per semester. Long-term relationships between students and faculty are more likely with a full-time faculty member. Many of these recommendations are for students who have already transferred and need letters for graduate school, medical school, dental school, etc. These letters are critical to students achieving their goals.

### Impacts to discipline