

# 1. Assessment Plan - Three Column



## PIE - Natural Sciences: Earth Sciences & Astronomy Unit

<i>Unit Goals</i>	<i>Resources Needed</i>	<i>1. Where We Make an Impact: Closing the Loop on Goals and Resources</i>	
<p><b>ASTR AA degree</b> - Develop Astronomy Associates Degree  <b>Status:</b> Active  <b>Goal Year(s):</b> 2016-17, 2017-18, 2018-19, 2019-20, 2020-21  <b>Date Goal Entered (Optional):</b> 09/01/2016</p>	<p><b>In Progress</b> - Create an Astronomy AA degree  <b>*Describe Plans &amp; Activities Supported (Justification of Need):</b> Need to wait until Astr11 is full approved to start working on this.  <b>*Lead:</b> Micol Christopher</p>	<p><b>Reporting Year:</b> 2017-18  <b>% Completed:</b> 0            Once Astr11 is approved, we can start working on AA Astronomy again. Pending approval of astr11. see analysis for Astr11 course. (05/18/2018)</p>	
<p><b>Geology Degrees</b> - Develop Geoscience Degrees to Meet Student Needs  <b>Status:</b> Active  <b>Goal Year(s):</b> 2016-17, 2017-18, 2018-19, 2019-20, 2020-21  <b>Date Goal Entered (Optional):</b> 09/01/2016</p>	<p><b>Completed</b> - CTE Geotechnical Careers - Develop a CTE for students wishing to pursue careers in geotechnical, engineering geology, environmental geology fields after two years of college work.  <b>What would success look like and how would you measure it?:</b> Have a Geotech CTE program approved  <b>Type of Request:</b> NON INSTRUCTIONAL EQUIPMENT:            Tangible property with useful life of more than one year, other than land or buildings improvements, equal and over \$500 per individual item. Used for administrative or non-instructional purposes.  <b>Planning Unit Priority:</b> High  <b>On-Going Funding Requested (if applicable):</b> 1500  <b>Total Funding Requested:</b> 1500</p>	<p><b>Reporting Year:</b> 2018-19  <b>% Completed:</b> 50            An advisory committee was put together, the committee met and approved submitting the certificate, a third course for methods was created, and the department is waiting to hear from EDC. The certificate is at stage 5. (05/17/2019)</p>	
		<p><b>Reporting Year:</b> 2017-18  <b>% Completed:</b> 25            A number of individuals have been identified as being good advisory members. Geology 9L, the first new course necessary for the CTE has been approved and will be offered in the Fall of 2018. Currently going through the approval process with the Chancellor's office after receiving permission from the LAOCRC Consortium. (05/18/2018)</p> <p><b>Reporting Year:</b> 2016-17  <b>% Completed:</b> 25            Strong Workforce Initiative funds were procured during the 2016-2017 school year to establish a Geotechnican Certificate program.</p> <p>Notice of Intent submitted, approved, and forwarded to the</p>	<p>: We are progressing in establishing CTE Geotech program. We have a better scope of the project. We would need various support from the college to complete this project. As stated above, here are the</p>

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	<p>Chancellor's Office.</p> <p>Numerous stakeholders have been contacted to serve on the advisory board for the certificate program and to offer work experiences for students.</p> <p>Labor market analysis has been performed with extremely favorable results for geotechnician, environmental technician, and petroleum technician.</p> <p>New course for certificate program (GEOL9L--environmental geology lab) approved by department and submitted to C&amp;I and Ed Design.</p> <p>Revised AA degree reflecting new &amp; modified courses has been submitted to C&amp;I and Ed Design. (06/27/2017)</p>		<p>support needed:</p> <ul style="list-style-type: none"> <li>- Release time for faculty co-directors. Development of a CTE program is above and beyond faculty curriculum development obligations as it involves new course development, interaction with stakeholders, organization and supervision of work experience courses, training and professional development to teach new courses and learn to use new equipment, etc. To best serve our students and expedite the offering of the geotech certificate program, faculty need dedicated time as part of their teaching load to develop and execute the program and assess the results.</li> <li>- Funding for equipment. The Geotechnical Methods (in development) and Environmental Geology Lab (submitted to C&amp;I, May 2017) will require additional analytical field and lab equipment beyond the department's current inventory. Anecdotally, geospatial proficiency is a necessary skill for employment as a geotech/petroleum tech/environmental tech, suggesting that we will need to purchase ArcGIS software and computers.</li> <li>- Additional funding for development of property in Landers, CA. The Landers property represents an excellent venue for field studies related to the</li> </ul>

Unit Goals

Resources Needed

1. Where We Make an Impact: Closing the Loop on Goals and Resources

Geotechnician Certificate Program as well as other STEM-discipline courses/programs at Mt. SAC and other institutions. Additional funds are needed to develop the property such that it is suitable for use. (06/29/2017)

**Completed** - Develop Geoscience Associate Degree (AS-T).

**\*Lead:** Hilary

**What would success look like and how would you measure it?:** Have a Geoscience Associate Degree (AS-T) Approved and available to students.

**Type of Request:** OTHER OPERATING EXPENSES AND SERVICES: Requests for contracted, legal/ audit, personal/ consultant, rent/ leases, repairs/ maintenance, and other misc. services. May also include request for travel and conference that does not require the assistance of POD.

**Planning Unit Priority:** Medium

**Total Funding Requested:** 0

**Reporting Year:** 2017-18

**% Completed:** 0

AS-T in Geology is held up because, as a department, we have not participated in the CID numbering system At least, this is what I've been told; we will continue to follow up with Jamaica Fowler on this work. (05/18/2018)

Develop AA Natural Sciences with an emphasis in geology

**\*Lead:** Dave Mrofka

**Planning Unit Priority:** Low

**Reporting Year:** 2018-19

**% Completed:** 0

No progress, but Hilary is working on AA-T (05/17/2019)

Develop Transfer Degree in Geology

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

Propose Transfer degree in Geology and establish C-ID for all involved courses.

**\*Lead:** Hilary

**Type of Request:** OTHER OPERATING EXPENSES AND SERVICES: Requests for contracted, legal/ audit, personal/ consultant, rent/ leases, repairs/

<i>Unit Goals</i>	<i>Resources Needed</i>	<i>1. Where We Make an Impact: Closing the Loop on Goals and Resources</i>
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maintenance, and other misc. services. May also include request for travel and conference that does not require the assistance of POD.  
**Planning Unit Priority:** High

<p><b>Revise AA in Liberal Arts with and Emphasis in Natural Science</b> - Revise the AA in Liberal Arts with and Emphasis in Earth Science to better meet the needs of our students.  <b>Status:</b> Active  <b>Goal Year(s):</b> 2017-18, 2018-19, 2019-20, 2020-21  <b>Date Goal Entered (Optional):</b> 06/27/2017</p>	<p><b>In Progress</b> - Get this degree revised and approved. Degree to include a new course for basic mapping skills, required or expected of students transferring to 4YCs as geology majors.  <b>Planning Unit Priority:</b> High</p>	<p><b>Reporting Year:</b> 2018-19  <b>% Completed:</b> 100            This degree has been modified and approved by EDC and the Chancellor (05/17/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18  <b>% Completed:</b> 75            All the documents have been submitted to EDC, but AA Emphasis in Natural Sciences is currently at stage 5, under review by the curriculum office. The curriculum liaison has commented that the degree needs to be "restructured" to offer clearer pathways for students, but is unsure how that would look. The task force, given the responsibility for revising the degree, is happy with the degree as is, after submitting a number of new courses and withdrawing several others.            Information is from <a href="https://webcms.mtsac.edu/admin/all_proposals.asp">https://webcms.mtsac.edu/admin/all_proposals.asp</a>, on</p>
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<p><b>New Courses</b> - Create and teach new courses  <b>Status:</b> Active  <b>Goal Year(s):</b> 2016-17, 2017-18, 2018-19, 2019-20, 2020-21  <b>Date Goal Entered (Optional):</b> 09/01/2016</p>	<p><b>In Progress</b> - Wilderness safety and first aid training for staff involved in outdoor field trips.  <b>*Lead:</b> Mark Boryta  <b>Planning Unit Priority:</b> High</p>	<p><b>Reporting Year:</b> 2018-19  <b>% Completed:</b> 0            Progress on this goal is delayed because courses of this nature are not transferable and so are deemed "Stand-Alone" courses and as such will not be approved by EDC or the Chancellor's Office at the present time. (05/17/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18  <b>% Completed:</b> 0            Department did not choose to use Flex Day to pursue these trainings yet; postponed to 2018-19 (05/18/2018)</p> <hr/> <p><b>Reporting Year:</b> 2016-17  <b>% Completed:</b> 0            Mark will attend a 2-day Field Safety training course offered before the GSA Fall 2017 Meeting in Seattle (06/27/2017)</p>
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**Completed** - Get Astr11 course

**Reporting Year:** 2018-19

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	<p>approved and offered in the schedule.</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b>            Course proposed to be added to AA Natural Sciences degree - hopefully this will allow for Astr 11 to be approved. Next step will be securing CSU/UC transferability and then hopefully offer the course in Fall 2018 for first time.</p> <p><b>*Lead:</b> Micol Christopher.</p> <p><b>What would success look like and how would you measure it?:</b> Course was approved and offered on the Spring 2020 schedule</p> <p><b>Type of Request:</b> OTHER OPERATING EXPENSES AND SERVICES: Requests for contracted, legal/ audit, personal/ consultant, rent/ leases, repairs/ maintenance, and other misc. services. May also include request for travel and conference that does not require the assistance of POD.</p> <p><b>Planning Unit Priority:</b> High</p> <p><b>One-Time Funding Requested (if applicable):</b> 0</p> <p><b>On-Going Funding Requested (if applicable):</b> 0</p> <p><b>Total Funding Requested:</b> 0</p> <p><b>In Progress -</b> Create Geol 20- Geological Field Skills- Create basic field mapping skills course.</p> <p><b>*Lead:</b> Dave Mrofka and Becca Walker</p>	<p><b>% Completed:</b> 75</p> <p>Astr11 has been approved by EDC. We are currently working on scheduling a section of this course for Fall 2019. (05/17/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18</p> <p><b>% Completed:</b> 75</p> <p>Astr 11 is at level 5, under review by EDC. This course can not be approved as a stand alone course, this course moving forward is pending approval on AA Emphasis in Natural Sciences , which is currently sitting at stage 5, under review by the curriculum office.</p> <p>Information is from <a href="https://webcms.mtsac.edu/admin/all_proposals.asp">https://webcms.mtsac.edu/admin/all_proposals.asp</a>, on</p> <hr/> <p><b>Reporting Year:</b> 2017-18</p> <p><b>% Completed:</b> 0</p> <p>Planning the curriculum or content of this course has not begun; still important to the staff involved. (05/18/2018)</p>
	<p><b>In Progress -</b> Offer Geology 30 course to students.</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b>            This course is currently in stage 5 of</p>	<p><b>Reporting Year:</b> 2018-19</p> <p><b>% Completed:</b> 100</p> <p>Course was approved and offered in the Fall of 2018 for the first time. The course is being taught again this semester. The next step is to make it a GE course and receive UC</p>

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	<p>curriculum development; need to finish the process and get it on the course schedule.  <b>*Lead:</b> Dave Mrofka</p> <p><b>Completed</b> - Create Geol 31-Getotechnical Skills Class.  <b>*Describe Plans &amp; Activities Supported (Justification of Need):</b>            Create Geol 31-Getotechnical Skills Class. This is a class necessary for the Geotechnician CTE  <b>*Lead:</b> Dave Mrofka  <b>What would success look like and how would you measure it?:</b>            Complete curriculum approval process for Geol31  <b>Type of Request:</b> OTHER OPERATING EXPENSES AND SERVICES: Requests for contracted, legal/ audit, personal/ consultant, rent/ leases, repairs/ maintenance, and other misc. services. May also include request for travel and conference that does not require the assistance of POD.  <b>Planning Unit Priority:</b> High  <b>One-Time Funding Requested (if applicable):</b> 0  <b>On-Going Funding Requested (if applicable):</b> 0  <b>Total Funding Requested:</b> 0</p>	<p>transfer status. (05/17/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18  <b>% Completed:</b> 100            Geol30, Global Climate Change has been approved and effective as of Summer 2018. We are offering one section of geol 30 in Fall 2018. We are planning to offer this course every full semester. (04/05/2018)  <b>Reporting Year:</b> 2018-19  <b>% Completed:</b> 50            The course is at stage 5 waiting for EDC questions. (05/17/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18  <b>% Completed:</b> 25            Curriculum and content ideas have begun to be identified for this course. Dependent on additional advisory committee interviews. (05/18/2018)</p>
	<p><b>Completed</b> - Create Geol 32-Getotechnical Skills Class.  <b>*Describe Plans &amp; Activities Supported (Justification of Need):</b>            Create Geol 32-Getotechnical Skills Class. This is a class necessary for the Geotechnician CTE</p>	<p><b>Reporting Year:</b> 2018-19  <b>% Completed:</b> 50            The course is at stage 5 waiting for EDC questions. (05/17/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18  <b>% Completed:</b> 0</p>

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**\*Lead:** Dave Mrofka  
**What would success look like and how would you measure it?:**  
 Complete curriculum process for Geol 32  
**Type of Request:** OTHER OPERATING EXPENSES AND SERVICES: Requests for contracted, legal/ audit, personal/ consultant, rent/ leases, repairs/ maintenance, and other misc. services. May also include request for travel and conference that does not require the assistance of POD.  
**Planning Unit Priority:** High  
**One-Time Funding Requested (if applicable):** 0  
**On-Going Funding Requested (if applicable):** 0  
**Total Funding Requested:** 0

**In Progress - GEOL 1**  
**\*Lead:** David Mrofka

Entered into WebCMS in name only; planning for this course is on hold until advisory committee members come forward who are interested in supporting future interns/work experience. (05/18/2018)

**Reporting Year:** 2018-19  
**% Completed:** 100  
 The goal of successfully teaching additional sections has been reached. (05/17/2019)

**In Progress - Create a 1-credit "Basic Science Skills" Class.**  
 This course would be designed to give students the tools they will need to be (more) successful when they later take a geoscience course.

**Reporting Year:** 2017-18  
**% Completed:** 0  
 Have not made progress on this class idea. (05/18/2018)

**In Progress - Create and offer a new oceanography course: Costal Oceanography**  
**\*Lead:** Tania Anders

**Reporting Year:** 2018-19  
**% Completed:** 25  
 Course has been submitted and is at stage 5 where it is "stuck". The course needs to be attached to a degree or certificate. Exploring options so that course can move forward. (05/17/2019)

**Reporting Year:** 2017-18  
**% Completed:** 25  
 Locating a similar course course offered at a 4YC in CA at the introductory undergraduate level is in progress, so far

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	<p>Create an online version (hybrid or fully online) of Geology 8.</p> <p><b>*Lead:</b> Dave Mrofka</p> <p><b>What would success look like and how would you measure it?:</b> Create and teach an online version of GEOL8</p> <p><b>Planning Unit Priority:</b> High</p>	<p>without success. Articulation officer at Mt SAC and Associate Dean have joined in this discussion and work. General course outline has been developed. A similar course is offered at Orange Coast College. (05/18/2018)</p> <p><b>Reporting Year:</b> 2018-19</p> <p><b>% Completed:</b> 0</p> <p>No progress. Awaiting department comments. (05/17/2019)</p>
	<p>Geol9L - Environmental geology lab to be approved and offered</p> <p><b>*Lead:</b> Dave Mrofka</p> <p><b>Planning Unit Priority:</b> High</p>	<p><b>Reporting Year:</b> 2018-19</p> <p><b>% Completed:</b> 100</p> <p>GEOL9L was approved by EDC and we have attempted to offer it the last two semesters, but it does not fill. It will be a required course for the GEOTECH CTE and we have it on hold until that certificate begins. (05/17/2019)</p>
		<p><b>Reporting Year:</b> 2017-18</p> <p><b>% Completed:</b> 100</p> <p>Geol9L has been approved and is scheduled to be offered for the first time during the fall 2018 semester. We are planning to offer this course every full semesters. (05/20/2018)</p>
	<p><b>Request - No Funding Requested -</b></p> <p>Create an online version of Geology 10</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b></p> <p>Create an online version of Geol10, either in a hybrid or fully online model</p> <p><b>*Lead:</b> Dave Mrofka</p> <p><b>What would success look like and how would you measure it?:</b> Have DL amendment approved for Geol10.</p> <p><b>Type of Request:</b> OTHER OPERATING EXPENSES AND SERVICES: Requests for contracted, legal/ audit, personal/ consultant, rent/ leases, repairs/</p>	



Unit Goals

Resources Needed

1. Where We Make an Impact: Closing the Loop on Goals and Resources

maintenance, and other misc. services. May also include request for travel and conference that does not require the assistance of POD.

**Planning Unit Priority:** High  
**One-Time Funding Requested (if applicable):** 0  
**On-Going Funding Requested (if applicable):** 0  
**Total Funding Requested:** 0

**Opportunities** - Provide students with opportunities that broaden their interests in Earth and Space Sciences  
**Status:** Active  
**Goal Year(s):** 2016-17, 2017-18, 2018-19, 2019-20, 2020-21  
**Date Goal Entered (Optional):** 09/01/2016

**In Progress** - TV Monitors in hallway of Bldg 60, 1st floor  
**\*Describe Plans & Activities Supported (Justification of Need):** 3 TV monitors. Our efforts to advertise our offerings will be enhanced by the installation of 3 TV monitors in the halls on the first floor of building 60. We intend to present course offerings, open classes, upcoming events including field trips and lectures, and topics of general interest in our department such as including streaming of NASA programs. We expect more efficient enrollment and increased interest in our offerings.  
**\*Lead:** Julie Bray-Ali  
**What would success look like and how would you measure it?:** We will have 3 interactive monitors throughout the first floor of building 60 to introduce students to Earth Space science / opportunities, along with sharing student success stories.  
**Planning Unit Priority:** High  
**One-Time Funding Requested (if applicable):** 12000

**Reporting Year:** 2018-19  
**% Completed:** 0  
This project was not funded and still on hold. We will continue to leave this item in our PIE to request funding again for 2019-2020 budget year. (05/17/2019)

**Reporting Year:** 2017-18  
**% Completed:** 0  
Equipment budget request for this item was not approved. This item will continue to be on our goal list. (05/18/2018)

**Reporting Year:** 2016-17  
**% Completed:** 50  
i have contacted Mikaela Klein and came up with the rough skedtch of the project (see below) however hte cost of the project was fairly high (approximately \$10,000). as a back up plan, we have discussed the project with IT department and planning to have 2 iMAC in a glass case to loop department information as well as general interest in science program. Dave Mrofka, Hilary Lackey and Julie Bray-Ali will be working on the plan and content development during summer 2017. Karen Long will assist us with the installation of the iMACs.  
100% with the back up plan as of the end of Summer 2017. This item will stay on our PIE to hopefully have the actual monitors installed in the hallways in next few years.

Tentative plan:  
Building: 60  
Rooms: hallway between 60-1515,1511&1512 and outside

: Evaluation of the project have taught us that having display panel is more expensive than we have originally expected. Our quick fix solution of using iMac in glass display cabinets will be implemented. . In near future, we would like to have the actual monitors installed in the hallways.s. (06/29/2017)

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	<p><b>In Progress</b> - Measure telescope vibrations and propose vibration dampening plan  <b>*Lead:</b> Heather Jones</p>	<p>of 60-1306  Scope:  - Purchase and installation of three (3) Flat Panel Displays (FPD is the generic technical term I use, not sure what Chris uses).  - Computers needed?  - Software needed?  - Run new power, data, and AV infrastructure to support FPDs (this is the construction part that needs to be included in the scope).  - Repaint as needed. (06/16/2017)</p> <p><b>Reporting Year:</b> 2018-19  <b>% Completed:</b> 25  We've had discussed the issue with professors from the Physics and Engineering Department. They have recommended some two students who would like to take this on as a special research project. We are communicating with these students to start the data gathering of this research project soon. (05/17/2019)</p> <hr/> <p><b>Reporting Year:</b> 2016-17  <b>% Completed:</b> 25  Telescope video camera purchased in 2015 to help measure the vibrations turned out to be incompatible with any powered USB extender and is therefore incompatible with our systems. A replacement camera was purchased in 2016 and is currently being tested. During 2017 we also took some exoplanet data to test our equipment's ability to do this kind of research. During a consultation with Dennis M. Conti, an exoplanet research expert it was determined that the vibration effects will prevent exoplanet research. Vibrations need to be measured and a dampening plan developed. This will likely result in the defocusing and reinstallation of the 16 inch telescope. (06/27/2017)</p>
	<p><b>Completed</b> - Create 3-4 new planetarium shows.  <b>*Lead:</b> Heather Jones</p>	<p><b>Reporting Year:</b> 2018-19  <b>% Completed:</b> 75  During summer 2018, the planetarium's system was upgraded to Digistar 6. This upgrade allows us the capability to stream planetarium shows, increasing the number of shows we can offer by 26%. Not all planetarium show titles</p>

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	<p><b>Completed</b> - Off Axis Guiding Camera for 16" Telescope</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b> Purchase off-axis guide camera for 16" telescope</p> <p><b>*Lead:</b> Heather Jones</p> <p><b>What would success look like and how would you measure it?:</b> Secure funding for off-axis guide camera and purchase it.</p> <p><b>Type of Request:</b> INSTRUCTIONAL EQUIPMENT: Equipment, library material, or technology for classroom instruction, student instruction or demonstration, or in preparation of learning materials in an instructional program, equal or over \$500.</p> <p><b>Planning Unit Priority:</b> High</p> <p><b>One-Time Funding Requested (if applicable):</b> 600</p> <p><b>On-Going Funding Requested (if</b></p>	<p>are available for streaming. We will still will be purchasing shows and renew our existing show licenses as needed, but we estimate savings a of \$5,000/year with this new capability. (05/17/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18  <b>% Completed:</b> 100  Five new shows were added to the planetarium show library during 2016-2018: Dark Matter Mystery, From Earth to the Universe, Seeing, Totality and Phantoms of the Universe. We are working on upgrading our system to Digistar 6 which will allow us to take advantage of dome streaming services and offer a larger vareity of shows. (05/23/2018)</p> <hr/> <p><b>Reporting Year:</b> 2016-17  <b>% Completed:</b> 100  Four new shows were created during 2016-2017: Dark Matter Mystery, From Earth to the Universe, Seeing, Totality. (06/27/2017)</p> <hr/> <p><b>Reporting Year:</b> 2018-19  <b>% Completed:</b> 75  The needed Off-Axis camera and guide scope hardware have been purchased. Our Fall 2018 Astro 99: Telescope Operating and Research class started using the guided telescope system to take their research data, but the system was buggy. Sometimes working and other times not. We are trying to isolate the problem and make the setup more reliable. (05/17/2019)</p> <hr/> <p><b>Reporting Year:</b> 2016-17  <b>% Completed:</b> 25  Camera purchase for telescope guiding was discovered to have software issues over long distance USB extenders. The quick download of the camera overloads the system and caused the telescope firmware and computer to crash repeatedly. Manufactures of the camera have been exteremely slow to resolve the issue. The camera will only work when attached directly to a computer with a cable 5m or shorter. A new camera has be purchased and is currently being tested. (06/27/2017)</p>

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

**applicable):** 600

**Total Funding Requested:** 600

**In Progress** - Planetarium lobby and grounds renovation

**Reporting Year:** 2018-19

**% Completed:** 0

A 80% scale model of the Apollo 11 Lunar Lander is being donated to the college with plans on having it displayed near the planetarium. We are working with the building and facilities management department to improve the planned site of this display. (05/17/2019)

**Reporting Year:** 2017-18

**% Completed:** 0

The plants that died in the flowerbeds at the planetarium main entrances have been replaced by bushes. Heather Jones met with Patty Leon-Encalade from facilities in May 2018 to discuss possible renovations for the planetarium lobby, grounds, and restrooms. We are waiting to hear back from her. (05/23/2018)

**Reporting Year:** 2016-17

**% Completed:** 0

Grounds was contacted and flowers were planted in the flower bed at the planetarium's main entrance. The flowers have since died. (06/27/2017)

**In Progress** - Additional bathroom stalls added to planetarium restrooms

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

Additional stalls are desperately needed to service the large groups that visit the planetarium. We frequently have groups up to 150 at a time.

**\*Lead:** Heather Jones

**Reporting Year:** 2018-19

**% Completed:** 0

No Progress as of Spring 2019 (05/17/2019)

**Reporting Year:** 2017-18

**% Completed:** 0

The restrooms were evaluated by facilities and it was determined that due to building and ADA requirements, additional stalls could not be added to the existing restrooms. Any changes would require a physical expansion of the space. The planetarium's needs for additional space was mentioned in the 2018 Educational and Facilities Master Plan (chapter 10 page 71) but a solution was not specifically addressed. This is still an ongoing issue. (05/23/2018)

**Reporting Year:** 2016-17

**% Completed:** 0

This is an ongoing need at the planetarium, requests for

<i>Unit Goals</i>	<i>Resources Needed</i>	<i>1. Where We Make an Impact: Closing the Loop on Goals and Resources</i>	
	<p><b>In Progress</b> - Storage room needed adjacent to planetarium for frequently used tables and chairs.</p> <p><b>*Describe Plans &amp; Activities</b></p> <p><b>Supported (Justification of Need):</b> Tables and chairs and used during weekend planetarium events are currently stored in the foyer and lobby.</p> <p><b>*Lead:</b> Heather Jones</p>	<p>expansion of the planetarium and restrooms have been included in the masterplan proposal. (06/27/2017)</p> <p><b>Reporting Year:</b> 2017-18</p> <p><b>% Completed:</b> 0</p> <p>Tables and chairs used during weekend planetarium events are currently stored in the foyer and lobby. The need for additional space was brought to facilities attention and was mentioned in the 2018 Master Plan but not specifically addressed. A solution is still needed. (05/23/2018)</p> <hr/> <p><b>Reporting Year:</b> 2016-17</p> <p><b>% Completed:</b> 0</p> <p>This is an ongoing need at the planetarium, requests for expansion of the planetarium and restrooms have been included in the masterplan proposal. (06/27/2017)</p>	
	<p><b>Completed</b> - Campus signs for the planetarium and telescope observatory</p> <p><b>*Describe Plans &amp; Activities</b></p> <p><b>Supported (Justification of Need):</b> The number one complaint received at the planetarium/observatory is that we are very difficult to find because of a lack of signs. Frequently visitors walk across campus to the telescope observatory on the top of building 60 thinking that is the planetarium because of its highly visible dome structure. Visitors are frequently frustrated and miss shows because they cannot find the planetarium. We want all visitors to have a good experience on Mt. SAC campus, and placing signs around and inside of campus would be a great help.</p> <p><b>*Lead:</b> Heather Jones</p> <p><b>What would success look like and how would you measure it?:</b> Have better signage installed, leading to reduced number of complaints about</p>	<p><b>Reporting Year:</b> 2018-19</p> <p><b>% Completed:</b> 100</p> <p>Several signs have been installed on the main route to the planetarium. (05/17/2019)</p> <hr/> <p><b>Reporting Year:</b> 2016-17</p> <p><b>% Completed:</b> 100</p> <p>Signs installed in late June 2017. Thank you! (06/27/2017)</p>	<p>: Visitors are now much better able to find their way to the correct part of campus to find the observatory and planetarium. (06/27/2017)</p>

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

not being able to find the planetarium and observatory.

**Type of Request:** FACILITIES: This section includes minor building improvement projects and alterations to specific rooms or operational areas.

**Planning Unit Priority:** High  
**One-Time Funding Requested (if applicable):** 0  
**On-Going Funding Requested (if applicable):** 0  
**Total Funding Requested:** 0

**In Progress -** Maintenance on both planetarium projection systems

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

Our planetarium uses two planetarium projection systems. Both need to be maintained on a regular basis. We maintain our Digistar projector with an annual maintenance agreement with Evans and Sutherland (Digistar's manufacturer) to support the software and hardware of the system. The Zeiss Skymaster ZKP 4 requires biannual maintenance from a certified technician which cost ~\$15,000 per visit (subject to exchange rates).

Zeiss is in need of maintenance and a new computer, with a cost of \$21,000

**\*Lead:** Heather Jones

**Type of Request:** INSTRUCTIONAL SUPPORT PROGRAM FUNDING (INSTRUCTIONAL EQUIPMENT): Equipment, library material, or

**Reporting Year:** 2018-19

**% Completed:** 50

During our Digistar 6 upgrade (summer 2018) we replace the color wheels and did general maintenance on our digital projectors. This should extend the life of these aging projectors another 5 years. Projector replacement is recommended for the future. The Zeiss star projector is still in need of maintenance and it's main computer system is failing. On campus IT personnel recommend that this computer be replaced by the Carl Zeiss company. We have received a quote for this maintenance repair and computer replacement for approximately \$21,000.00 (05/17/2019)

**Reporting Year:** 2017-18

**% Completed:** 25

We have maintained our annual maintenance agreement with Evans and Sutherland and use it frequently to solve hardware and software issues with the planetarium system when it arises. The Zeiss projector is due for another maintenance visit. The main polar rotation gears need to be looked at, as it is squeaking quite badly. (05/23/2018)

**Reporting Year:** 2016-17

**% Completed:** 25

Cost of maintenance has been increased to \$5,000.00 annually. Zeiss maintenance is being scheduled for early August to coincide with Digistar 6 upgrade. (06/27/2017)

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

technology for classroom instruction, student instruction or demonstration, or in preparation of learning materials in an instructional program, equal or over \$500.

**Planning Unit Priority:** High  
**One-Time Funding Requested (if applicable):** 21000

**In Progress -** Continue to offer students opportunities to become involved in research in the geosciences. We currently have two students doing research through the Redinger grant, others working with Bob Nelson on a project, and access to the CAMPARE and CalBridge projects through Mike Hood's involvement in both of those grants.

**\*Describe Plans & Activities Supported (Justification of Need):** Support from the college to continue this important work.

The ability for faculty to be paid to work on research experience courses (99 classes).

**Reporting Year:** 2018-19  
**% Completed:** 100  
RESSG - Brittany Brelle completed her project with Dave. Astr 99 - telescope research class had 4 students in Fall 2018.  
Math 99 - Travis Navarrette was selected for a SIRI projection Fall 2018.  
Morgan Palmer and Joel Gutierrez are working with Bob and Mark. This project will continue. (05/17/2019)

**Reporting Year:** 2017-18  
**% Completed:** 100  
Dave Mrofka worked with Adam Fuentes on ESSRRG. Have completed his research, successfully completed a poster presentation and Adam has since transferred to 4 year institution (UC-Davis). Heather Jones, Jessica Draper and Julie Bray-Ali are continuing to work with Chelsea Adelman on ESSRRG - Education research: Learning gain through demonstrations and activities. Chelsea collected a substantial amount of data and presented at both SCCUR in November 2017 and at the Kepler Scholarship event in 2018. We are still withking with her to add more activities in the exploration center. Christina VIdes participated in CAMPARE 2017. Her research was presented at numerous conferences including SCCUR 2017 and AAS 2018. Chelsea Adelman will participate in CAMPARE during Summer 2018. Nikki Cielo is working on SIRI JPL student intern program on Graphics design and technical visualization project during spring 2018. During fall 2017 semester, we offered Astrophotography course as Astr99 for the first time. We had 3 students enrolled in the course and was a great success! Winter 2018 saw the initiation of Morgan Palmer and Robert Zou as ASTR 99 students working with Bob

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

Nelson. Spring 2018, students Morgan Palmer and Danny Vencek-Martinez started an independent research project correlating sedimentology and stratigraphy of the coast with core samples that Hilary Lackey is procuring from CRC oil consulting firm.

Note that we are marking this as 100% complete, though this work will continue on in the future. (05/18/2018)

**Request - Full Funding Requested -**

Create useable rock cutting and polishing room in the basement of building 11.

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

Create a space for rock cutting and polishing in building 11, and purchase a new tile saw for trimming small rock samples. This will give students in classes the opportunity to prepare specimens.

Facilities or custodial services to help with hauling scrap wood and large waste items away from the room. Move junk out of the way and have it removed.

18 gallons of antifreeze for the large saw that is in there already (and bi-annual replacement of this antifreeze). Fill large saw with antifreeze, and set up a bench with a new tile saw. Have trainings for students and staff. This will also benefit the Geotech program by providing equipment to teach lapidary skills, and will be useful for Geo 99 projects. \$2000 total for for tile saw, accessories (Model # BEAST7PKIT Internet #303674598



<i>Unit Goals</i>	<i>Resources Needed</i>	<i>1. Where We Make an Impact: Closing the Loop on Goals and Resources</i>
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Store SO SKU #1002842165 (\$895.00+ tax and ship) and antifreeze. Will need ongoing costs for maintenance and resupplying  
**\*Lead:** Hilary Lackey  
**What would success look like and how would you measure it?:** Rock sample preparation will be included in class curriculum and students will demonstrate skills.  
**Type of Request:** INSTRUCTIONAL SUPPORT PROGRAM FUNDING (INSTRUCTIONAL EQUIPMENT): Equipment, library material, or technology for classroom instruction, student instruction or demonstration, or in preparation of learning materials in an instructional program, equal or over \$500.  
**Planning Unit Priority:** High  
**One-Time Funding Requested (if applicable):** 2000  
**On-Going Funding Requested (if applicable):** 200

**Student success** - Apply outcomes research to teaching methods and curricular planning in an effort to help our students achieve academic success.  
**Status:** Active  
**Goal Year(s):** 2016-17, 2017-18, 2018-19, 2019-20, 2020-21  
**Date Goal Entered (Optional):** 09/01/2016

**In Progress** - Purchase and Install a Modern Weather Station  
**\*Describe Plans & Activities Supported (Justification of Need):** Purchase a modern weather station.  
**\*Lead:** Craig Webb  
**One-Time Funding Requested (if applicable):** 5500

**Reporting Year:** 2018-19  
**% Completed:** 75  
 Weather station has been purchased and delivered, but has not yet been installed or utilized. (05/17/2019)

**Reporting Year:** 2017-18  
**% Completed:** 75  
 Weather station equipment was purchased during spring 2018 semester, though it has not been delivered yet. We are planning to install the weather station and start using the unit in meteorology lecture and lab courses starting fall 2018. We need add new goal to develop activities using the new weather station for 2018-2019 PIE (05/18/2018)

**Reporting Year:** 2016-17  
**% Completed:** 25

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources	
	<p><b>In Progress</b> - Actively recruit and hire student tutors for our General Education courses. We serve almost 2000 students per year in ASTR 5, GEOL 8, METO 3, and OCEA 10. There is tutoring on campus for Math and English, but tutoring resources have not been made available in our area. For 2017-2018 academic year, we are submitting SI request for Astr5, Astr8, Ocea10 and Geol 1.</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b> Funding to pay student tutors.</p> <p>Support from the tutoring center or STEM center. <b>*Lead:</b> Faculty, STEM-center</p>	<p>Not yet purchased. We have a plan for a new weather station, however, funding is needed to complete this project. (06/25/2017)</p> <p><b>Reporting Year:</b> 2018-19 <b>% Completed:</b> 0</p> <p>Have attempted to get an SI for Physical Geology the last two semesters, but denied funding. (05/17/2019)</p> <hr/> <p><b>Reporting Year:</b> 2016-17 <b>% Completed:</b> 50</p> <p>Currently we have regular weekly tutoring sessions from Astronomy 8. we have looked into adding Oceanography tutoring sessions, but we were not able to establish a schedule. We need to start Oceanography tutoring session from first week of the semester in Fall 2017. (06/25/2017)</p>	<p>: We need to establish a schedule from the beginning of the semester. Tutoring sessions are more likely to become part of the student's regular weekly schedule if started early in the semester. We will establish both astronomy and oceanography tutoring session schedules by the end of week 1 during fall 2017. (06/25/2017)</p>
	<p><b>In Progress</b> - Lab space that can be used by all Earth Science disciplines</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b> Design a workspace for students of Earth Sciences that would:</p> <ul style="list-style-type: none"> <li>- be accessible to all at times when campus is open (7:00am-10:00pm)</li> <li>- be able to safely house research equipment</li> <li>- provide spaces for various research projects (equipment for sediment/rock analyses, large tables for map projects, microscopes, computers including GIS, projector/screen or 4K monitor, whiteboard space, etc.)</li> </ul> <p><b>*Lead:</b> Mark Boryta</p>	<p><b>Reporting Year:</b> 2018-19 <b>% Completed:</b> 0</p> <p>There have been zero meetings of the Building Committee since its formation about 2 years ago. (05/17/2019)</p> <hr/> <p><b>Reporting Year:</b> 2016-17 <b>% Completed:</b> 0</p> <p>There have been no opportunities for us to increase lab space or offerings. (06/25/2017)</p>	

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

**Type of Request:** FACILITIES: This section includes minor building improvement projects and alterations to specific rooms or operational areas.

**Planning Unit Priority:** Medium

**In Progress -** Equity in learning in all intro astronomy courses

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

The ability for faculty to be paid to work on research experience courses (99 classes).

**\*Lead:** Mike Hood and Julie Bray-Ali

**Planning Unit Priority:** High

**Reporting Year:** 2017-18

**% Completed:** 75

We are continuing to implement the 2 activities developed.

We are no longer collecting pre-test and post data as we already have ample amount of data to analyze before moving forward to the next step. (05/18/2018)

**Reporting Year:** 2016-17

**% Completed:** 100

We received funding through the FIG projects to assess student learning in our astronomy courses. Pre- and post-tests were given to astronomy students in every section. The FIG funding allowed us to hire a student to help score tests and analyze the score results. We used this data to find concepts that students were struggling to understand, and designed activities to help students learn this material. We presented one full year worth of our data to other faculty members inside and outside of our department. (05/24/2017)

: We were able to show how the activities we created helped improve student learning, and continue to use this assessment data to pinpoint areas where we can improve student learning. We also used the data we collected to as a part of our SLO assessment for the year, which helped inform the changes we made to Astr5 in the process of our 4-year course review. (05/24/2017)

**In Progress -** Student computer carts updates

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

New software. We recently acquired vernier equipment. We would like all of our instructor systems and student computer charts have vernier software (LoggerPro3) . We will survey what other additional softwares are needed and will update all our computer system. 2 of the laptop carts were updated with new computers in fall 2016 and one is from spring 2015. We will be

**Reporting Year:** 2018-19

**% Completed:** 75

Student computer carts were mostly updated. Astronomy cart in 1306 has 20 brand new computers. Other 2 carts should have 20 computers as well. We will request replacement for those 2 carts in 2019-2020 budget year. (05/17/2019)

**Reporting Year:** 2017-18

**% Completed:** 75

Some updates on our 3 computer carts were done. All 3 computer carts are now equipped with less than 4 years old computers. 3 of our carts have 18, 18 and 14 machines. We need each cart to have 20 computers as more of our in-class activities require individual computer use. (05/18/2018)

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources	
	<p>requesting new system for the older set in 2018-2019 PIE.  <b>*Lead:</b> Julie Bray-Ali will  <b>What would success look like and how would you measure it?:</b>            Softwares purchased and installed.  <b>Planning Unit Priority:</b> High  <b>One-Time Funding Requested (if applicable):</b> 500</p> <p><b>In Progress</b> - 2017-2018 academic year, we need replacement computer system for 60-1515, 60-1306 and building 61 -Exploration center . During the summer 2017, we will assess all the systems for technology update needs. As for the student laptop carts, 2 of the laptop carts were updated with new computers in fall 2016 and one is from spring 2015. We will be requesting new system for the older set in 2018-2019 PIE.  <b>*Describe Plans &amp; Activities Supported (Justification of Need):</b>            New classroom systems  <b>*Lead:</b> Julie Bray-Ali  <b>What would success look like and how would you measure it?:</b> New systems to be installed  <b>Planning Unit Priority:</b> High  <b>One-Time Funding Requested (if applicable):</b> 3600</p>	<p><b>Reporting Year:</b> 2016-17  <b>% Completed:</b> 100            Here's a list of classroom computers that were updated for 2016/2017 academic year.11-2119, 11-2209, 11-2310, 11-2324, 11-2123 Astronomy Laptop Cart, 60-1511, 60-1512, 60 Planetarium - iMAC students desktops. During summer 2017, following IT project will be completed: 60-1402 - Adjunct printer replacement, 60-1104 - ES department printer replacement, 60 Planetarium - student observatory laptops, 60 Wifi Access Points upgrade We will be 100% complete with this task as of the end of Summer 2017. But we will start assessing the conditions of the other systems to see if we need updates and replacement during 2017-2018 academic year. As of now, we know we need 60-1515 and 60-1306 . As we start to use more vernier software as part of our lab activities, we need software installed on faculty computers and student laptops. (06/14/2017)</p> <p><b>Reporting Year:</b> 2018-19  <b>% Completed:</b> 100            Completed (05/17/2019)</p>	<p>: With the updated student laptops and instructor computers, we are able take advantage of the latest technology in our classroom for more effective learning. (06/14/2017)</p>
		<p><b>Reporting Year:</b> 2017-18  <b>% Completed:</b> 75            Some updates on our 3 computer carts were done. All 3 computer carts are now equipped with less than 4 years old computers. 3 of our carts have 18, 18 and 14 machines. We need each cart to have 20 computers as more of our in-class activities require individual computer use. (05/18/2018)</p>	

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

**In Progress** - Purchase and install new softwares in our classroom and staff computers. We know we need vernier software (Logger pro3). Logger pro site licence (\$250) and 10 student CD - to be used as faculty resource in each classroom. We will survey the department for additional software to be included in the update

**\*Describe Plans & Activities Supported (Justification of Need):** site licence of Logger pro and other software

**\*Lead:** Julie Bray-Ali  
**What would success look like and how would you measure it?:** Software to be installed in all of our computers.

**Planning Unit Priority:** High  
**One-Time Funding Requested (if applicable):** 1000

Improve usability of Oceanography Classrooms (11-2209 and 60-1511). This includes general clean up and decluttering of the rooms, as well as purchasing materials to enhance student learning.

**\*Describe Plans & Activities Supported (Justification of Need):** This includes a marine fossil collection, sedimentary structures, sediment samples, glass beakers and other general equipment required for lab activities. Estimated cost: \$3,000.

**\*Lead:** Tania Anders  
**Type of Request:** INSTRUCTIONAL SUPPORT PROGRAM FUNDING

**Reporting Year:** 2018-19  
**% Completed:** 0  
Not completed. We need to revisit the need of this item. (05/17/2019)

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**Reporting Year:** 2017-18  
**% Completed:** 0  
This has not been done. We are waiting for geoscience faculty members to let us know when we should purchase the software. Geoscience faculty members are using Logger Pro to establish set activities to be used by all of our bread and butter courses. Software purchase is part of that effort and we will continue to work on this task during the 2018-2019 academic year. (05/18/2018)

**Reporting Year:** 2018-19  
**% Completed:** 100  
Regular, once a week, clean-up of work spaces and equipment used during the lab week (such as beakers) was added to lab technicians duties. Lab tech needs to develop routine. As of right now the workspaces near the sink and material are not cleaned regularly.

Locks have been installed on cabinets in ocean lab; 100% complete (05/17/2019)

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**Reporting Year:** 2017-18  
**% Completed:** 50  
Clean-up of 60-1511 has begun and oceanography faculty have met to discuss general use and organization of cabinet space. A request to add locks to cabinets was submitted on March 14th 2018. Once locks are installed material of varying values can be added for safe storage. Basic material

<i>Unit Goals</i>	<i>Resources Needed</i>	<i>1. Where We Make an Impact: Closing the Loop on Goals and Resources</i>
	<p>(INSTRUCTIONAL EQUIPMENT): Equipment, library material, or technology for classroom instruction, student instruction or demonstration, or in preparation of learning materials in an instructional program, equal or over \$500.</p> <p><b>Planning Unit Priority:</b> Low</p> <p><b>One-Time Funding Requested (if applicable):</b> 3000</p> <p><b>In Progress -</b> Create "Instructional Toolkit Boxes" for adjunct faculty members.</p> <p>To ensure quality instruction by all faculty for Oceanography, full-time Oceanography faculty plan on putting together "instructional toolkit boxes" for all adjunct faculty. These boxes will include material for hands-on activities for lecture courses. Adjunct faculty members often only come to our campus to teach one or two classes. It is instrumental for these faculty members to know that they have a space where they can store their own material that they can count on being there and ready for use.</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b></p> <p>Have locks installed on all cabinets in 60-1511 to allow adjunct faculty to have somewhere to store their materials. Personal spaces as well as well maintained joint equipment, will encourage adjunct faculty to do more hands on activities and to feel welcomed at Mt. SAC.</p> <p>Purchase and outfit toolkit boxes</p>	<p>such as glass beakers and plastic cylinders have been purchased and added to cabinets, although it seems that a number of glass beakers have disappeared from the room. More need to be ordered if material does not show up again. (05/18/2018)</p> <p><b>Reporting Year:</b> 2018-19 <b>% Completed:</b> 75</p> <p>Most of the material needed for the newly developed activities has been purchased and is already being used. Faculty need to come together to put more boxes together. For this purpose more boxes need to be purchased. It is important to complete this soon to keep material in order. Goal is for faculty to be able to rely on material being available when they need it and in designated locations. More material needs to be purchased to maintain and expand the collection. (05/17/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18 <b>% Completed:</b> 25</p> <p>The Oceanography faculty have met and discussed which materials would be beneficial to have to compliment the lecture courses. Order requests were submitted to lab technician in early April, 2018, and some materials arrived. Once material arrives, boxes will be put together to be completed by the start of Fall 2018. (05/18/2018)</p>

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

with the necessary materials for each adjunct faculty member. - \$3000

Funding for adjunct faculty to be paid to attend a flex-day activity for introduction of the use of the boxes. - \$500

**\*Lead:** Tania Anders

**Type of Request:** INSTRUCTIONAL SUPPORT PROGRAM FUNDING (INSTRUCTIONAL EQUIPMENT): Equipment, library material, or technology for classroom instruction, student instruction or demonstration, or in preparation of learning materials in an instructional program, equal or over \$500.

**Planning Unit Priority:** High

**One-Time Funding Requested (if applicable):** 3500

**Request - Full Funding Requested -** Student worker budget to pay student to work on data entry and analysis.

**\*Describe Plans & Activities**

**Supported (Justification of Need):** Intro astronomy student learning research is still continuing. Results have already lead to improvements in our teaching in introductory astronomy courses. We will use the data we have already collected to inform our work on developing additional in-class activities to resolve difficult topics.

**\*Lead:** Mike Hood and Julie Bray-Ali

**What would success look like and how would you measure it?:**

Continue to work on analysis of the

**Reporting Year:** 2018-19

**% Completed:** 0

This budget increase has not been funded. (05/17/2019)

<i>Unit Goals</i>	<i>Resources Needed</i>	<i>1. Where We Make an Impact: Closing the Loop on Goals and Resources</i>
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data we collected. This data consists of pre- and post test in all intro astronomy courses to assess most difficult topics in intro astronomy courses and develop additional activities / demos.

**Planning Unit Priority:** Medium  
**One-Time Funding Requested (if applicable):** 300

Upgrade equipment, demos, and posters in room 11-2115 to give students in that classroom the same learning opportunities as students in other classrooms.

**Planning Unit Priority:** High

**Reporting Year:** 2018-19  
**% Completed:** 75  
 11-2115 now has many more demos and posters to help with student learning. (05/17/2019)

**Request - Full Funding Requested -**

Kits of materials for students to borrow when taking a GEOL class; includes Mineral ID box/kit, Ig/Sed/Met kit, topographic maps appropriate for the particular course

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

Minerals and Rocks that are commonly used for student learning are not available during this time of pandemic. Electronic devices that students can access are far too small to view topographic maps, which are typically approximately 17"x24" and printed at fine detail. These are essential items that students of geology must be able to access. Different classes (e.g., GEOL 1, 2, 7, 8/8L) have different needs to meet standard requirements. These materials should be returned at the end of each semester. Estimated cost is approximately \$50/student,



*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

plus time to construct them.

**\*Lead:** Mark Boryta

**What would success look like and how would you measure it?:**

Purchase, prepare, and distribute necessary kits

**Type of Request:** INSTRUCTIONAL EQUIPMENT: Equipment, library material, or technology for classroom instruction, student instruction or demonstration, or in preparation of learning materials in an instructional program, equal or over \$500.

**Planning Unit Priority:** Urgent

**One-Time Funding Requested (if applicable):** 4000

**Total Funding Requested:** 4000

**Request - Full Funding Requested -**

Rock samples for Geol1 students

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

We need enough bulk samples (like fist-sized hand samples) of igneous, sedimentary, and metamorphic rocks for GEOL1 students if we're going to continue online for the foreseeable future. These samples are about \$10 apiece, and students in this course would need multiple samples to be able to complete the learning objectives of the course.

**\*Lead:** Becca Walker

**What would success look like and how would you measure it?:**

Purchase, package, and distribute enough of these rock samples for students to use in this GEOL1 course

**Type of Request:** INSTRUCTIONAL EQUIPMENT: Equipment, library material, or technology for classroom

<i>Unit Goals</i>	<i>Resources Needed</i>	<i>1. Where We Make an Impact: Closing the Loop on Goals and Resources</i>
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instruction, student instruction or demonstration, or in preparation of learning materials in an instructional program, equal or over \$500.  
**Planning Unit Priority:** Urgent  
**One-Time Funding Requested (if applicable):** 20000  
**Total Funding Requested:** 20000

**Cutting Edge Technology to Support Student Learning** - We will continue to strive to give our students access to cutting edge technology to allow us to help increase student success.  
**Status:** Active  
**Goal Year(s):** 2016-17, 2017-18, 2018-19, 2019-20, 2020-21  
**Date Goal Entered (Optional):** 06/27/2017

**In Progress** - Ten replacement iPads and charging station. \$7500  
**\*Describe Plans & Activities Supported (Justification of Need):** Our department has 8 iPads for student use in the classroom and on the field. They are now almost 5 years old and no longer updatable with new software and no longer supported by the vendor. We would like to request replacements. 10 iPads. (\$650 per unit with apple care = \$6500 plus docking station / charging station)  
**\*Lead:** Julie Bray-Ali  
**What would success look like and how would you measure it?:** iPads will be used by our students in the classroom and in the field to learn the subject, record their learning and discoveries and share. Implementation of this tool will increase the student learning. Success will be measured by acquiring the iPads..  
**Planning Unit Priority:** Medium  
**One-Time Funding Requested (if applicable):** 7500

**Reporting Year:** 2018-19  
**% Completed:** 100  
 iPads were purchased and set up. We are working on creating evening observation lab activity using the iPads. (05/17/2019)

**Reporting Year:** 2017-18  
**% Completed:** 0  
 These iPads have not been purchased. We will continue to request these items. (05/18/2018)

**In Progress** - Maintain chemical and physical sampling equipment for use in classes and for student research.

**Reporting Year:** 2018-19  
**% Completed:** 25  
 Maintenance of Vernier equipment designated as a

<i>Unit Goals</i>	<i>Resources Needed</i>	<i>1. Where We Make an Impact: Closing the Loop on Goals and Resources</i>
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The Department has purchased a set of Vernier geochemical sampling devices for use in oceanography and geology labs. We have also purchased sedimentary coring devices. This equipment requires proper care and storage - for instance, some probes need to sit in a wet chemical solution during storage. Sediment cores need to be stored at proper temperature and humidity levels.

**\*Describe Plans & Activities Supported (Justification of Need):** It is important that the space, budget and employee hours (those of Mark Koestel, our technician, or student hourly assistants) be available for upkeep.

**\*Lead:** Tania Anders, geology faculty

**In Progress -** Replace Aging Digital Projectors in the Planetarium

**\*Describe Plans & Activities Supported (Justification of Need):** Replace Aging Digital Planetarium Projectors - The planetarium's digital projectors are heavily used and have not kept up well with current technology. The current 2K resolution limitation causes some pixelation, especially when looking at planet orbits, and the stars do not look like stars but instead fuzzy dots. Upgrading to a 4K projection system will significantly increase the resolution with crisper point like stars and smoother image renders. Installation would close the planetarium for one week and would

responsibility of lab technician. (05/17/2019)

**Reporting Year:** 2017-18  
**% Completed:** 25  
 Lab technician has been instructed to regularly (at least once a month) check probes that require storage in solution, as well as to maintain other probes. Faculty are not monitoring if lab technician is completing this task regularly but are trusting that task is being done. Some Lab Quest 2 units are not functioning properly. Lab technician should follow up with Vernier. We currently have no storage space for sediment cores (requires refrigeration). (05/18/2018)

**Reporting Year:** 2018-19  
**% Completed:** 0  
 During our Digistar 6 upgrade (summer 2018) we replace the color wheels and did general maintenance on our digital projectors. This should extend the life of these aging projectors another 5 years. Projector replacement is still recommended for the future. (05/17/2019)

**Reporting Year:** 2017-18  
**% Completed:** 25  
 The planetarium saves some of it's revenue each year in anticipation of this cost. As of May 23, 2018 we have saved up \$100,000.00 to put towards this cost. (05/23/2018)

**Reporting Year:** 2017-18  
**% Completed:** 0  
 This will be the most expensive upgrade to the planetarium since it reopened. We are saving planetarium revenue to help with the cost. (05/18/2018)

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

need to be done by a professional. This is a significant and expensive upgrade.

**\*Lead:** Heather Jones

**Planning Unit Priority:** High

**Request - Full Funding Requested - 9** additional laptops to equip all of our carts to the intended capacity of 20.

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

Currently, our three laptop carts have 18, 18 & 15 computers. We need to increase each of these laptop sets to have 20 computers each, so that we have enough computers for each of our students to have their own computer to use in lab. Completion of this goal will equip each computer carts to have 20 laptops to accommodate the classroom and lab rooms better. We have 9 classrooms and share 3 computer carts. We will in the near future increase in the number of carts, but for now we will be mostly supported by 3 sets of carts of computers.

**\*Lead:** Julie Bray-Ali

**What would success look like and how would you measure it?:** Success will be measured by acquiring and using the new laptops.

**Planning Unit Priority:** High

**One-Time Funding Requested (if applicable):** 10800

**Request - Full Funding Requested - 20** laptop computers to replace the units in our oldest laptop cart.

**\*Describe Plans & Activities**

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

**Supported (Justification of Need):**

One of the carts full of laptop computers from Spring 2015 needs to be replaced. The computers are now old enough that they cannot handle the software needed for some of our astronomy labs.

**\*Lead:** Julie Bray-Ali

**What would success look like and how would you measure it?:** Success will be measured by acquiring the new laptops to replace our oldest set of computers.

**Planning Unit Priority:** High  
**One-Time Funding Requested (if applicable):** 21600

**Completed -** Maintenance to classroom microscopes and petrographic scopes

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

Maintenance to classroom microscopes and petrographic scopes

**\*Lead:** Dave Mrofka

**What would success look like and how would you measure it?:**

Complete maintenance on microscopes and petrographic scopes.

**Type of Request:** INSTRUCTIONAL EQUIPMENT: Equipment, library material, or technology for classroom instruction, student instruction or demonstration, or in preparation of learning materials in an instructional program, equal or over \$500.

**Planning Unit Priority:** High  
**One-Time Funding Requested (if applicable):** 1000

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

**Total Funding Requested:** 1000

**Request - Full Funding Requested -**

Logger Pro and other software

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

Purchase and install new software on our classroom and staff computers. We know we need vernier software (Logger pro3). Logger pro site licence (\$250) and 10 student CD's intended to be used as faculty resource in each classroom. We will survey the department for additional software to be included in the update

**\*Lead:** Julie Bray-Ali

**What would success look like and**

**how would you measure it?:** Logger pro is a software to be used with the handheld data collecting units that we have. Software will allow students to further analyze the data collected. Success will be measured by acquiring and utilizing the software.

**Planning Unit Priority:** Medium

**One-Time Funding Requested (if applicable):** 250

**Request - Full Funding Requested -**

Classroom to be equipped with BrightLink system.

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

Campus is starting in implement Bright ink system (similar to SmartBoard) in newer classrooms / building. We would like to start by equipping one of our classrooms to with BrightLink system to be used in conjunction with iPads to have more effective in-class small group

**Reporting Year:** 2018-19

**% Completed:** 0

This project was not funded and still on hold. We will continue to leave this item in our PIE to request funding again for 2019-2020 budget year. (05/17/2019)

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

activities and discussions. Our immediate goal in summer 2018 is to research infrastructure change needs and asses which classroom would be appropriate for this system to be installed. We imagine this to be the first installation of this college standard system in our division to study the effectiveness of this device. Julie Bray Ali will work with IT staff and interview other instructors, programs, the IT department and presentation services to analyze the benefits and challenges of this system. Once the system is installed, we envision this system to be used by ESA as well as other department faculty members to utilize this new cutting edge resource. System is about \$3,000. Facility updates needs to be completed to install smartboard system.

**What would success look like and how would you measure it?:** Bright Link will allow greater student participation in the classroom and recording of the participation. In conjunction with the use of classroom iPads, we can transform our classroom to be even more technologically advanced in order to take advantage of online resources and other online tools. Implementation of the system will improve student participation and learning. Success will be measured by acquiring the Brightlink system in one of our classrooms, after which we will continue to measure improvements

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

in student learning due to the use of this system.

**Planning Unit Priority:** Medium

**One-Time Funding Requested (if applicable):** 3000

**Request - Full Funding Requested -**

Augmented reality sandbox

**\*Describe Plans & Activities**

**Supported (Justification of Need):** 1.

In alignment with External Condition 1 (see relevant section in this PIE document), our department may face a higher need for offering some of our lectures online. An augmented reality (AR) sandbox offers the opportunity to produce high quality visual instructional material for our students. 2. Many of our students struggle with the transfer of 3 dimensional information into a 2 dimensional view.

"Using an AR sandbox allows users to create topography models by shaping real sand, which is then augmented in real time by an elevation color map, topographic contour lines, and simulated water. The system teaches geographic, geologic, and hydrologic concepts such as how to read a topography map, the meaning of contour lines, watersheds, catchment areas, levees, etc." (UC Davis).

A majority of our Earth Science courses include these concepts in our Student Learning Outcomes/Course Measurable

**Reporting Year:** 2018-19

**% Completed:** 0

Department needs to vote if it would like to pursue this purchase. (05/17/2019)



<i>Unit Goals</i>	<i>Resources Needed</i>	<i>1. Where We Make an Impact: Closing the Loop on Goals and Resources</i>
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Objectives, so an AR sandbox will help us teach these concepts that so many of our students struggle with.3. The AR sandbox can be used for community outreach events.

**\*Lead:** Tania Anders

**What would success look like and how would you measure it?:**

Purchase and install the augmented reality sandbox. Develop activities to be used with the equipment for use both in the classroom and for outreach events.

**Planning Unit Priority:** Low

**One-Time Funding Requested (if applicable):** 10000

**Request - Full Funding Requested -** Meteorite display for the planetarium. Request includes design of the display as well as purchase of the samples for the display.

**\*Describe Plans & Activities Supported (Justification of Need):**

We would like to hire Dustin Dickens, a noted and well-qualified meteorite specialist to design and obtain samples for a meteorite display. This display will highlight the concepts behind planet differentiation and accretion theory and show how this theory explains the different types of meteorites found. This display will also honor the late Ron Hartman, a meteorite expert, who served as Mt. SAC's Planetarium Director for over 40 years by featuring some of his original collection.

**\*Lead:** Heather Jones

**Reporting Year:** 2018-19

**% Completed:** 25

Waiting for updated quote from the vendor. (05/17/2019)

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

**What would success look like and how would you measure it?:** Use of the display for astronomy and geology classes to promote student learning, as well as interest from Mt. SAC visitors

**Planning Unit Priority:** Low  
**One-Time Funding Requested (if applicable):** 15040

ARC-GIS Facility

**\*Describe Plans & Activities Supported (Justification of Need):**  
Update computing facilities to include ARC-GIS capabilities and other systems for use with our technical equipment.

**\*Lead:** Tania Anders, Dave Mrofka  
**Planning Unit Priority:** Low

**Reporting Year:** 2018-19

**% Completed:** 0  
Department should consider reaching out to the geography faculty on our campus and plan a joint GIS lab space. This would be a great opportunity for collaboration. GIS will become more important for department with the Geotech program. (05/17/2019)

**Request - Full Funding Requested -**  
Projector installed into the ceiling of 11-2115

**\*Describe Plans & Activities Supported (Justification of Need):**  
Currently, the only projector in this classroom is placed on a cart in the middle of the room. This leads to cords stretched across the floor, leading to a clearly undesirable situation.

**\*Lead:** Julie Bray-Ali and Mike Hood  
**Planning Unit Priority:** High  
**One-Time Funding Requested (if applicable):** 6000

**Reporting Year:** 2018-19  
**% Completed:** 100  
Completed (05/17/2019)

**Request - Full Funding Requested -**  
Outdoor Whiteboard/Chalkboard, Tables with attached benches

**\*Describe Plans & Activities Supported (Justification of Need):**  
Students often hesitate to visit faculty in their offices. In an effort to

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

reach our students in a setting in which they feel more comfortable, that is more inviting and informal, an outdoor study/teaching space along the wall of the steps to building 11 is proposed. This could be a pilot project for the campus. If successful more outdoor study/teaching spaces could follow.

Approx. \$25,000 includes outdoor metal furniture and chalkboard

**\*Lead:** Tania

**Type of Request:** INSTRUCTIONAL SUPPORT PROGRAM FUNDING (INSTRUCTIONAL EQUIPMENT): Equipment, library material, or technology for classroom instruction, student instruction or demonstration, or in preparation of learning materials in an instructional program, equal or over \$500.

**Planning Unit Priority:** Medium

**One-Time Funding Requested (if applicable):** 25000

**Request - Full Funding Requested -** Replacement computers for two laptop carts

**\*Describe Plans & Activities**

**Supported (Justification of Need):** This will replace our oldest two sets of laptops that are predominately used in the Earth Science classrooms and labs. This is for a total of 36 computers, 18 for each laptop cart.

**\*Lead:** Julie Bray-Ali

**Type of Request:** INSTRUCTIONAL SUPPORT PROGRAM FUNDING (INSTRUCTIONAL EQUIPMENT): Equipment, library material, or

<i>Unit Goals</i>	<i>Resources Needed</i>	<i>1. Where We Make an Impact: Closing the Loop on Goals and Resources</i>
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technology for classroom instruction, student instruction or demonstration, or in preparation of learning materials in an instructional program, equal or over \$500.

**Planning Unit Priority:** Medium  
**One-Time Funding Requested (if applicable):** 43200  
**Request - Full Funding Requested -** Zeiss star projector maintenance and computer replacement  
**\*Describe Plans & Activities Supported (Justification of Need):** The Zeiss star projector is squeaking badly and the hard drives on the main computer are failing. A computer replacement and system maintenance is necessary.

This mainenance was scheduled for Spring 2020 but was cancelled due to COVID-19 concerns.  
**\*Lead:** Heather Jones  
**What would success look like and how would you measure it?:** Complete maintenance and computer replacement.  
**Type of Request:** INSTRUCTIONAL EQUIPMENT: Equipment, library material, or technology for classroom instruction, student instruction or demonstration, or in preparation of learning materials in an instructional program, equal or over \$500.  
**Planning Unit Priority:** High  
**One-Time Funding Requested (if applicable):** 18380  
**Total Funding Requested:** 18380

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**Cutting-edge science - Update and**      **In Progress - Wave Tank for 60-1515**      **Reporting Year: 2017-18**

<i>Unit Goals</i>	<i>Resources Needed</i>	<i>1. Where We Make an Impact: Closing the Loop on Goals and Resources</i>	
<p>augment our Earth Science program to reflect cutting edge science and pedagogy. Special emphasis placed on oceanography and field studies.</p> <p><b>Status:</b> Active</p> <p><b>Goal Year(s):</b> 2016-17, 2017-18, 2018-19, 2019-20, 2020-21</p> <p><b>Date Goal Entered (Optional):</b> 09/01/2016</p>	<p><b>*Lead:</b> David Mrofka</p> <p><b>Type of Request:</b> INSTRUCTIONAL SUPPORT PROGRAM FUNDING (INSTRUCTIONAL EQUIPMENT): Equipment, library material, or technology for classroom instruction, student instruction or demonstration, or in preparation of learning materials in an instructional program, equal or over \$500.</p> <p><b>Planning Unit Priority:</b> High</p> <p><b>One-Time Funding Requested (if applicable):</b> 14000</p> <p><b>In Progress -</b> Instructors will have access to subject-specific professional development opportunities that will assist in designing student research and inquiry-based activities (particular focus on improving the oceanography laboratory materials and curriculum)</p> <p><b>*Lead:</b> Faculty, Deans,</p> <p><b>Planning Unit Priority:</b> High</p> <p><b>One-Time Funding Requested (if applicable):</b> 5000</p>	<p><b>% Completed:</b> 100</p> <p>The new, smaller, wave tank has been installed in 60-1515. It is there to be used by all of our Earth Science lab sections and both field geology courses. It has helped students understand the physical characteristics of ocean waves, how they change as energy increases or decreases, how they change as water level changes and the relationship between waves and sedimentary structures. All of these are related to measurable objectives for Geol8L, Geol24 &amp; Geol25. (05/18/2018)</p>	
	<p><b>In Progress -</b> Classroom presentation systems</p> <p><b>*Lead:</b> Julie Bray-Ali will</p> <p><b>Planning Unit Priority:</b> High</p>	<p><b>Reporting Year:</b> 2016-17</p> <p><b>% Completed:</b> 100</p> <p>Here's a list of classroom computers that were updated for 2016/2017 academic year. 11-2119, 11-2209, 11-2310, 11-2324, 11-2123 Astronomy Laptop Cart, 60-1511, 60-1512, 60 Planetarium - iMAC students desktops. During summer 2017, following IT project will be completed: 60-1402 - Adjunct printer replacement, 60-1104 - ES department printer replacement, 60 Planetarium - student observatory laptops, 60 Wifi Access Points upgrade We will be 100% complete with this task as of the end of Summer 2017. But we will start assessing the conditions of the other systems to see if we need updates and replacement during 2017-2018 academic year. As of now, we know we need 60-1515</p>	<p>: New classroom systems and student laptops allows us to take advantage of the technology in learning. (06/14/2017)</p>

<i>Unit Goals</i>	<i>Resources Needed</i>	<i>1. Where We Make an Impact: Closing the Loop on Goals and Resources</i>
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and 60-1306 . As we start to use more vernier software as part of our lab activities, we need software installed on faculty computers and student laptops. (06/14/2017)

**Request - Full Funding Requested -**  
 Turbidity current demonstrator  
**\*Describe Plans & Activities**  
**Supported (Justification of Need):**  
 Purchase and install a turbidity current demonstrator into room 60-1515  
**\*Lead:** Dave Mrofka  
**Planning Unit Priority:** Low  
**One-Time Funding Requested (if applicable):** 3000

**Reporting Year:** 2018-19  
**% Completed:** 0  
 No progress (05/17/2019)

**Request - Full Funding Requested -**  
 Safe Room for Lunar Soil Samples  
**\*Describe Plans & Activities**  
**Supported (Justification of Need):**  
 Safe, dual lock, security camera system, change personnel access for basement of Bldg 11.

MtSAC has been awarded access to lunar soils collected by Apollo Astronauts. The curator has specific requirements for assuring that the samples (as priceless National Treasures) be kept safe. A room has been assigned to house them, but it needs a safe, a dual-locking door lock (keypad + fob), limited access to the outside lab space, and a security camera system to be installed before the samples will be released to us. Also, access to the basement must be strictly controlled such that only people who are working on the Goniometric Photopolarimeter are allowed into the lab space.

<i>Unit Goals</i>	<i>Resources Needed</i>	<i>1. Where We Make an Impact: Closing the Loop on Goals and Resources</i>
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The funding requested includes the hardware needed, but does not include costs to facilities for installation of the equipment.  
**\*Lead:** Mark Boryta  
**What would success look like and how would you measure it?:** Have locks and security equipment installed in basement of building 11.  
**Type of Request:** FACILITIES: This section includes minor building improvement projects and alterations to specific rooms or operational areas.  
**Planning Unit Priority:** High  
**One-Time Funding Requested (if applicable):** 6000  
**Total Funding Requested:** 6000

**Community outreach** - Continue to reach out to the community to encourage their participation in activities related to the Randall Planetarium, the Observatory, and other events on or off campus.  
**Status:** Active  
**Goal Year(s):** 2016-17, 2017-18, 2018-19, 2019-20, 2020-21  
**Date Goal Entered (Optional):** 09/01/2016

**In Progress** - Work with faculty at La Fetra Elementary School in Glendora, CA in implementing the school's Science Night activities and provide assistance in developing their earth science curriculum.  
**\*Lead:** Craig Webb

**Reporting Year:** 2016-17  
**% Completed:** 100  
 Craig Webb helped organize the Science Night at La Fetra elementary school in Glendora, CA. He continued to be the defacto "geologist" to assist faculty at the school with the earth science curriculum. This is an ongoing plan for future school years as well. (06/27/2017)

**In Progress** - Planetarium Bus Drop Off Area  
 Over 13,600 students from local schools visited the planetarium during the 2016-17 school year; that's nearly 200 busses on campus throughout the year. Currently schools are requested to drop off their students in Lot F and then walk to the planetarium across the pedstiran bridge, but long distance trek has been problematic for students using crutches or walkers. Creating a designated area for

**Reporting Year:** 2018-19  
**% Completed:** 0  
 Contacted Mika about this issue and inquired if the new proposed bus terminal could be used for a planetarium group drop off zone too. I was told that would not be a likely possibility. (05/17/2019)

**Reporting Year:** 2017-18  
**% Completed:** 0  
 Email was sent to Mika Klein about including a planetarium bus drop off in the master plan or get permission to use the transit center drop off for school kids. (05/18/2018)

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

planetarium bus drop-offs in close proximity to the planetarium would help limit confusion and congestion in the parking areas as well as be much safer for the students visiting Mt. SAC for the first time.

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

Build a bus drop-off area close to the planetarium. Signage will be needed to direct busses to the drop-off area. Cement work needed to build the bus path and change the traffic patterns.

**\*Lead:** Heather Jones + Facilities

**In Progress -** Park Benches in Front of Planetarium

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

Local schools frequently visit the planetarium for field trips. Part of their field trip experience is a rocket building and launching activity. Rocket are launched next to the planetarium on the 26 East grass next to the the energy building. Frequently adults with the group look for places to sit while watching their students launch the rockets and end up sitting on the planetarium back stairs instead. These stairs are not comfortable, block an exit and don't have enough room for everyone who wants a seat. Adding park benches nearby would relieve this problem and provide additional seating for Mt. SAC students. The best location for these park benches would be on the north side of the large tree in front

**Reporting Year:** 2018-19

**% Completed:** 0

Met with Patty Encalade at the planetarium about this project on 3/19/2019. She will be soon generating a quote soon. (05/17/2019)

**Reporting Year:** 2017-18

**% Completed:** 0

Email was sent to Mika Klein about improving the outdoor spaces around the planetarium as part of the master plan. (05/18/2018)



Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	<p>of the planetarium's main entrance parallel to the sidewalk (not on the grass).</p> <p><b>*Lead:</b> Heather Jones + Facilities  <b>Planning Unit Priority:</b> Medium  <b>In Progress</b> - Planetarium Expansion</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b>  The planetarium is frequently visited by local schools for field trips. It is not unusual to have 150 students here at a time. During that time space is very limited in the planetarium lobby, as students take up all of the available floorspace. There is literally no room expand our programs or displays. Additional display space and project areas would ease the congestion, and allow us to offer more programs to the hungry public as well as Mt. SAC students. Additionally the planetarium is in desperate need of storage space and expanded restrooms to accommodate our growing attendance. The planetarium can be added to by expanding into the hillside on the southeast side of the building</p> <p><b>*Lead:</b> Heather Jones + Facilities  <b>Planning Unit Priority:</b> Medium</p>	<p><b>Reporting Year:</b> 2018-19  <b>% Completed:</b> 0  No progress (05/17/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18  <b>% Completed:</b> 0  Email was sent to Matthew Judd requesting expansions to the planetarium for the master plan. As of 4/9/2018 none of these requests made it into the final draft of the master plan (05/18/2018)</p>
	<p><b>Completed</b> - Planetarium Marketing Intern</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b>  Offer an opportunity for a student to exercise what they are learning and get valuable work experience by expanding the marketing of the</p>	<p><b>Reporting Year:</b> 2018-19  <b>% Completed:</b> 75  A marketing intern was hired from the Business Department through the work experience program. They expanded our social media capabilities using a program called Hootsuite and kept our posted events up to date. We are communicating with the Business Department about what we need to do to repeating this program in Fall 2019.</p>

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources	
	<p>planetarium to students and the community.  <b>*Lead:</b> Heather Jones  <b>What would success look like and how would you measure it?:</b> Hire marketing interns  <b>Type of Request:</b> STAFFING: Requests for permanent employee positions or temporary/hourly employees.  <b>Planning Unit Priority:</b> Medium  <b>One-Time Funding Requested (if applicable):</b> 0  <b>On-Going Funding Requested (if applicable):</b> 0  <b>Total Funding Requested:</b> 0</p>	<p>(05/17/2019)  <b>Reporting Year:</b> 2017-18  <b>% Completed:</b> 25            We are working with the Business Department work experience program to hire students who have been studying business marketing to help develop and implement a marketing plan to increase weekend show attendance.            (05/23/2018)</p>	
<p><b>Student access</b> - Make efforts to increase student access to faculty members and facilities. We encourage use of the Earth Science Resource Room, Redinger Exploration Center, Mt. SAC Randall Planetarium and the observatory, in addition to the classroom and the faculty offices to ensure student access.  <b>Status:</b> Active  <b>Goal Year(s):</b> 2016-17, 2017-18, 2018-19, 2019-20, 2020-21  <b>Date Goal Entered (Optional):</b> 09/01/2016</p>	<p><b>In Progress</b> - Department retreat for curriculum and SLO planning. We need to put the information gained from SLO and GEO data to use in the classroom in a meaningful way. We have lagged behind on this.  <b>*Lead:</b> Faculty  <b>Planning Unit Priority:</b> High  <b>One-Time Funding Requested (if applicable):</b> 1000</p>	<p><b>Reporting Year:</b> 2018-19  <b>% Completed:</b> 75            The department does now have a central repository for SLO data for all of our classes. Faculty is trying to enter data there every time it's collected. We have decided as a department to collect SLO data the semester before any course is resubmitted to curriculum. (05/17/2019)  <b>Reporting Year:</b> 2016-17  <b>% Completed:</b> 50            Our department has completed a full SLO cycle, including use of results, for all of our courses. However, there was no department retreat to work on outcomes or training sessions were planned or funded. , (06/27/2017)</p>	<p>: SLO data collection were successfully done. Our department conduct SLO data collecting in the same year as when 4 year review for the courses are due. As of now, vast majority of our courses are due at the same time. this create huge amount of work of completing SLOs and curriculum review once every 4 years. Our department will look into reviewing the curriculum in 2 years for about half of our courses, that way not all courses comes up for the 4 year review in a same year.</p>

Unit Goals

Resources Needed

1. Where We Make an Impact: Closing the Loop on Goals and Resources

(06/29/2017)

**In Progress** - Staffing, supplies, and repairs for the Exploration Center.

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

Exploration center upkeep: Exploration center updates and staffing. Exploration center first opened in 2014. It is a wonderful space, but we have not had adequate staff or budget to properly update and introduce new exhibit. Requesting \$64,400 for 1/2 time museum tech and \$2,000 per year for supplies and repairs.

During the 2019-2020 academic year, we will be working on : looking into reorganizing, rotating exhibits, new VR exhibit and more. Create training materials for student employees. Develop more tours and activities.

**\*Lead:** Julie Bray-Ali

**What would success look like and how would you measure it?:**

Exploration center will have regular scheduled open hours with knowledgeable staff members to help all guests. Exhibits will be updated to make better use of technology and to better explain current scientific ideas.

**Type of Request:** STAFFING: Requests for permanent employee positions or temporary/hourly employees.

**Planning Unit Priority:** High

**On-Going Funding Requested (if applicable):** 66400

**Reporting Year:** 2018-19

**% Completed:** 0

Staff - We are continuing to struggle to find good students to keep the exploration center open as the only option we have for student workers is from the work-study / SEED program, and those students are not necessarily science majors.

Supplies and repairs - There is no designated budget for the exploration center. We will continue to ask for designated funding to request student worker, 50% museum tech position and supply and repair budget. . (05/17/2019)

**Reporting Year:** 2017-18

**% Completed:** 25

Julie Bray-Ali has met with Matt Judd and Mark Cooper to discuss the direction of the Exploration Center and Meek. We all agree we need substantial student worker and a museum tech, as well as regular supply and repair budget. Matt has brought this up to the instruction office and we hope to see more progress on this topic in early summer 2018. Larry Redinger and I have met the representative from ViewSonic at the exploration center and we are in discussion on modernizing the Exploration Center with digital wallpaper (instead of having student research posters, we will have rotating digital files of student posters), as well as an information kiosk. We will continue to work on this project during summer 2018 and during the academic year of 2018 & 2019 (05/18/2018)

**Reporting Year:** 2016-17

**% Completed:** 50

Bard Moormon from Omni Globe,ARC Science Simulations has send us software update and additional content (i.e. updated image of Pluto). Software update is not a requirement, but as it has been 4 years since the unit was purchased, we will be working with IT department to install new software and contet during summer 2017. (06/14/2017)

: Omni globe has been an important part of the Exploration center exhibit. Guests to the exploration center enjoy exploring earth and other solar system bodies on their own. Our geology and astronomy classes take advantage of this resource as well. With new update and additional content, we can expand out use of

**In Progress** - An increase in student worker budget. We have been able to take advantage of work study students to keep resource room and exploration center open. It would be ideal for the exploration center to have Geology or astronomy student to work there as a museum guide. We can not find students with the qualification from work study students.

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

Increase in student worker budget. We requested an increase in student employee budget in the 2017-18 school year, but it was not granted. Our student worker budget has not changed since since the minimum wage was only \$8 / hour, even though the minimum wage has now increased to \$11 / hour. Plus, the minimum wage is scheduled to increase to \$15 / hour in 2025. We would like to request increase in student employee budget to at least match the increase in COLA / minimum wage. For the \$11/hour, we need our budget to be increased by 37.5% to return to the same number of student worker hours that we used to have. In January 2019, we also request an additional increase by 8.3%, which results in a total increase of 50% to current budget.

[https://www.dir.ca.gov/dlse/faq\\_mi](https://www.dir.ca.gov/dlse/faq_mi)

**\*Lead:** Julie Bray-Ali and Mike Hood

**What would success look like and**

**Reporting Year:** 2018-19

**% Completed:** 0

We did not receive additional funding in 2018-2019 academic year. (05/17/2019)

**Reporting Year:** 2017-18

**% Completed:** 0

Increase in student employee budget was discussed. We were not granted budget increase this year. Our student worker budget has not changed since when the minimum wage was \$8 / hour. Minimum wage has increased since and now is at \$11 / hour. Minimum wage is scheduled to increase to \$15 / hour in 2025. We would like to request increase in student employee budget at least to match the increase in COLA / minimum wage. We will continue to request increase in student worker budget. (05/18/2018)

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

**how would you measure it?:** Much of our student worker budget is used for lab assistants. Having greater numbers of lab assistants is great for students enrolled in the lab classes as well as for those lab assistants to gain experience in learning more and teaching the subject.

**Planning Unit Priority:** High

**In Progress -** Professional Development Opportunities

**\*Describe Plans & Activities**

**Supported (Justification of Need):** Instructors will have access to subject-specific professional development opportunities that will assist in designing student research and inquiry-based activities (particular focus on improving the oceanography laboratory materials and curriculum)

**Reporting Year:** 2016-17

**% Completed:** 50

Several faculty members(Mark Boryta, Tania Anders, Julie Bray-Ali) and Geol99 student (Seiji Ueda) have attended 4-hour workshops hosted by Vernier at locations around the southland, helping make us more comfortable with the equipment. (06/27/2017)

: Attending the workshop was informative. We also have learned that it would be beneficial to have Logger pro software rather than the free software to run the equipment . Additional software will allow our studnets to conduct complex analysis of data. (06/29/2017)

**In Progress -** Review classroom setup and layout to create optimal learning space.

Some of our classroom does not have appropriate classroom set up conducive for effective collaborative learning - large maps, charts, posters, models, samples, demos and appropriate furniture.

**\*Describe Plans & Activities**

**Supported (Justification of Need):** Funds to buy additional classroom models, replacement furnitures, posters / charts / maps, globes, demos and more. Exact request value will be determined soon. (project quote has been submitted for the furniture component.)

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

**Planning Unit Priority:** High  
**Request - Full Funding Requested -**

Exploration center computer displays and electronic kiosk stations.

**\*Describe Plans & Activities**

**Supported (Justification of Need):**  
We will install computer displays and kiosks that will allow us to do a better job of teaching visitors about science and technology.

**\*Lead:** Julie Bray-Ali and Mike Hood

**What would success look like and how would you measure it?:** Our exploration center will be updated and equipped with cutting edge technology to help increase the interest in our science departments.

**Type of Request:** INSTRUCTIONAL SUPPORT PROGRAM FUNDING (INSTRUCTIONAL EQUIPMENT):  
Equipment, library material, or technology for classroom instruction, student instruction or demonstration, or in preparation of learning materials in an instructional program, equal or over \$500.

**Planning Unit Priority:** Medium  
**One-Time Funding Requested (if applicable):** 15000

**Request - Full Funding Requested -**  
Supplies, exhibit furniture and carts to allow for rotating exhibits at the Exploration Center. Secure storage for exhibit items that are not on display.

**\*Describe Plans & Activities**

**Supported (Justification of Need):**  
The building 61 Cube includes the Exploration Center for physical

<i>Unit Goals</i>	<i>Resources Needed</i>	<i>1. Where We Make an Impact: Closing the Loop on Goals and Resources</i>
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sciences and the Meek Museum for biological science. Currently, the physical science side is predominantly made up of geology and astronomy displays. We will design and build rotating exhibits for the central area of the Exploration Center to also feature chemistry, physics and engineering. Mike and Julie will work with the other departments to design and build the exhibits, which will be changed out every semester. We will also work with Mark Cooper to bring in exhibits that display the connections between biological sciences and physical sciences. For example, Mark Cooper has recently added some dinosaur displays, which would be a perfect bridge between biological science and geology. in the future, we can have exhibits bridging the gaps between Oceanography and Marine biology, or Engineering and anatomy..

**\*Lead:** Julie Bray-Ali and Mike Hood. Working with Mark Cooper from Biology and Larry Redinger.

**Planning Unit Priority:** High Animation/Planetarium Partnership

**\*Describe Plans & Activities Supported (Justification of Need):**  
The animation and planetarium program would like to develop a relationship where students get valuable work experience and opportunity to create visuals campus produced planetarium shows.

**\*Lead:** Heather Jones, Animation Department

**Reporting Year:** 2018-19  
**% Completed:** 50

In Fall 2018 we initiated a planetarium/animation project to convert a classic planetarium show that had used slides, to a digital animated format. This project is still ongoing and expected to be completed in Spring 2019. We hope to do many more project in the future with animation students.  
(05/17/2019)

**Reporting Year:** 2017-18  
**% Completed:** 25

There was a meeting of Art and Natural Science Deans and

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

**Planning Unit Priority:** Medium

professors on March 12, 2018. Everyone was supportive of the idea. More follow up work needs to be done to solidify these relationships and implement these ideas. Heather Jones will be attending the Astroviz Conference in Pasadena in June to learn more about innovations in astronomy visualizations and how they can be transferred to the planetarium. (05/23/2018)

Develop new lab activity using virtual reality goggles. Need goggles, software, hard drives to store data, and securing devices.

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

Working with the new Animation and gaming program faculty, Sunil Thankamushy and aeronautics program faculty and staff members, Robert Rogus and Philip Wright to create images / video to be used for the activity. We will project lab manual for the activity.

**\*Lead:** Jessica Draper and Julie Bray-Ali

**Type of Request:** INSTRUCTIONAL SUPPORT PROGRAM FUNDING (INSTRUCTIONAL EQUIPMENT): Equipment, library material, or technology for classroom instruction, student instruction or demonstration, or in preparation of learning materials in an instructional program, equal or over \$500.

**Planning Unit Priority:** Medium  
**One-Time Funding Requested (if applicable):** 4000

NEW: Develop training material for the resource room and exploration center student workers.

**\*Describe Plans & Activities**



<i>Unit Goals</i>	<i>Resources Needed</i>	<i>1. Where We Make an Impact: Closing the Loop on Goals and Resources</i>
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**Supported (Justification of Need):**  
 Develop training course for our student employees to be familiar with the resource room (11-2310) and the exploration center. Training will include brief introductions on solar system, use of astronomical tools, scale of the universe, use of geoscience tools, rocks and minerals identifications, and how to use textbook. Platform of the instruction will be in person, and online - canvas.

**\*Lead:** whole department - Julie Bray-Ali will serve as a coordinator

**Type of Request:** PROFESSIONAL & ORGANIZATION DEVELOPMENT (POD): Requests that provide professional learning opportunities for Mt. SAC employees.

**Planning Unit Priority:** High

**Department Promotion** - Design and implement opportunities to publicize our department's offerings, including outreach ("Debbie Day") and attending and presenting at scientific meetings and workshops (NAGT, GSA, AGU, IAU, SAGE)

**Status:** Active

**Goal Year(s):** 2016-17, 2017-18, 2018-19, 2019-20, 2020-21

**Date Goal Entered (Optional):** 09/01/2016

**In Progress** - Improve Department Website - We will work with IT specialists to improve the department website to highlight opportunities for students and showcase faculty, staff and student accomplishments.

**\*Describe Plans & Activities Supported (Justification of Need):**  
 Website maintenance

**\*Lead:** Hilary Lackey

**Reporting Year:** 2018-19  
**% Completed:** 25  
 The changeover to the new Web design undid much of the work Hilary did on adding photos and new pages, including an updated directory, to the website. Hillary will require additional training in OmiUpdate in order to proceed. (05/17/2019)

**Reporting Year:** 2017-18  
**% Completed:** 0  
 Little progress has been made. Now that the college website overhaul is complete and the images and files don't keep getting removed with each iteration, we can make improvements to our website. (05/18/2018)

**Reporting Year:** 2016-17  
**% Completed:** 50  
 Hilary Lackey has been working with IT to continue to improve our website. We will continue to improve this, to

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	<p><b>In Progress</b> - Install bulletin board near oceanography faculty offices for posting of current news, student opportunities etc.</p> <p><b>*Describe Plans &amp; Activities</b></p> <p><b>Supported (Justification of Need):</b> Purchase and install bulletin board</p> <p><b>*Lead:</b> Tania Anders</p> <p><b>One-Time Funding Requested (if applicable):</b> 700</p>	<p>highlight course offerings and especially our diverse field trip programs. (06/27/2017)</p> <p><b>Reporting Year:</b> 2018-19 <b>% Completed:</b> 100</p> <p>Bulletin boards have been installed along entire stretch of our hallway and faculty have the opportunity to post material. The oceanography bulletin board is updated regularly, usually once a week. (05/17/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18 <b>% Completed:</b> 25</p> <p>Bulletin board was requested March 7, 2018 and wall space has been measured. It looks like we will be receiving a board from surplus. A bulletin board for oceanography has been on the request list since 2015. Faculty hope that without funds having to be used for a new purchase, that we will see a board from surplus added soon. (05/18/2018)</p>
<p><b>Geoscience Roadmap</b> - Develop a geoscience course roadmap with courses necessary for transfer in the geosciences. To be printed on brochure for the ESA department</p> <p><b>Status:</b> Active</p> <p><b>Goal Year(s):</b> 2016-17, 2017-18, 2018-19, 2019-20, 2020-21</p> <p><b>Date Goal Entered (Optional):</b> 09/01/2016</p>	<p>Develop a course road map to assist students in finding the correct courses to take to transfer into a geoscience program or progress toward a geoscience career.</p> <p><b>*Lead:</b> Dave Mrofka and Becca Walker</p>	<p><b>Reporting Year:</b> 2018-19 <b>% Completed:</b> 25</p> <p>Some progress was made from our SAGE 2YC regional workshop at Mt SAC 2 years ago (05/17/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18 <b>% Completed:</b> 50</p> <p>This partly done for all of our courses (Astr, Geol, Meto &amp; Ocea). We have a counselor assigned to our department and we have worked on the description of all our our courses including the field trip expectations. Now that we have 2 additional courses as of fall 2018, and other courses in the pipeline, we will continue to update the ESA course guide to assist our students better on what courses to complete and in what order. (05/18/2018)</p> <hr/> <p><b>Reporting Year:</b> 2016-17 <b>% Completed:</b> 75</p> <p>1.) Dave Mrofka and Becca Walker are part of the SAGE 2YC Faculty agents of change project. As part of this project, a workshop was convened in December 2016 for local 2YC geoscience faculty and counselors. Mt. SAC faculty and counselors worked together to discuss transfer issues and course planning for students intending on majoring in the</p>

<i>Unit Goals</i>	<i>Resources Needed</i>	<i>1. Where We Make an Impact: Closing the Loop on Goals and Resources</i>
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geosciences. 2.) There is transfer information for CSULA and CSUF on the bulletin board in building 60 with geoscience and supporting science courses needed for a Bachelors degree and those courses that can be fulfilled at Mt. SAC. (06/27/2017)

<p><b>Faculty and Staff Hiring</b> - Hire more adjunct and full-time faculty members in each area.  <b>Status:</b> Active  <b>Goal Year(s):</b> 2016-17, 2017-18, 2018-19, 2019-20, 2020-21  <b>Date Goal Entered (Optional):</b> 05/09/2017</p>	<p><b>In Progress</b> - Hire full time astronomy professor</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b>  During 2016-2017, only 57% of the classes were taught by full time faculty members as part of their regular load. We would like to increase astronomy sections, especially now that we will have Astr 11 and are looking into creating an Astronomy AA degree. Also, the number of astronomy sections we can offer is currently limited by the number of instructors we have to teach the classes. We have tried to hire more part-time instructors, but finding quality adjunct instructors has been very difficult. As it is nearly impossible to find new adjunct (we conducted 6 adjunct interviews in last 2 years and hired one), we need to hire a full time faculty member to be able to grow our department.  <b>*Lead:</b> Mike Hood and Julie Bray-Ali  <b>What would success look like and how would you measure it?:</b> Hire a new full time astronomy faculty member to better serve our students.  <b>Planning Unit Priority:</b> High  <b>On-Going Funding Requested (if applicable):</b> 100000</p>	<p><b>Reporting Year:</b> 2018-19  <b>% Completed:</b> 0  This position was not funded during 2018-2019 academic year. The college initially committed to hiring 40 faculty, and this position was ranked 43. (05/17/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18  <b>% Completed:</b> 0  We applied to hire a new astronomy position, but were not close to being highly ranked enough to get to hire someone for this position. (04/05/2018)</p>
	<p><b>In Progress</b> - Hire one or more</p>	<p><b>Reporting Year:</b> 2018-19</p>

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	<p>geosciece faculty member</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b>            During 2016-2017, only 41% of the classes were taught by full time faculty members as part of their load. When there are too many sections taught by adjunct, it is possible for the quality of instructions to start to slip. We need to hire one or two full time faculty members to accommodate for the recent increase in number of sections offered in GeoScience. This is especially important as we are in process of developing geotech program.</p> <p><b>*Lead:</b> Mike Hood and Julie Bray-Ali</p> <p><b>What would success look like and how would you measure it?:</b> Hire full time faculty member to better serve our geoscience students. This is especially important as we are in process of developing geotech program.</p> <p><b>Planning Unit Priority:</b> High</p> <p><b>On-Going Funding Requested (if applicable):</b> 100000</p> <p><b>In Progress -</b> Hire more adjunct faculty members.</p>	<p><b>% Completed:</b> 0</p> <p>This position was not funded during 2018-2019 academic year. The college initially committed to hiring 40 faculty, and this position was ranked 48. (05/17/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18</p> <p><b>% Completed:</b> 0</p> <p>We were not ranked high enough in our division or the college as a whole in order to hire this position. We will continue to work toward this goal, especially as we move closer to offering a geotech degree. (04/05/2018)</p> <hr/> <p><b>Reporting Year:</b> 2018-19</p> <p><b>% Completed:</b> 50</p> <p>We hired 3 new geoscience adjunct faculty members. (05/17/2019)</p>
	<p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b>            We have been advertising our adjunct pool though our HR department, but we are not receiving many applications. We need to look into different publications to advertise and</p>	<hr/> <p><b>Reporting Year:</b> 2017-18</p> <p><b>% Completed:</b> 50</p> <p>We continue to work to add more adjunct faculty members to our department. We hired three new part-time faculty members to the Earth Science side of the department; one started in Summer 2017, one started in Fall 2017, and one started in Winter 2018.</p>

<i>Unit Goals</i>	<i>Resources Needed</i>	<i>1. Where We Make an Impact: Closing the Loop on Goals and Resources</i>
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perhaps attend job fairs to recruit.  
**\*Lead:** Mike Hood and Julie Bray-Ali  
**What would success look like and how would you measure it?:** Hire more adjunct professors in geoscience and astronomy.  
**Planning Unit Priority:** High

Despite our repeated attempts to add more faculty members on the astronomy side, we have been unable to find any new people to hire to our department. Julie Bray-Ali and Mike Hood attended a community college job fair in the winter term, but did not find any new astronomy faculty members through this job fair either.

Starting Fall 2018, one new adjunct faculty in astronomy will teach one section per semester. We are able to confirm one of our adjunct faculty on extended leave to return starting Fall 2018.

We will continue to work toward adding new adjunct faculty members to both the Earth Science and Astronomy sides of the department. (04/05/2018)

**Request - Full Funding Requested -**  
 Hire tutors -  
**\*Describe Plans & Activities Supported (Justification of Need):**  
 We will recruit excellent students to work as tutors in our program. It would be great to have tutors at earth science resource room on regular schedule.  
**\*Lead:** Julie Bray-Ali and all other faculty  
**What would success look like and how would you measure it?:** Hire tutors to have wide availability of tutoring scheduled in various subject matter. This will give our students more chances to learn the material in class, improving student success.  
**Planning Unit Priority:** High

**Reporting Year:** 2018-19  
**% Completed:** 50  
 We have one regular astronomy tutor and one regular geoscience tutor available at the resource room. (05/17/2019)

**Request - Full Funding Requested -**  
 Full time lab tech in geology  
**\*Describe Plans & Activities Supported (Justification of Need):**  
 Hire a geology science lab tech.

**Reporting Year:** 2018-19  
**% Completed:** 0  
 This position was not funded during 2018-2019 academic year. (05/17/2019)

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

With implementation of more demonstrations, activities, technology and field trips, it is extremely difficult to have all needed tasks done by a 50% tech in the geology area. We need either an additional geology tech position to fill these roles.

The ESA department would benefit from an additional full-time tech in a variety of important areas. The current geology tech is unable to fulfill many of the duties the department asks of him, in part because of time limitations. We would like to focus the current tech's attention on the Oceanography part of our department and on overseeing operation of the Earth Science Resource Room, as well as continuing to support the department clerically (POs, quotes, etc.) in that location. This would allow the department to use student workers to work in the Discovery Center, which we hope to continue to use more for Mt. SAC students and the general public. Our new tech would have three main priorities:

- Support the geology lab and lecture rooms. This mostly involves maintaining extensive collections of student and classroom samples, overseeing resupply of experiment supplies, setting up classroom experiments and general organization.

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

- Support the extensive investment the department has in proper and safe running of field trips. The tech will make sure that items students use regularly are clean and safe to use, that the field supplies are inventoried and ready for future trips, and that our collection of field equipment is maintained.

- Support the operation of the Discovery Center. Organizing and coming up with new displays and activities has fallen on different people in the department without a lead person to go to if something needs to be fixed or repaired. The tech would train student workers, come up with ideas for displays, help run some activities and generally maintain the samples and displays in that area.

**\*Lead:** Mike Hood and Julie Bray-Ali  
**What would success look like and how would you measure it?:** Hire a new geoscience lab tech.

**Planning Unit Priority:** High  
**On-Going Funding Requested (if applicable):** 80000

Part time planetarium show presenter

**\*Describe Plans & Activities**

**Supported (Justification of Need):**  
Part time planetarium show presenter- Community outreach is a large part of the planetarium's mission. We offer field trip experiences for local schools, scout groups and families during the week

**Reporting Year:** 2018-19

**% Completed:** 25

We have hired a part time student worker with a lot of experience in astronomy and a strong interest in teaching to help out. After an entire semester he is now fully trained, but is transferring at the end of the Spring 2019 semester. Because of their impermanence, training student workers is not a good long term solution for our staffing problems. We need a short-term hourly worker who will stay with the planetarium for years instead. (05/17/2019)

<i>Unit Goals</i>	<i>Resources Needed</i>	<i>1. Where We Make an Impact: Closing the Loop on Goals and Resources</i>
	<p>and on the weekends. The planetarium has grown in popularity enough that we regularly sell out our available time slots during the week. To keep up with demand we have doubled the planetarium student staff to help with lobby activities, however our show presenting staff is still only two people: Heather Jones and Jessica Draper. Increasingly, Heather and Jessica's time has become dominated by the day-to-day needs of running these outreach activities instead of other projects. Unfortunately it has gotten to the point where they cannot take on new projects or expand on any programs at the planetarium or telescope observatory. Additional staff is desperately needed to avoid cutbacks in the outreach program.</p> <p><b>*Lead:</b> Heather Jones  <b>Planning Unit Priority:</b> High</p>	<p><b>Reporting Year:</b> 2017-18  <b>% Completed:</b> 0</p> <p>We are researching a few options to find funding for this position. In addition to the investment the college could make toward fulfilling this need, the money for this position could come in part from donations from the Randalls, work experience funding, grant funding, or other sources. We are hopeful for a solution. (05/23/2018)</p>
<p><b>Develop Landers Site</b> - Develop the site in Landers, CA to allow Earth Science and Astronomy students to make use this valuable resource. This site is in a remote, dark location, making it an ideal place for our students in courses and our students doing research.</p> <p><b>Status:</b> Active  <b>Goal Year(s):</b> 2017-18, 2018-19, 2019-20, 2020-21  <b>Date Goal Entered (Optional):</b> 06/30/2017</p>	<p><b>Report directly on Goal</b></p> <hr/> <p><b>In Progress</b> - Develop basic infrastructure for Landers site.  <b>*Describe Plans &amp; Activities Supported (Justification of Need):</b></p>	<p><b>Reporting Year:</b> 2017-18  <b>% Completed:</b> 0</p> <p>Outline of items needed and estimate cost was sent to Matthew Judd. Faculty and staff visited the site on 5/12/18 to assess the physical conditions of the property (weather conditions, local light pollution etc...). We found that this site would be ideal for astronomical observing, and look forward to being able to use this site in the future. Contacts have been made with the Riverside Astronomical Society who have extensive experience building observatories in Landers, CA which is where their main observing site is located. (05/18/2018)</p>



*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

Internet access, including wifi, firewall, USB extender, etc. - \$20,000

Facilities construction - Cement, shelter walls, furniture, etc. - \$30,000

**\*Lead:** Heather Jones and Facilities

**Type of Request:** INSTRUCTIONAL SUPPORT PROGRAM FUNDING (INSTRUCTIONAL EQUIPMENT):

Equipment, library material, or technology for classroom instruction, student instruction or demonstration, or in preparation of learning materials in an instructional program, equal or over \$500.

**Planning Unit Priority:** Low

**One-Time Funding Requested (if applicable):** 50000

**In Progress** - Purchase, build, and install telescope infrastructure.

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

Telescope Mount - \$21,000

Telescope Pier - \$1,000

Clamshell Dome - \$30,000

**\*Lead:** Heather Jones, Facilities

**Type of Request:** INSTRUCTIONAL SUPPORT PROGRAM FUNDING (INSTRUCTIONAL EQUIPMENT):

Equipment, library material, or technology for classroom instruction, student instruction or demonstration, or in preparation of learning materials in an instructional program, equal or over \$500.

**Planning Unit Priority:** Low

**One-Time Funding Requested (if applicable):** 52000

**In Progress** - Purchase Telescope for

*Unit Goals*

*Resources Needed*

*1. Where We Make an Impact: Closing the Loop on Goals and Resources*

Landers remote observing site.

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

Plane wave 20" telescope - \$50,000

**\*Lead:** Heather Jones

**Type of Request:** INSTRUCTIONAL SUPPORT PROGRAM FUNDING (INSTRUCTIONAL EQUIPMENT):

Equipment, library material, or technology for classroom instruction, student instruction or demonstration, or in preparation of learning materials in an instructional program, equal or over \$500.

**Planning Unit Priority:** Low

**One-Time Funding Requested (if applicable):** 50000

**In Progress** - Purchase CCD camera, filter wheel, and software necessary to make remote astronomical observations at the Landers site.

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

Finger Lakes CCD - \$14,000

filter wheel - \$2,000

MaxIm DL - \$675

SkyX Pro w/ Camera add on - \$675

ACP with service Agreement - \$2,800

Starlight Xpress Lodestar X2 - \$700

**\*Lead:** Heather Jones

**Type of Request:** INSTRUCTIONAL SUPPORT PROGRAM FUNDING (INSTRUCTIONAL EQUIPMENT):

Equipment, library material, or technology for classroom instruction, student instruction or demonstration, or in preparation of learning materials in an instructional program, equal or over \$500.

**Planning Unit Priority:** Low

<i>Unit Goals</i>	<i>Resources Needed</i>	<i>1. Where We Make an Impact: Closing the Loop on Goals and Resources</i>
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**One-Time Funding Requested (if applicable):** 20850  
**In Progress** - Purchase and install all-sky camera and weather station to allow for remote astronomical observing at the Landers site.  
**\*Describe Plans & Activities**  
**Supported (Justification of Need):**  
 All Sky Camera and weather Station - \$2750 from SBIG  
**\*Lead:** Heather Jones  
**One-Time Funding Requested (if applicable):** 2750

**Increased Collaboration** - Increase collaboration with other departments across campus to help with overall student success rates  
**Status:** Active  
**Goal Year(s):** 2017-18, 2018-19, 2019-20, 2020-21  
**Date Goal Entered (Optional):**  
 05/21/2018

Learning Community  
**\*Describe Plans & Activities**  
**Supported (Justification of Need):**  
 Create a learning community, which would include Oceanography, a first year seminar and one to two other courses (such as English or Political Sciences)  
**What would success look like and how would you measure it?:** Higher student success rates, measured by percentage of students passing courses.  
**Planning Unit Priority:** High

One College One Book Initiative  
**\*Describe Plans & Activities**  
**Supported (Justification of Need):**  
 Department involvement in "One College-One Book" initiative  
**\*Lead:** Tania Anders  
**What would success look like and how would you measure it?:**  
 Increased visibility of our department across campus; increased enrollment in our courses.  
**Planning Unit Priority:** High

**Reporting Year:** 2018-19  
**% Completed:** 100  
 The One Campus One Book Initiative was introduced during Spring FLEX day and several events have been held across campus. Theme of this year's book was Depression. We hope that some of our students participated in events. As the book did not directly relate to our subject areas, the department did not actively pursue participation.  
 (05/17/2019)

<i>Unit Goals</i>	<i>Resources Needed</i>	<i>1. Where We Make an Impact: Closing the Loop on Goals and Resources</i>
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Oceanography Study Abroad

**\*Describe Plans & Activities**

**Supported (Justification of Need):**

Involve Ocean Sciences in a Study Abroad Program

**\*Lead:** Tania Anders

**What would success look like and how would you measure it?:**

Increased visibility of our department across campus; increased enrollment in our courses.

**Planning Unit Priority:** Medium

**Reporting Year:** 2018-19

**% Completed:** 50

One department member is currently participating in a Study abroad program and offering one oceanography section. This program is run through Citrus College. (05/17/2019)