Non-instructional Guided Pathways
Program Review

As Hartnell College is embarking on a journey to join a growing national movement aiming at improving student success called “Guided Pathways,” the Guided Pathways framework is incorporated into the Spring 2018 Program Review. The Guided Pathways framework “creates a highly structured approach to student success that provides all students with a set of clear course-taking patterns that promotes better enrollment decisions and prepares students for future success. The Guided Pathways framework also integrates support services in ways that make it easier for students to get the help they need during every step of their community college experience.” (California Community College Guided Pathways, http://cccgp.cccco.edu/About-Guided-Pathways)


Please note that resource requests will occur in fall 2018.

<table>
<thead>
<tr>
<th>Service/Office/Non-Instructional Program</th>
<th>Date Submitted to VP (Deadline by 4/27/17)*</th>
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<tbody>
<tr>
<td>STEM</td>
<td>May 2018</td>
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*Please note that you should work with your colleagues and supervisor/director/dean to ensure that this report is completed, revised as needed, in its final form and submitted no later than April 27, 2017.

List of Contributors, including Title/Position

<table>
<thead>
<tr>
<th>Name</th>
<th>Title/Position</th>
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<tr>
<td>Shannon Bliss</td>
<td>AA Dean: STEM</td>
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Typed Name of Manager | Date
A. STUDENT SUCCESS

1. As Hartnell is a student-focused college, how does your service/office/non-instructional program focus on students?

[Enter your response in the table cell below. The box will expand as you enter text:]

The Area of STEM has 4 key tasks.

1. Provide basic skills preparation in Math
2. Provide lower division preparation for transfer across many disciplines, with particular depth in Math, Science and Engineering (up to 7 courses in some).
3. Confer Associate’s degrees in STEM
4. Offer key courses for General Education in the following areas
   - Natural Sciences/Language and Rationality (Hartnell),
   - Physical Universe and Its Life Forms (CSU Breadth)
   - Mathematical Concepts and Quantitative Reasoning/Physical and Biological Sciences (IGETC)

The STEM office supports students, staff and faculty to ensure quality courses are available to students. We work with College partners to support student success. We host MESA, the STEM Internship Program, and K-12 STEM Programs, the Hartnell Planetarium, among others.

2. How does your service/office/non-instructional program interact with prospective students in the community and assist/support students to enroll? Is there more that it can do?

[Enter your response in the table cell below. The box will expand as you enter text:]

K-12 STEM Programs are a key pipeline for STEM students, with edges broad enough to spark K-12 interest in Allied Health, many aspects of agriculture, and higher education in general. This program provides 30-40 hour, hands-on STEM experiences to more than 7000 children a year. This dense programming is supplemented by our Family STEM Day, Planetarium exposure (7000 children per year visit with classes, weekly public shows), and participation in community events like the International Airshow.
CSin3 does a lot of high school outreach, including many school visits. It ties with our K-12 Program: Coder Dojo to build a pipeline for computer science.

STEM advocated for and obtained funding to hire a dedicated STEM counselor—Brook Foley. Her role in “supporting students to enroll” includes leading the 5 STEM groups at Panther Prep in May of 2018—coordinating all students getting a one-term ed plan and register for Summer and Fall Courses. The STEM staff participated in this efforts as well.

We recognize the need for STEM students to have informed support from their parents. We have tried a number of models to build this (a parent event at our internship retreat in July, a parent event at the intern kick off in June, and including a STEM perspective in the parent events at Panther Prep). In 2018 we have piloted having a series of parent events during the term- targeting MESA. Based on the success of these events, we plan to launch another series in 2018-19- likely starting at the Internship Symposium and including these topics: an Orientation to Hartnell, Financial Aid, Supporting Your Student Through Transfer.

We are looking to increase our outreach in STEM to middle and high schools.

3. **How does your service/office/non-instructional program support students in choosing their pathway? Is there more that it can do?**

[Enter your response in the table cell below. The box will expand as you enter text:]  

STEM students often need very specific information to plan an effective path to transfer in a STEM discipline; having a dedicated counselor help build institutional knowledge to assist student directly and disseminate information through counseling staff has proven to be an effective support for STEM students. The Science and Math Institute/MESA work closely with Brook, and also provide student ambassadors working with students and career and transfer workshops. With the addition of our STEM Internship Program, STEM is currently a leader on campus supporting students in choosing their pathway.

We are working to formalize a program called STEM Stepping Stones, that allows students some of the benefits of internships (access to faculty as a mentor, working with other students, engaging authentic STEM problems with hands-on approach), but as a much shorter experience (20-30 hours during the term) we hope to allow access to these experiences for new populations of students (1st term at Hartnell, full-time workers, students will high family responsibilities). We have 2 active grant applications pending to support these projects.
4. **What does your service/office/non-instructional program do to impact and/or support students’ learning in the classroom? Is there more that it can do?**

[Enter your response in the table cell below. The box will expand as you enter text:]

Stem and math were 2 of the pioneers for supplemental instruction, so this support is widely available across most of the STEM program.

For our large math courses (MAT 13, 121, 123, 201) we currently have course leads. This is an effort to ensure best practices available to full-time faculty are also available to part-time faculty, including Early Support Program (ESP), Canvas/online supports, Supplemental Instruction/Peer-Lead Tutoring, required homework, review bootcamps, etc. We particularly need this coordination and faculty support as we implement multiple measures and AB705 acceleration.

5. **How does your service/office/non-instructional program support students to**
   a. **Complete their program?**
   b. **Complete their program on time?**

   **Is there more that it can do?**

[Enter your response in the table cell below. The box will expand as you enter text:]

Science and Math Institute/MESA and its student ambassadors work with students to support transfer, including workshops. Our transfer numbers are strong- with 110 transfers in 2017.

STEM students do not typically graduate on time- the average number of units to graduate is around 110, rather than 60. Several STEM majors are high unit (biology, chemistry) and needed special general education to be developed state-wide to qualify for transfer degrees at 60 units, while engineering still does not have a transfer degree, as a 60 unit path has not been determined by the TMC process.

There are many strong reasons for STEM students to take more units than required to transfer. It is often prudent that students finish a sequence of a course ensuring it will not need to be repeated after transfer- the MAT 3 Calculus sequence is a common example. Additionally, sequences can be taken that will be needed to
complete the bachelor’s but are not required for transfer- the CHM 12 Organic Chemistry sequence is often prudent for biology majors to complete. Across STEM we can work to better explain these options for students.

6. What does your service/office/non-instructional program do to assist students in
   a. Transferring to a four-year institution (finding the right institution and determining what needs to be done to get there)?
   b. Finding employment opportunities in their field (finding the right employment opportunities and determining what needs to be done to get there)?

   Is there more that it can do?

   [Enter your response in the table cell below. The box will expand as you enter text:]

   MESA partners with the Transfer Center on a number of campus tours every year. UC Davis has a MESA-specific transfer day, while UC Santa Cruz does something similar through its ACCESS Program. We are working to put in place something similar at CSUMB.

B. SERVICE AREA OUTCOMES

Each service unit/office/non-instructional program develops its own Service Area Outcomes (SAOs). The outcomes should be directly related to the work of the service unit/office/non-instructional program, challenging but attainable, and measureable. SAOs should articulate what specifically is to be achieved; their measurement should assess how well the service unit/office/non-instructional program is performing.

http://www.hartnell.edu/service-area-outcomes

Please answer the following questions:

1. Which service area outcome did you assess? How did you assess it?

   [Enter your response in the table cell below. The box will expand as you enter text:]

   The STEM SAO: Staff and students will be satisfied with the turnaround time required to complete, answer, and/or process projects, forms, documentation, signature folders, and requests.
This is a new SAO that will be assessed in Fall 2018.

2. Describe how service area outcomes were specifically addressed by the service/office/program during the past year.

   Was there review and analysis of the data? How did the staff engage in discussion? Were any interventions conducted? Are there any plans to make changes/improvements in the service/office/program? What did you find?

   [Enter your response in the table cell below. The box will expand as you enter text:]

   Alicia has actively pursued training on other Divisions forms to ensure efficient implementation. Both Alicia and Shannon attended the Federal Regulations training provided by the HSI Office.

   c. PREVIOUSLY SCHEDULED ACTIVITIES (Linked to previous PPA)

   1. Evaluate the success of each completed activity since your last PPA. What measurable outcomes were achieved? Did the activities and subsequent dialog lead to significant change in student learning or program success? Your previous PPA can be found through this link: http://www.hartnell.edu/2017-program-planning-and-assessment-reports-1

   [Enter your response in the table cell below. The box will expand as you enter text:]

   none