Vacancy Replacement Request 4/23/2020. Submitted by Carol Rhodes, Sci/Tech Division

1. *Title of position*: **Math, Engineering & Science Achievement (MESA) Coordinator**
2. *Job description (approximately two sentences):*

The MESA Coordinator is responsible to support financially- and educationally-disadvantaged Canada College students majoring in STEM fields to:

* build a strong foundation in math and gain academic group study skills to succeed in math, science and engineering courses,
* secure financial resources to pay for college,
* learn about transfer process, 4-year university options and careers for STEM majors and
* gain initial research or work experience in a STEM field.

In addition, responsibilities include working with other faculty members and college staff to support activities to increase student retention and success in STEM as well as transfer to 4-year universities.

1. *If applicable, justify any proposed changes in the position or job description since last hire.*
This position would revert to one person, rather than splitting between two part-time individuals as was required for the past three years while the MESA Coordinator was working part-time through the phase-in retirement program.
2. Does the vacancy bring that department to having no full-time faculty? Yes
3. Are there any special regulations such as law, Title 5, Education Code, Student Success Initiative, or accreditation standards, etc., that would require a minimum of one full-time faculty member?
This position is required per the MESA grant from the Fund for Student Success (CA Community College Chancellor’s Office)
4. *How does the position support the goals of the Educational Master Plan or other strategic college plans?*

The MESA Program aligns perfectly with the College’s Mission of ensuring that students from diverse backgrounds achieve their educational goals by increasing the success of STEM students in transferring to a four-year university. The MESA program directly contributes to the Educational Master Plan’s goals to increase student completion/success and to build and strengthen community connections. See Program Results at the end of this document. Since 1999, the College has never wavered in the required commitment of 100% of the MESA Coordinator position.

The MESA Coordinator supports Guided Pathways by piloting strategies within the MESA program that inform and expand student opportunities to have clear pathways in a major, engage in academic support and explore careers, scholarships and internships. The focus of the MESA grant on low-income STEM students falls squarely within the Science & Health Interest Area. However, work done in MESA, including cohorting of students, can inform overall implementation of Guided Pathways across all Interest Areas.

1. *Describe program review or other data that indicate a demonstrated program/service need.*

Fuller results are appended. At least 125 MESA students are served every semester. Each spring, between 25 and 35 MESA students transfer successfully to 4-year universities as STEM majors. Programs employed in MESA are leveraged to serve many more STEM students.

1. *Additional information that may be helpful, such as how the position addresses access, equity, retention issues.*

The Cañada College MESA Program has been the core support program for financially- and economically-disadvantaged STEM majors at the College since 1999. The focus is to identify and retain students from student groups with the lowest eligibility rates to 4-year universities in math, engineering and science majors.

The MESA Program is part of the college’s institutional commitment to student equity, success and retention issues in technology and science fields. The MESA Program is part of the college’s Guided Pathways and student equity plans for our college. MESA students and Latino STEM majors have benefited from investments made through Cañada’s Student Equity Plan and the MESA grant. The college recognizes the special needs of students who are from economically and educationally disadvantaged backgrounds. Administrators, faculty and staff have strongly supported the MESA Program to serve those students. The support from the STEM Center team as well as Science & Technology faculty has been critical to keep the program’s momentum going, experimenting with improvements and developing new sources of grant funding.

The MESA coordinator focuses on finding new ways to identify and engage fully-qualified MESA students in STEM Center and campus activities that help them be more successful academically and better prepared to transfer – going on college visits, applying for scholarships, applying for transfer agreements, etc. The Dept. of Education HSI STEM and NSF S-STEM grants have added significant resources that provide more support for STEM majors at our college. Faculty members who spend time in the STEM center are a wonderful source of academic support, encouragement and mentoring for students.

The MESA Coordinator is a position that highly leverages other outside resources. There are a number of opportunities to engage students in programs sponsored by Statewide MESA or regional MESA programs. In this way, our campus MESA grant is able to take advantage of other sources of funding or save funds by combining effort and costs with other MESA programs. For example, we have been able to get Cañada students involved in an annual trip to CalPoly Engineering, UC Davis STEM Day, the N. California MESA Student Leadership Retreat, UC Santa Cruz STEM Day and MESA/Industry Student Leadership Conference. We have also gotten opportunities for our students to be part of MESA CISCO Mentoring Program, SanDisk Job Shadow Day and Jabil Manufacturing tours. Getting more students involved in paid summer internships has been a focus because students benefit from working alongside STEM professionals, researchers and graduate students. Funding NSF scholarships and supporting students to apply for NSF and external scholarships, the MESA program has been able to grow a cadre of MESA students who are full-time, on-campus student leaders.

**Program Results**

In the past eight years:

* MESA students were admitted to 26 different universities
* MESA students have won over $3M in scholarships

The following charts demonstrate the growth in the value of scholarships and internships secured by our students as well as the increase in the number of internship offers made to our students. These student achievements also demonstrate the breadth of community connections with industry and other academic institutions that have been developed by the MESA Coordinator.

***Chart 11. Number of paid internship offers*** *(2008 – 2017)*

***Chart 10. Total value of scholarships and internships*** *(2008-2017)*

* MESA students were admitted to 26 different universities, including UC Berkeley, UCLA, UC Davis, UC Santa Cruz, UC San Diego, UC Irvine, UC Santa Barbara, UC Merced, UC Riverside, CalPoly SLO, CalPoly Pomona, Stanford, Cornell, Brown, Mount Holyoke, USF, Santa Clara University, CSU East Bay, SJSU, and SFSU.
* MESA students participated in summer research internships at Stanford School of Medicine, NIH’s Bridges to the Baccalaureate Program at SFSU, ASPIRES engineering research, NASA AMES, NASA/SFSU Comets program, NASA Community College Internship, SRI, University of Nebraska Microbiology, National Institute on Drug Abuse, SRI Molecular Physics REU, Stanford Linear Accelerator, Dept of Energy CCI program (Natl Renewable Energy Lab in CO, Lawrence Berkeley Lab, Princeton Plasma Lab, and Brookhaven Lab in NY), Princeton University MITRE REU program, US Geological Survey, Stanford’s Chemical Engineering Department, Stanford’s Microsystems Lab, UC Riverside STEM Research Summer Internship, National Arthritis and Kidney labs, Leadership Alliance Cell Biology research at Brown University and Stanford Physics lab.
* Industry internships have included Menlo Security (internet start-up), Jacobs Technology, SFO Airport Engineering Internship, CISCO Corporation, NASA Marshall Space Flight Center (Huntsville, AL), Alana Buick & Bers, Roominate and Wind River. Transfer students have interned at Samsung Corp, Box Corp, CISCO, Google, St. Jude Medical and Intel.
* Summer program paid internships have included Engineering With Legos, Valdes Math Institute, STEM Summer Programs Internships at Canada College, Stanford Health Careers Opportunity Program, UC Berkeley T-Prep program, Summer Medical and Dental Education Program and UC Davis Prep Medico.