Administrative Services Program Review 2018/19 (Comprehensive)

STEM Programs

Created on: 09/10/2018 09:22:00 AM PST
Last Modified: 12/17/2018 11:19:43 AM PST

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General Information (Administrative Services Program Review 2018/19 (Comprehensive))

2018/19 Administrative Services Program Review

Program Review Data and Resources

Submission Information (REQUIRED)

- Name of Lead Writer: Leticia Lopez / Brian Mackus
- Name of Liaison: Madeleine Hinkes
- Name of Manager/Service Area Supervisor: Leslie Shimazaki

Faculty/staff (REQUIRED)

- Number of Full-Time Classified Professionals
  - 2 Instructional Assistants
- Number of Part-Time Classified Professionals
  - N/A
- Number of NANCE
  - STEM Center/Mentoring
    - 2 Educational Technicians
    - 34. Tutors (Confirm with budget)
    - 8-10 Peer Mentors.
  - STEM IRL
    - 4-5 Assistants
- Number of Students
  - STEM Center: Accessed from SAT-044. Approximately ~900-1,000 per semester.
  - STEM IRL: Accessed from SARS.

Service Area Mission (REQUIRED)

a. Enter the service area mission.

The HSI STEM Programs are designed to increase capacity in STEM education at Mesa by increasing enrollment, retention, success, and completion using two STEM "hubs" on campus: STEM Center and Innovation Research Lab (IRL):

- The STEM Center at San Diego Mesa College aims to cultivate a community of STEM learning among the students, faculty, and staff of the college. By providing open and equitable access to innovative STEM resources and personnel, the STEM Center empowers our students to transform their learner identities and go from simply enrolling in STEM classes to seeing themselves as the next generation of scientists, researchers, engineers, and innovators.

- The Innovation Research Lab (IRL) aims to empower our diverse student population to obtain their academic goals by providing educational access, support, inclusion, and lifelong learning opportunities at San Diego Mesa College. As a community college research center, we promote student success by linking faculty with student mentees to develop exciting research ideas, since research experience is extremely fundamental in STEM academic achievement. The IRL also supports student scholarship and nurtures their scientific identity.

b. How does your service area mission support the mission of the College?

San Diego Mesa College is a comprehensive community college committed to access, success, and equity. We honor those commitments as a diverse community of faculty, students, professional staff, and administrators who collaborate to foster scholarship, leadership, innovation, and excellence in an inclusive learning environment. By promoting student learning and achievement that leads to degrees and certificates, transfer, workforce training, and lifelong learning, we empower our students to reach their educational goals and shape their future.

- The STEM Center serves San Diego Mesa College's mission by acting as a one-stop hub for STEM activity on campus and providing access to resources that would otherwise be outside the reach of our students. Initially funded by Title III/HSI, the Center helps close equity gaps in math and science education by giving students a welcoming study space buttressed with the necessary resources to succeed in STEM courses and majors – calculators, laptops, software, tutors, peer mentors, faculty supported study, models and kits. We also promote and host STEM workshops, clubs, and volunteering opportunities at the college, to foster a further sense of student engagement, leadership, and community in STEM at Mesa College.
- The Innovation Research Lab serves San Diego Mesa College's mission by fostering leadership, innovation, and excellence among student researchers. The IRL is designed as a comprehensive program structured around the understanding of scientific investigation by engaging students in research initiatives, engaging them in problem-solving, fostering science identify and inclusion of all students, teaching them to analyze data and interpret results, and training them to present their research at symposia and professional societies.

Service Area Overview (REQUIRED)

Form: 2018/19 Comprehensive Program Review Administrative Services Program Overview Section (See appendix)

Outcomes and Assessment (REQUIRED)

Form: 2018/19 Comprehensive Program Review Administrative Services Outcomes and Assessment Section (See appendix)

Service Area Analysis (REQUIRED)

Form: 2018/19 Comprehensive Program Review Administrative Services Program Analysis Section (See appendix)

Service Area Goals (REQUIRED)

2018-2019 STEM Center Outcome Set

Goal

Goal	Mapping
Expanding the STEM Center space	**CA- Mesa College Strategic Directions**

Expanding the STEM Center space and capacity in order to meet the increasing needs and demands of students.	**and Goals:** Strategic Goal 1.1, Strategic Goal 1.2, Strategic Goal 1.3, Strategic Goal 1.4, Strategic Goal 1.5, Strategic Goal 1.6, Strategic Goal 2.2, Strategic Goal 2.3, Strategic Goal 2.5, Strategic Goal 3.2, Strategic Goal 3.3, Strategic Goal 4.1, Strategic Goal 4.3, **Institutional Learning Outcomes 2016/17:** Communication, Critical Thinking, Global Consciousness, Information Literacy, Professional & Ethical Behavior
Improve and Expand STEM Tutoring and Mentoring Services. Continue to improve STEM Tutoring and Mentoring Programs in order to facilitate student success on campus.	**CA- Mesa College Strategic Directions and Goals:** Strategic Goal 1.1, Strategic Goal 1.2, Strategic Goal 1.3, Strategic Goal 1.4, Strategic Goal 1.5, Strategic Goal 1.6, Strategic Goal 2.1, Strategic Goal 2.2, Strategic Goal 2.3, Strategic Goal 2.4, Strategic Goal 4.1, Strategic Goal 4.2, Strategic Goal 6.2, **Institutional Learning Outcomes 2016/17:** Communication, Critical Thinking, Information Literacy, Professional & Ethical Behavior
Improve STEM Professional Learning across campus Continue to grow and improve STEM Professional Learning opportunities for faculty and staff in order to respond to the changing needs of our student body.	**CA- Mesa College Strategic Directions and Goals:** Strategic Goal 1.1, Strategic Goal 1.2, Strategic Goal 1.3, Strategic Goal 1.4, Strategic Goal 1.6, Strategic Goal 2.1, Strategic Goal 2.2, Strategic Goal 2.3, Strategic Goal 3.1, Strategic Goal 3.2, Strategic Goal 4.1, Strategic Goal 4.2, Strategic Goal 5.1, Strategic Goal 5.2, Strategic Goal 6.2, **Institutional Learning Outcomes 2016/17:** Communication, Critical Thinking, Global Consciousness, Information Literacy, Professional & Ethical Behavior

Action Plans (REQUIRED)

Actions

2018-2019 STEM Center Outcome Set

Goal

Goal: Expanding the STEM Center space

Expanding the STEM Center space and capacity in order to meet the increasing needs and demands of students.

Action: Expanding the STEM Center space

Describe the actions needed to achieve this objective:	Discuss and secure support for space remodel and expansion with the School of Learning Resources and Academic Support Leadership Team Involve VP of Administrative Services, District Architect, and State Architect (if necessary) if building licenses are involved in the remodel and expansion Share the news of the expansion with the campus community at President's Cabinet and Planning & Institutional Effectiveness meetings to create awareness
Who will be responsible for overseeing the completion of this objective:	Leticia Lopez.
Provide a timeline for the actions:	6-12 months.
Describe the assessment plan you will use to know if the objective was achieved and effective:	
List resources needed achieve this objective and associated costs (Supplies, Equipment, Computer Equipment, Travel & Conference, Software, Facilities, Classified Staff, Faculty,	

Other):

Goal: Improve and Expand STEM Tutoring and Mentoring Services.
Continue to improve STEM Tutoring and Mentoring Programs in order to facilitate student success on campus.

Action: Improve and Expand STEM Tutoring and Mentoring Services

Describe the actions needed to achieve this objective:	Have staff and supervisor serve on MT2C Tutor Leadership Team. Participate in hiring and training of new STEM tutors. Receive input from STEM faculty on student and faculty needs. Design new STEM trainings for tutors. Implement new trainings during Fall and Spring semesters. Oversee and supervisor tutors in the STEM Center and other MT2C sites. Evaluate impact of training on tutors and students during Winter and Summer.
Who will be responsible for overseeing the completion of this objective:	Brian Mackus and Irena Stojimirovic.
Provide a timeline for the actions:	6-12 months.
Describe the assessment plan you will use to know if the objective was achieved and effective:	Evaluating student usage, success, completion, retention and GPA.

List resources needed achieve this objective and associated costs (Supplies, Equipment, Computer Equipment, Travel & Conference, Software, Facilities, Classified Staff, Faculty, Other):	

Goal: Improve STEM Professional Learning across campus

Continue to grow and improve STEM Professional Learning opportunities for faculty and staff in order to respond to the changing needs of our student body.

Action: Improve STEM Professional Learning across campus

Describe the actions needed to achieve this objective:	Expand STEM PL to faculty outside the School of Math & Science, specifically School of Social & Behavioral Science (PSYC, ANTH), School of Business Technology (CISC, GISG) Involve Mesa's Professional Learning Coordinator, Dean of Equity, Open Educational Resources Librarian, and Instructional Designer in more STEM PL-related discussions as we move toward institutionalizing programs (e.g., ESCALA every summer, NAPE every fall semester)
Who will be responsible for overseeing the completion of this objective:	Leticia Lopez and Kelly Spoon.
Provide a timeline for	6-12 months.

the actions:

Describe the assessment plan you will use to know if the objective was achieved and effective:

List resources needed achieve this objective and associated costs (Supplies, Equipment, Computer Equipment, Travel & Conference, Software, Facilities, Classified Staff, Faculty, Other):

Closing the Loop (REQUIRED)

Form: 2018/19 Comprehensive Program Review Administrative Services Closing the Loop (See appendix)

Request Forms

- **BARC & Facilities Requests**
- **Classified Position Request**
- **Faculty Position Request**

Reviewers

Liaison's Review

Form: Administrative Unit Program Liaison's Review 2018/19 (Comprehensive)

Manager's Review

Appendix

A. **2018/19 Comprehensive Program Review Administrative Services Program Overview Section** (Form)
B. **2018/19 Comprehensive Program Review Administrative Services Outcomes and Assessment Section** (Form)
C. **2018/19 Comprehensive Program Review Administrative Services Program Analysis Section** (Form)
D. **2018/19 Comprehensive Program Review Administrative Services Closing the Loop** (Form)

Form: "2018/19 Comprehensive Program Review Administrative Services Program Overview Section"

Created with : Taskstream
Participating Area: STEM Programs

(REQUIRED) Service Area Name

STEM Programs

(REQUIRED) Service Area Strengths

Discuss strengths of the service area.

- The STEM Center provides a centralized hub for students, faculty, and staff to engage in STEM related activities and development. Its 1st floor location in the Learning Resource Center allows quick access to students who are using the buildingâ€™s other services, and conversely allows STEM students and faculty quick access to other services (MT2C, High Tech Center, Language Center, Writing Center, Library Services, and the LOFT). This proximity has allowed collaboration between the STEM team and other departments within the LRC [see section 5] to provide tutoring, computers and printing, counseling, and text books beyond what a single center would be capable of.
    - The newly renovated space provides a welcoming environment for support study for Mesa STEM students. Students have access to suite of desktops and laptops (available for checkout) are equipped with software that aligns with relevant STEM courses. Additionally, a calculator circulation program allows students to checkout graphing and scientific calculators for both short-term and long-term periods of time (with unlimited renewals in a semester). The space has been home to more than 20 tutors since opening who cover the 13 disciplines outlined under STEM. Our collaboration with MT2C has allowed an effective cross-training of tutors to be able to work as general tutors and STEM Center tutors. Additionally, we host faculty office hours and STEM club events in the STEM Center, further building a community engagement opportunities for our students â€“ this semester featured office hours in chemistry, statistics, and mathematics as well as events such as the Astronomy Clubâ€™s viewing party for NASAâ€™s Mars Lander and volunteer coaching from the Computer Science Club.
    - The STEM Center also provides newly purchased kits, models, and technology for biology, chemistry, anatomy, geology, and computer science to provide equitable access to classroom resources for those students unable to purchase them on their own. In the past two semesters professors have specifically assigned students credit to use our genetics and molecular biology kits (Bio107, Bio210a), as well as our modular robots (CISC190). As we expand our offerings, we aim to close more gaps in equitable access to educational resources.
- The Innovation Research Lab (IRL) provides a hands-on research hub for students and faculty on campus. Here the campus community can also attend STEM workshops in cross-disciplinary fields of research such as Computer

Science and Engineering (Python and Microcontrollers), Behavioral Psychology and Biology (e.g., Asleep to Remember), Computer Science and Math (e.g., Hyperglyphs), as well as work-based learning modules linked to the STEM Core program.

- The IRL is currently housed in a former chemistry lab in I-112 that is slated for demolition in late 2019 or early 2020. The permanent IRL will be a modified wet lab that will be housed in B-109 in a 900ft2 space that will offer flexible tabletop and seating arrangements and will be adjacent to the NIF-funded Bridges to the Baccalaureate Program. The temporary IRL can seat up to 25 students at one time and is staffed 40 hours per week by 3 Instructional Assistants (IAs) who are also part-time students. These IAs are STEM majors (Civil Engineering, Biology, Mechanical Engineering). They have a vested interest in promoting workshops to their peers and instructors.
- The IRL works with a grant budget to order supplies, equipment, and pay for speakersâ€™ fees. The IRL Workgroup decides on the programming, purchasing supplies and equipment, and discussing the kinds of interdisciplinary research projects to encourage faculty to undertake with students.

(REQUIRED) Service Area Challenges

Discuss challenges to the service area.

- Sustaining tutoring - Peer Mentors (~10 students @ 20hrs/week and 18 weeks); STEM Tutors (~15 students @ 20hrs/week and 36 weeks)
- Sustaining salaries - Innovation Research Lab Coordinator (.20), STEM Professional Learning Coordinator (.20), STEM Peer Mentor Coordinator (.20), STEM Pathways Coordinator (.20)
- The STEM Center is housed within the Learning Resource Center and thus the buildingâ€™s issues are often shared with the STEM Center. Limited space and historic building practices restrict the growth of new programs (STEM or otherwise) within the LRC. Additionally, staffing issues in one area will often negatively impact others â€“ e.g. a student who has a negative interaction with one service area in the LRC is likely to disengage from other services in the building regardless of their individual quality.
- STEM Programs face sustainability challenges with regards to tutoring and mentoring services. Our faculty and hourly staff are funded entirely through soft grant money. It is our aim to demonstrate the value of these programs to the college such that they will be institutionalized in part or in whole.

(REQUIRED) External Influences

Discuss external influences (Collegewide and beyond).

- BSSOT/BSI - Funding from the BSSOT/BSI grant has been allocated to cover the cost of employing tutors in the STEM Center in Fall 2018 through Spring 2019.
- STEM Core funding (NSF Alliance Includes / Lead: Saddleback College) - In January 2019 Mesa College will sign a MOU with Saddleback College to receive

$75,000 in grant funding to pay for a Mesa Student Support Specialist to assist and track progress of the 66 Mesa STEM Core students persisting in the program from Fall 2018 through Spring 2019.

- STEM Community Scholars funding (SD Foundation) - Received private funding from the San Diego Foundation Science & Technology Fund in the amount of $75,000 in January 2018. The Mesa Foundation became the fiscal agent. Thirteen (13) students were awarded $5000 each for a total of $65K. They received one check of $1000 per month for five months upon completing program requirements (10 points per month in Leadership, Academics, Student Services, Experiential Learning Projects, and "Giving Back"/Volunteerism.) Each studentâ€™s portfolio and progress was tracked on Google Drive. Upon completing the requisite activities per month for five months, the students were awarded their checks. The remaining $10K was spent on travel and food (breakfast, snacks, lunch) associated with the 8 days of field trips that STEM Community Scholars participated in.

(REQUIRED) Areas of Focus

Describe one or more areas that your department is focusing on. You will refer to this response in the Program Analysis Section.

- The STEM Center serves as a hub for academic support in the form of STEM specific peer mentoring and tutoring programs. These programs aim to close achievement and equity gaps in STEM classes and majors with historically low success and completion rates through intrusive mentoring and robust tutoring.
- The STEM Center provides technology in the form of hardware/software access and kits/models/equipment checkout. We have 20 new laptops and 4 new desktops loaded with STEM software. Additionally we provide calculators, models, and kits that would otherwise be inaccessible to students outside of their classroom. It is our expectation that access to these resources will close achievement and equity gaps in STEM Classes and majors with historically low success and completion rates.
- STEM Professional Learning has occured at many levels in various ways at Mesa since the college was awarded HSI Title III STEM funding. We were able to fund faculty to attend professional development workshops by agencies like NAPE (National Alliance on Partnerships in Equity) and ESCALA . This has led to more robust discussions on culturally relevant teaching in School of Math & Science monthly meetings, sharing of best practices through gallery walks at Math department meetings, and STEM Course and Lab redesign. The IRL Workgroup offers faculty and staff Professional Learning opportunities as well. Faculty in attendance at the biweekly meetings are in disciplines across the board (e.g., Math, Chemistry, Anthropology, Biology, Geographic Information Systems, Geology, and Geography) and discuss faculty-student mentor research projects in collaboration with agencies in our community such as the Surfrider Foundation.

Form: "2018/19 Comprehensive Program Review Administrative Services Outcomes and Assessment Section"

Created with : Taskstream
Participating Area: STEM Programs

(REQUIRED) Service Area Name

STEM Programs

(REQUIRED) We are halfway through our 6-year cycle. Is your area on target to complete assessment by Spring 2022? Please attach your schedule for assessment, with explanations as needed.

Refer back to Direction #3 on how to attach documents.

As a new program, weâ€™ll be assessing starting the 2018-2019 cycle. See attached schedule.

(REQUIRED) Please list your AUOs.

i. Enrollment/Success/GPA/retention/transfer-AA/ of students.
    i. â€‹*Providing academic support in the form of tutoring, mentoring, counseling, and resource access to STEM or STEM-interested students that will positively impact course success and retention, GPA, and STEM persistence in classes.*

ii. Rate of LatinX/URM students in STEM
    i. â€‹Providing *STEM-oriented professional learning to faculty and staff that will increase culturally relevant teaching course and lab redesign that will positively impact underrepresented studentsâ€™ retention and persistence in those courses*

(REQUIRED) What have your completed assessments revealed about your area?

Not possible to determine since we donâ€™t have assessments yet.

(REQUIRED) If issues or problems were identified, what is your plan for implementing change?

Not possible to determine since we donâ€™t have assessments yet.

(REQUIRED) Based on your assessments, have you identified resource needs?

- Budget
- Equipment
- Facilities
- Faculty
- Classified Professionals

Please provide any other comments.

Some resource needs are:

- Classified Professionals -- Instructional Lab Technician for the IRL, full-time employee. Cost: $45,000/year
- STEM Peer Mentors (PMs) -- These students will work with Faculty Mentors to learn how to serve as PMs in transfer-level Math, Biology, Chemistry, Physical Science, and Psychology courses. These mentors earn $12.88 an hour. Eight peer mentors will be hired for five hours a week and 36 weeks a year. Cost: $17,000/year
- Faculty Mentors / Peer Mentor Faculty Leads -- Faculty will serve as mentors for STEM Peer Mentors. A total of five mentors in Math, Chemistry, Biology, Psychology, and Physical Sciences will be selected and paid an Educational Service Unit ($968) for their time per semester. Cost: $10,000 per year;
- Student Learning Assistants (Tutors) - These students earn $11.71 an hour. In STEM Grant Year 1, 10 students will be hired for 20 hours a week and 18 weeks. In Grant Years 2-5, 15 tutors will be hired for 20 hours a week and 36 weeks with the college absorbing salaries at a rate of 25% per year to assist with institutionalizing the positions. Cost: $19,000/year;
- STEM Outreach / Conference & Travel - Funds to faculty and staff to travel to STEM-related professional conferences and STEM outreach activities, covers mileage costs and other travel costs. Cost: $7000 per year;
- STEM Professional Learning - Funds available for comprehensive professional development opportunities for STEM faculty and staff. Cost: $10,000/year;
- Supplies - Items in this category are less than $5000 per unit. They will be used to cover basic needs for the HSI STEM Programs (copying, supplies) as well as a variety of materials for use in the STEM Center and IRL. A breakdown by year includes:
    - Project Supplies ($2000);
    - Student computers maintenance ($2000);
    - Student computers annual licensing ($7000);
    - Additional software, models, books, resources ($10,000);
    - Research supplies for the IRL ($7000);

  The costs listed above have been cross-checked with grant-related costs that have been encumbered or will be encumbered, so we could arrive at a realistic idea of cost per area.

Form: "2018/19 Comprehensive Program Review Administrative Services Program Analysis Section"

Created with : Taskstream
Participating Area: STEM Programs

(REQUIRED) Service Area Name

STEM

(REQUIRED) Given your stated area(s) of focus in Part 4, has your service area introduced new or different actions that have changed how you do your work? Please describe.

- **Academic Support (Mentoring/Tutoring)**
-
    - **Desired data: Student outcome based on interaction (GPA, success, retention, persistence) vs non-service using students (e.g. a student who received tutoring or mentoring in a course performed better than similar students who did not).â€‹**
- **Supplies & Technology Access**
-
    - **Desired data: Circulation data vs. student outcomes (e.g. a student who borrowed a laptop for a particular science class performed better than similar students who did not).**
- **Counseling**
-
    - **Desired data: STEM Core Counseling (GPA, success, retention, persistence); STEM Conex Counseling (GPA, success, retention, persistence); compared to overall student (non-STEM) data (GPA, success, retention, persistence)**
- **STEM Professional Learning**
-
    - **Desired data: Pre and post workshop feedback forms from faculty (e.g., has a faculty member learned more about STEM PL than before attending the workshop or was there no impact?**
    - **Desired data: Pre and post classroom improvement in student success and retention (e.g., after incorporating a lab / class redesign / mini grant idea do the IE dashboards for the individual instructors show marked improvement in retention, completion, and persistence rates our Latinx and low-income student populations?)**

(REQUIRED) How do you create an environment that fosters equity, diversity, and inclusion?

The HSI STEM Programs are designed to foster environments that celebrate equity, diversity, and inclusion. The mission of an HSI is to provide an opportunity to improve the academic attainment of Latino/a, Chicano/a, Hispanic, or similar identities--hereafter abbreviated Latinx--, and low-income students. Being an HSI means we are a reflection of our students, their cultures, values, and life experiences. It guides the direction of the college and how we go about the work that we do. Every students deserves to feel connected and safe on campus and to have access to the programs and services to successfully reach their goals. As an Hispanic Serving Institution, Mesa is committed to be the Leading College of Equity and Excellence. As an HSI Mesa qualifies for Department of Education Title III Part F STEM grants and Title V Strengthening Institutions grants. These ensure that services and resources are available to the Latinx student population to promote academic success. Grants are awarded on an annual basis and programs can vary in range of services. At Mesa our Title V Proyecto Exito grant (2014-2019) and our Title III STEM Conexiones grant (2016-2021) serve our Latinx community and help us stay true to the collegeâ€™s mission in becoming the leading college of equity

and excellence. Our HSI grants allow us to provide services (e.g., mentoring, tutoring, counseling, faculty office hours, safe and secure study areas, laptop and calculator checkouts, access to computers and STEM software, access to supplies and materials) in locations such as the STEM Center and Innovation Research Lab that help us empower Mesaâ€™s diverse student body to reach their educational goals and succeed in their future endeavors.

(REQUIRED) Do you see trends in access to your services? What changes might you foresee in the next 2-3 years?

- Peer Mentoring: More promoting of the STEM Peer Mentoring should be done initially in the semester. An idea is to get peer mentors into the classroom on the first day so that students can meet them. They should also be prepared to point to the students the benefits of participation in the mentoring program. Getting feedback from mentees within first few weeks and later in the semester can also be useful in addressing any issues or concerns mentees may have. As we move from the piloting phase we hope that the word of mouth would help promote program. We currently work with one faculty in each STEM discipline included in the program.
- Space, Tutoring, Supplies: As the STEM Center usage increases, demand for space will increase proportionally. Additionally, with the rollout of AB705, more intrusive academic support will be required for students beginning their STEM pathways. This is a natural fit for what the STEM Center is already providing with regards to mentoring and tutoring. With regards to technology, as more courses add hardware and software requirements - the STEM Center will continue to be able to serve as an access point for students who cannot afford it on their own.

(REQUIRED) Do you have a vision for your areaâ€™s future? Do you have ideas for changes to services or procedures? Please explain.

- **STEM Peer Mentoring**: In the future we see the STEM Peer Mentoring program expanding to additional STEM courses. We already have requests for Calc III (MATH 252). We are expanding to PHYS 196 in the Spring 2019. The number of sessions per course seem OK as of now for the number of instructors that we are working with. After this semester ends we will have data available to review attendance and student success and we can make more informed decisions based on this. Although different faculty follow different schedules in their course sections it would be nice to make this sessions general enough so that all students can potentially benefit from them.
- **Innovation Research Lab:** The IRL has begun the process of becoming a hub of multi-disciplinary activities through workshops and talks that are geared to require minimal background and are mostly self-contained. In the future, this philosophy could be carried into creating a program where it could create pathways for students to be prepared for research by getting exposure to ideas, tools and team projects with guidance from faculty from multiple departments.

(REQUIRED) Describe how your area interacts and collaborates with other College areas/programs and the effects of that interaction

- **STEM Counseling**
  - **The STEM Counselor is part of the general counseling department. By working in both general counseling and the STEM Center the counselor is able to provide updated counseling services to STEM students. The counselor also works closely with other STEM faculty from various Math and Science disciplines.**
- **STEM Professional Learning**
  - **STEM PL activities complement the work that Mesaâ€™s Professional Learning Coordinator and Instructional Designer do to bring cultural awareness and innovation in teaching and learning in the classroom. The STEM PL Coordinator is a member of the Faculty Professional Learning Committee (FPLC) and has reassigned time on the BSSOT grant to coordinate culturally relevant pedagogy in STEM classes. STEM PL will also be featured as part of the Catalyst Conference that will take place Jan.23, 2019 at Mesa. STEM PL enhances the work of the LOFT**

in that job, workplace skills, professional and personal development, team building, and equity are all considered, developed. This builds a culture of inquiry and self-improvement among STEM faculty.

- **IRL/STEM workshops**
  - **The Innovation Research Lab (IRL) naturally overlaps and complements the activities of the STEM disciplines and beyond those, including professional learning, and others. The activities at the IRL are meant to create opportunities for students to interact across boundaries and learn in an environment that promotes learning through mini-courses, seminars, self-initiated and guided projects of the kind that do not belong to a single department. This model has efficacy in the kind of skills that students can then take to their goals including research and industry.**
- **STEM Articulation:**
  - **STEM Articulation helps students transfer more easily as it creates agreements with other colleges as to what courses offered at Mesa can transfer and fulfill degree requirements at the receiving institution. Having articulation agreements in place directly contributes to student success as it provides a clear path of coursework for students to follow that can be completed all at Mesa. One example of a current articulation issue is the lack of an ADT (Associate Degree for Transfer) in Biology at Mesa. Currently, if students want to transfer to SDSU for Biology, the only way they can gain priority admission is by having an ADT, which is offered at City and Miramar. Students must take courses there to earn the degree from that school, which is not equitable to all students as taking classes elsewhere may not be an option for all students. This contributes to achievement gaps as students may miss out on the integrated STEM services offered here at Mesa (tutoring, counseling, workshops, etc.).**
- **Tutoring/LRC/LRAS**
  - **The STEM Center has interfaced remarkably well with the LRC and its subdivisions (MT2C, Library Services, etc). MT2C has shared their tutors who are cross trained to work in the STEM Center and provide direct intrusive support to students. Additionally, our respective classified staffs have begun cross training to support the wider mission of the Learning Resource Center. The Title III Program Manager and STEM Instructional Support Supervisor both serve on the LRC/LRAS Leadership Committee. The STEM Instructional Support Supervisor participates in LRC Supervisor meetings and is a member of the MT2C Leadership Team and the MT2C Professional Learning Workgroup. These interactions provide the STEM team a voice within the LRC that allows for integration of tutoring and circulation services that would not be possible otherwise.**

Form: "2018/19 Comprehensive Program Review Administrative Services Closing the Loop"

Created with : Taskstream
Participating Area: STEM Programs

(REQUIRED) Service Area Name

HSI STEM Programs

(REQUIRED) Which one(s) of the following were received in past year?

- None

(REQUIRED) How have these resources benefited your service area?

Funding from BARC, Equity, IELM, Foundation MiniGrants, Perkins, Faculty, Classified Professionals, SSSP, the areas below were **not** received since the STEM Center opened in September 2017 and the temporary IRL opened September 2018. We have soft (grant) funding available and rely on that. In September 2018 upon entering Year 3 of the STEM Conexiones grant, we had to scale back funding STEM tutors. Per grant requirements, â€œIn Year 1, 10 students will be hired for 20 hours a week and 18 weeks. In Years 2-5, 15 tutors will be hired for 20 hours a week and 36 weeks. Beginning in Year 3, the college will begin absorbing these salaries at a rate of 25% per year to assist with institutionalizing the positions.â€□

- In order to continue offering a robust lineup of tutors, we have relied on the BSSOT grant to provide funding for tutors in the STEM Center. BSSOT funding will be sunsetting, so weâ€™ll need to find a revenue stream to sustain this. The STEM Conexiones grant was able to continue funding STEM Classroom Tutors but ...
- In Fall 2018 in order to provide growth in the STEM Core Program that gets students STEM summer internship and calculus-ready in one year, we tapped the Career Technical Education Program and Strong Workforce for a STEM Internship Coordinator (.30 FTE from CTE; .10 FTE from STEM Conexiones). Ideally, the salary for this coordinator should be institutionalized.

BSSOT and NSF STEM Core funding benefitted our service area since without them we would not have been able to sustain STEM tutoring in the STEM Center nor continued working at the brisk pace with onboarding students into the STEM Core program without a separate source of funding for a Student Support Specialist and STEM Internship Coordinator