

# 1. Assessment Plan - Three Column



## PIE - Natural Sciences: Chemistry Unit

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
<p><b>Laboratory program</b> - Maintain modern state-of-the-art laboratory program in preparatory, allied health, general and organic chemistry classes</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>In Progress</b> - Training and any needed accessories to implement the 2 modular spectrometers previously purchased into the curriculum.</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b> We have purchased the 2 systems, but still need training to use them effectively in class. We may also need some accessories to increase the effectiveness of them.</p> <p><b>*Lead:</b> Todd Clements</p> <p><b>What would success look like and how would you measure it?:</b> To be able to implement this technology in allied health (CHEM 10), preparatory (CHEM 40) and general (CHEM 50) courses. This will require providing training to at least 30 faculty. The spectra generated by these units help students understand the structure of atoms.</p> <p><b>Planning Unit Priority:</b> Medium</p>	<p><b>Reporting Year:</b> 2018-19</p> <p><b>% Completed:</b> 50</p> <p>There have been some discussions with Physics, who also uses these probes, but faculty have thus far been unable to get the resolution they would like from the spectra. Work is periodically ongoing. (05/20/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18</p> <p><b>% Completed:</b> 50</p> <p>We have purchased the two systems during the spring 2017 semester. We have not successfully implemented them into the curriculum. We still need training on how to use the systems. (05/06/2018)</p> <p><b>Related Documents:</b></p> <p><a href="#">Light, Electron Configuration, and Periodic Trends F15.pdf</a></p> <hr/> <p><b>Reporting Year:</b> 2018-19</p> <p><b>% Completed:</b> 0</p> <p>This needs to be added to our budget as it is an annual recurring expense. Lottery funds have been used for equipment and supply purchases allowing department budget to be used for this contract. Down time under the</p>
	<p><b>Request - Full Funding Requested -</b> Continue to purchase a service contract for the 2 FTIR instruments purchased during the 2014-2015 school year. This is a recurring, annual expense that will prevent</p>	<p>: We need to train full-time and adjunct faculty to use these system before that can be effectively implemented into the curriculum. (06/27/2017)</p>

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	<p>downtime that interrupts the lab curriculum in the organic chemistry program (CHEM 80, CHEM 81 and CHEM 20).</p> <p><b>*Describe Plans &amp; Activities</b></p> <p><b>Supported (Justification of Need):</b> This item should be part of our budget, since it is a yearly reoccurring expense.</p> <p><b>*Lead:</b> Todd Clements, Jane Ho</p> <p><b>What would success look like and how would you measure it?:</b> The funding for this item is added to our annual budget. This will avoid the stress caused when the bill arrives and everyone scrambles to find the funding to pay it.</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>On-Going Funding Requested (if applicable):</b> 10000</p> <p><b>Total Funding Requested:</b> 10000</p> <p><b>Related Documents:</b> <a href="#">MT Sac Agreement IR Quote-66286.pdf</a></p> <p><b>In Progress -</b> Increase supply budget (to maintain supplies for growth)</p> <p><b>*Describe Plans &amp; Activities</b></p> <p><b>Supported (Justification of Need):</b> An increase in our basic supply budget will allow for much more efficient planning. We currently spend the majority of our budget</p>	<p>contracts has been close to zero, allowing for successful completion of laboratory work. These instruments are critical for the CHEM 20, CHEM 80 and CHEM 81 curriculum. These instruments are essential for the organic laboratory curriculum. Their frequent breakdowns in the past have created a great deal of stress as faculty and technicians had to continually adapt the lab schedule. (05/20/2019)</p> <p><b>Related Documents:</b> <a href="#">IR service MT Sac Agreement Quote-77337.pdf</a></p> <hr/> <p><b>Reporting Year:</b> 2017-18</p> <p><b>% Completed:</b> 100</p> <p>This needs to be added to our budget as it is an annual recurring expense. These instruments are critical for the CHEM 20, CHEM 80 and CHEM 81 curriculum. Both instruments worked perfectly for the entire school year. These instruments are essential for the organic laboratory curriculum. Their frequent breakdowns created a great deal of stress as faculty and technicians had to continually adapt the lab schedule. (05/06/2018)</p> <p><b>Related Documents:</b> <a href="#">MT Sac Agreement IR Quote-66286.pdf</a></p> <hr/> <p><b>Reporting Year:</b> 2016-17</p> <p><b>% Completed:</b> 100</p> <p>The service contract was purchased for the spring semester. Both instruments worked perfectly for the entire semester for the first time since the warranty expired. These instruments are essential for the organic laboratory curriculum. Their frequent breakdowns created a great deal of stress as faculty and technicians had to continually adapt the lab schedule. (06/27/2017)</p> <p><b>Reporting Year:</b> 2018-19</p> <p><b>% Completed:</b> 0</p> <p>There has been no progress on this goal. We received significant additional one-time funding that allowed us to purchase needed items, but it would make planning much more efficient to have an adequate budget at the beginning of the school year. (05/20/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18</p>	
			<p>: The implementation of the service contract has kept both instruments functioning smoothly. The instruments are now receiving regular maintenance which should increase their dependability in the future. (06/27/2017)</p>

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	<p>early in the summer and fall semester as we restock and resupply for our lab curriculum. This leaves us with few resources for most of the rest of the year. Lottery money and other one-time funds occur later in the year, with incredibly quick deadlines. We are never sure how much we will receive, making it difficult to reliably provide resources for the end of the school year. There have been years when we have run out of chemicals and glassware before the end of the spring semester.</p> <p><b>*Lead:</b> Todd Clements</p> <p><b>What would success look like and how would you measure it?:</b> Success will be an increase in the supply budget commensurate with the percentage of growth the Department has experienced in recent years.</p> <p><b>Planning Unit Priority:</b> High</p> <p><b>On-Going Funding Requested (if applicable):</b> 5000</p> <p><b>Request - Full Funding Requested -</b> Vernier Polarimeter</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b> Polarimetry is an important analytical technique in organic laboratories. It shows correlation between stereoactivity in molecules and the rotation of light. Currently this is just a theoretical discussion in our organic chemistry labs (Chem 80 and Chem 81) because we have no devices that can measure this rotation of light. We wish to</p>	<p><b>% Completed:</b> 0</p> <p>There has been no progress on this goal. We received additional one-time funding towards the end of the school year that allowed us to purchase needed items, but it would make planning much more efficient to have an adequate budget at the beginning of the school year. (05/31/2018)</p> <hr/> <p><b>Reporting Year:</b> 2016-17</p> <p><b>% Completed:</b> 0</p> <p>There was no increase in our annual budget, but the College provided a very generous one-time lottery fund allotment of \$45000. This allowed the Department to restock and replace depleted chemicals and equipment resulting from the rapid growth over the last three years. (06/26/2017)</p>	<p>: Receiving the one-time lottery allotment allowed the Department to replace chemicals and equipment needed due to the 30% increase of sections offered in the last 3 years. The Department will have difficulty planning expenditures knowing it has inadequate supply funding and does not know if and how much lottery funding it will receive during the year. (06/30/2017)</p>

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	<p>purchase four polarimeters for use in Chem 80 and 81 that will allow students to quickly determine the rotation of light which allows them to help identify the purity of products as well as tie an abstract lecture topic to real world measurements. In Fall 2017 Vernier loaned us one of these devices and it was successfully piloted in Chem 80 for students to measure the optical rotation of sugar solutions.</p> <p><b>*Lead:</b> Todd Clements, Jenny Leung</p> <p><b>What would success look like and how would you measure it?:</b> Success would be the use of the instrument in both Chem 80 and Chem 81 laboratories. Labs would be revised to include using this method as an analytical technique. Approximately 150 students per term would use the instrument and increase their understanding of optical rotation of light by small molecules.</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> Medium</p> <p><b>One-Time Funding Requested (if applicable):</b> 2000</p> <p><b>Total Funding Requested:</b> 2000</p> <p><b>Related Documents:</b>  <a href="#">1063899.pdf</a></p> <p><b>Request - Full Funding Requested -</b>            CondensSyn Air condenser and Distillation Adapters</p>	

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**\*Describe Plans & Activities**

**Supported (Justification of Need):**

Distillation and refluxing techniques are an integral part of the organic chemistry lab curriculum. Currently, students are exposed to the typical distillation and refluxing techniques which require the use of a water condenser in which water is constantly running to keep a reaction cool. With the state of California being in a perpetual drought, it is important to seek alternatives to reduce wasting water. The CondensSyn air condenser and distillation adapter is a set of glassware that eliminates the use of running water to cool a reaction. It uses air instead of running water to cool the reaction. By adopting the CondensSyn air condenser and distillation adapter into our labs, there is potential water cost savings to the college and will enable the department to proceed with their goal "green" chemistry. The goal is to acquire a class set (30) plus extra sets (10) of the glassware. They are priced at \$195 for the CondensSyn air condenser and \$49 for the distillation adapter. Quotes can be provided upon request.

**\*Lead:** Jane Ho, Todd Clements

**What would success look like and how would you measure it?:** Mt. SAC would continue to enhance its reputation as a college where Green Chemistry is practiced. Students would perform distillations that are both easier and more

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	<p>environmentally friendly, while saving time on setup and takedown of water-cooled apparatus.</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> Medium</p> <p><b>One-Time Funding Requested (if applicable):</b> 9760</p> <p><b>Total Funding Requested:</b> 9760</p> <p><b>Request - Full Funding Requested -</b> Additional class set of Vernier probes</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b> The department recently and gratefully received updated probes for automated data acquisition in our Chem 50/51 program. We would like to expand our data acquisition capabilities to our Chem 40 program to reflect more accurately the current state of Chemistry laboratory work in both academic and industrial environments. We are requesting a class set (+ spares) of probes for temperature, pressure, and pH measurement. This is about 20 probes x 3 = 60 probes.</p> <p><b>*Lead:</b> Tatiana Lopez, Todd Clements</p> <p><b>What would success look like and how would you measure it?:</b> Students would use these probes to do automated data acquisition, and computer assisted data analysis,</p>	

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	<p>consistent with common practice in Chemistry labs.</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> Medium</p> <p><b>One-Time Funding Requested (if applicable):</b> 6000</p> <p><b>Total Funding Requested:</b> 6000</p>	
<p><b>Technology</b> - Continue to expand use of technology in teaching and learning</p> <p>a. To increase utilization of the major instrumentation (IR,, NMR, etc.) currently within the department, obtain additional training for faculty and staff.</p> <p>b. To comply with ADA regulations regarding accessibility, caption all departmental videos.</p> <p>c. To temporarily resolve scheduling conflicts between sections needing to use technology for student learning</p> <p>d. To resolve long-term scheduling conflicts and increase technology use across the curriculum, obtain space and funding for an additional computer/technology facility and/or equipment.</p> <p>e. To maintain current level of technology-based instruction in the classroom, renew current and purchase additional software, licenses, spare accessories, and update all computers</p>	<p><b>Completed</b> - Mathematica (1 copy)</p> <p><b>*Lead:</b> Todd Clements, Kenneth Huang</p> <p><b>What would success look like and how would you measure it?:</b> Request is complete</p> <p><b>Type of Request:</b> IT SUPPORT: Requests for projects related to the implementation, integration, application, delivery, and support of information and instructional technologies.</p> <p><b>Planning Unit Priority:</b> Medium</p> <p><b>One-Time Funding Requested (if applicable):</b> 300</p> <p><b>Total Funding Requested:</b> 300</p> <p><b>In Progress</b> - In order to be able to implement instructional technology in all lecture and lab rooms: 7 laptop computers for instructor use (1 per laboratory), 1 ELMO projector for 7-1201, 12 switching boxes to easily choose device for projection.</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b> Each Department lecture and lab</p>	<p><b>Reporting Year:</b> 2018-19</p> <p><b>% Completed:</b> 0</p> <p>There was no progress on this item. (05/20/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18</p> <p><b>% Completed:</b> 0</p> <p>There was no progress on this item. (05/06/2018)</p> <hr/> <p><b>Reporting Year:</b> 2016-17</p> <p><b>% Completed:</b> 0</p> <p>There was no progress on this request. (06/20/2017)</p> <hr/> <p><b>Reporting Year:</b> 2018-19</p> <p><b>% Completed:</b> 25</p> <p>An ELMO was purchased and installed in 7-1201 allowing instructors to show step-by-step problem solving, or exhibit student work. This impacts approximately 12 sections of classes scheduled in that room (300 students) per semester.</p> <p>The dedicated laptop computers in laboratory rooms are still not available. With the deprecation of DVD players, our safety video is now played from a laptop, and not all of our</p>

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<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>room would have a dedicated computer and switching box to easily transition between devices as needed. All lecture rooms would have an ELMO projector.</p> <p><b>*Lead:</b> Todd Clements</p> <p><b>What would success look like and how would you measure it?:</b> Instructors would be able to walk into any classroom and easily be able to connect to the classroom projector.</p> <p><b>Planning Unit Priority:</b> High</p> <p><b>Request - Full Funding Requested -</b> Replace 15 aged laptops</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b> Laptops for laboratories 60-3617 and 60-3620 are approaching (or beyond?) end of life (5 years) and need to be replaced.</p> <p><b>*Lead:</b> Todd Clements, Karen Long</p> <p><b>What would success look like and how would you measure it?:</b> Updated laptops able to run current software efficiently for the next five years.</p> <p><b>Type of Request:</b> IT SUPPORT: Requests for projects related to the implementation, integration, application, delivery, and support of information and instructional technologies.</p> <p><b>Planning Unit Priority:</b> High</p>	<p>laboratory rooms have laptops available, especially for adjunct faculty who are not as familiar with the resources available outside of their classrooms.</p> <p>There has been no progress on the ABC switches. It is still difficult to get audio visual set up in some of our rooms due to a multitude of cables. (05/20/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18  <b>% Completed:</b> 0          The Department has updated their plans for the use of media in lecture rooms. The desktop computers are not part of the new plan. (05/26/2018)</p> <hr/> <p><b>Reporting Year:</b> 2016-17  <b>% Completed:</b> 0          There has been no progress on this request. (06/20/2017)</p>
<b>Outreach -</b> Continue to support chemistry/science events outside of	<b>Completed -</b> To respond to a critical shortage of qualified middle school	<b>Reporting Year:</b> 2018-19 <b>% Completed:</b> 75



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<p>the classroom and outstanding chemistry achievement within the classroom that engage students and members of the community in enrichment activities.</p> <p><b>Status:</b> Active</p> <p><b>Goal Year(s):</b> 2017-18, 2018-19, 2019-20, 2020-21</p> <p><b>Date Goal Entered (Optional):</b> 09/01/2016</p>	<p>and high school math and science teachers, Mt. SAC Chemistry Professors, Drs. Iraj Nejad and Charles Newman received funding, a three-year grant in the amount of \$624,668 awarded in 2015, from the National Science Foundation (NSF) to develop, implement and assess a sustainable STEM teacher preparation program designed to help students succeed in their STEM courses and seamlessly transfer to a baccalaureate teacher preparation program to earn their teaching credentials. The program activities are offered in close collaboration with the Cal Teach Program at the University of California, Irvine (UCI). The primary goal of the project, titled Mt. SAC STEM Teacher Preparation Program (or STEM TP2), is to develop a program that will recruit, counsel, and direct likely students that have the desire and potential to become highly-qualified middle school and high school math and science teachers. Program strategies include student counseling and advising, teaching opportunities for students in a Summer Science Exploration Experience (S2E2) and as a supplemental instructor, after-school tutoring, free tuition enrollment in teaching and research methods courses at UCI and authentic STEM research experiences. In 2017, Drs. Nejad and Newman received additional funding in the amount of \$105,843 from the NSF to help initiate a process to</p>	<ol style="list-style-type: none"> <li>Presented the program at the annual ATE PI meeting in Washington DC</li> <li>Submitted the annual report to the NSF.</li> <li>Held one Family Science nights at three different elementary schools</li> <li>Conducted our fourth Summer S2E2</li> <li>Held an Advisory Committee meeting.</li> <li>Recruited a fifth cohort of participants in the program.</li> <li>Program was published in the 2018-2019 ATE IMPACTS publication, celebrating 25 years of NSF ATE program.</li> <li>A program blog was published on the "ATE Central" website: <a href="https://atecentral.net/r29559/mt_sac_stem_teacher_preparation_program_stem_tp2">https://atecentral.net/r29559/mt_sac_stem_teacher_preparation_program_stem_tp2</a></li> <li>Program received the 2018 American Chemical Society (ACS) "Partners for Progress and Prosperity" award recognizing an exemplary collaboration between a 2-year and a 4-year institution.</li> <li>Link to program video at the ATETV.org: <a href="http://atetv.org/video/mt-san-antonio-college-stem-tp2-program/">http://atetv.org/video/mt-san-antonio-college-stem-tp2-program/</a>. (05/22/2019)</li> </ol> <hr/> <p><b>Reporting Year:</b> 2017-18</p> <p><b>% Completed:</b> 100</p> <p>Grant Activities (2017-2018):</p> <ol style="list-style-type: none"> <li>Presented the program at the annual ATE PI meeting in Washington DC</li> <li>Submitted the annual report to the NSF.</li> <li>Held 4 Family Science nights at three different elementary schools</li> <li>Conducted our third Summer S2E2</li> <li>Held two meetings with participants from six different community colleges and four four-year universities to explore replication of the Mt. SAC STEM TP2 at other two-year institutions.</li> <li>Held an Advisory Committee meeting.</li> <li>Recruited a fourth cohort of participants in the</li> </ol>

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	<p>replicate the program at other local community colleges and to establish transfer pathways to local four year institutions in the greater Los Angeles area.</p> <p>Presently we are in the third year of the three-year program. To date, we have assisted 25 students through the 15-month summer-to-summer grant supported program. We have selected another cohort of 12 math and science majors to participate in the last year of the program. Of the 35 total cohort students, 19 are Hispanic, 22 are first generation college students and 19 are female. Of the first two cohorts of 25 students, 17 have already transferred to four-year institutions to earn their baccalaureates degree and teaching credentials.</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b> Support for faculty</p> <p><b>*Lead:</b> Iraj Nejad, Charles Newman</p> <p><b>What would success look like and how would you measure it?:</b> This program will serve as a model to develop STEM teachers.</p> <p><b>Planning Unit Priority:</b> High</p> <p><b>Request - Full Funding Requested -</b> Chemistry-relevant displays and materials in the Exploratorium.</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b> The Chemistry Department uses this facility for our main community outreach event; the Family Science</p>	<p>program.</p> <p>8. Link to video: <a href="http://atetv.org/video/mt-san-antonio-college-stem-tp2-program/">http://atetv.org/video/mt-san-antonio-college-stem-tp2-program/</a> (05/31/2018)</p>

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	<p>Festival. It has very interesting displays, but nothing directly related to chemistry. It would be beneficial to our students to develop exhibits that are focused on chemistry.</p> <p><b>*Lead:</b> Todd Clements</p> <p><b>What would success look like and how would you measure it?:</b> We would be able to take our students to the facility to explore an exhibit that is relevant to the material that they are studying.</p> <p><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.</p> <p><b>Planning Unit Priority:</b> Medium</p>	
<p><b>Professional Development</b> - Attend conferences, symposiums, workshops to enhance our knowledge</p> <p><b>Status:</b> Active</p> <p><b>Goal Year(s):</b> 2016-17, 2018-19, 2019-20, 2020-21</p> <p><b>Date Goal Entered (Optional):</b> 09/01/2016</p>	<p><b>Report directly on Goal</b></p>	<p><b>Reporting Year:</b> 2018-19  <b>% Completed:</b> 75  During the 2018-2019 academic year, 10 faculty attended conferences funded or partially funded by the college. (05/20/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18  <b>% Completed:</b> 75  During the 2017-2018 school year, 12 full time faculty members attended conferences that were totally or partially funded by the College. (05/26/2018)</p> <p><b>Related Documents:</b>  <a href="#">2017-2018 Conferences attended.docx</a></p>
<p><b>Meeting Student Needs</b> - Increase student access to impacted courses by adding sections, safely and with stockroom and budget support</p> <p><b>Status:</b> Active</p>	<p><b>In Progress</b> - Adjunct Faculty Mentor</p> <p><b>*Describe Plans &amp; Activities</b></p> <p><b>Supported (Justification of Need):</b> Reassigned time for a full time faculty member to serve as a adjunct</p>	<p><b>Reporting Year:</b> 2018-19  <b>% Completed:</b> 0  There has been no progress on this goal. The College continues to provide no support for the extremely large work load created by the large number of adjunct</p>

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<p><b>Goal Year(s):</b> 2016-17, 2018-19, 2019-20, 2020-21</p> <p><b>Date Goal Entered (Optional):</b> 09/01/2016</p>	<p>faculty mentor</p> <p><b>*Lead:</b> Todd Clements</p> <p><b>What would success look like and how would you measure it?:</b> Departments that have 30 - 39 adjuncts would receive some support from the College to help with the tremendous work load created by the high dependence on adjunct faculty.</p> <p><b>Planning Unit Priority:</b> High</p>	<p>professors needed for the Department's positive response to the College's request to add sections for growth. Although we are slowly increasing the number of full time faculty in the department, we are still less than 40% of LHE taught by full time faculty. We have had difficulty in mentoring adjunct faculty in an effective manner due to the sheer number of faculty. It makes no sense that having 35 adjunct faculty gets no release time and having 40 adjunct faculty gets 3 LHE of release time. (05/20/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18 <b>% Completed:</b> 0 There has been no progress on this goal. The College continues to provide no support for the extremely large work load created by the large number of adjunct professors needed for the Department's positive response to the College's request to add sections for growth. (05/29/2018)</p> <p><b>Related Documents:</b> <a href="#">PER0007-A - Faculty Evaluation Report_20180410_115108.pdf</a></p> <hr/> <p><b>Reporting Year:</b> 2016-17 <b>% Completed:</b> 0 The union and college came to an agreement on providing 3 LHE for a department designee to act as a adjunct faculty mentor for departments with 40 or more adjuncts. Unfortunately, we do not qualify with only 37. The Department feels strongly that this item must be renegotiated to provide a sliding scale for departments with 30 or more adjunct . The adjuncts outnumber us 3 to 1 and it is incredibly challenging do a good job interviewing, hiring, mentoring, training and evaluating that many adjunct. The quality of our courses suffers due to the limited time the full-time faculty have to supervise adjuncts. (06/20/2017)</p> <p><b>Reporting Year:</b> 2018-19 <b>% Completed:</b> 0 No progress was made on this request. The College and Division do not provide any clerical support for our Department as they do for other departments. The</p>
	<p><b>In Progress -</b> Clerical assistance</p> <p><b>*Describe Plans &amp; Activities</b></p> <p><b>Supported (Justification of Need):</b> The Department Chair would be able to obtain clerical assistance from the</p>	

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	<p>Division for confidential types of tasks such as adjunct evaluations that cannot be done by student workers.</p> <p><b>*Lead:</b> Todd Clements</p> <p><b>What would success look like and how would you measure it?:</b> The Department Chair would receive College support and assistance with some of the tremendous clerical tasks that arise from the large number of adjunct faculty our Department is dependent on.</p> <p><b>Planning Unit Priority:</b> High</p> <p><b>Request - Full Funding Requested -</b> We need at least 4 new full time faculty positions to accommodate past growth and to provide access to current students. At the end of the 2019-2020 school year we had two full time faculty retire, which has a significant impact on our ability to staff classes. Qualified adjuncts are increasingly difficult to find in Chemistry. We have made little progress with adding desperately needed growth positions. According to California Community College Chancellor's website, 63% of Mt. SAC's LHE are taught by full time faculty, but the number for the Chemistry Department has been less</p>	<p>Department has grown significantly in the past several years. For instance in Spring 2014 we offered 12 sections of Chem 40. In Spring 2019 we offered 22 sections. Adjunct faculty outnumber full time faculty ~2.5 to 1, and there is a large amount of clerical work done by the chair and by faculty doing evaluations. (05/20/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18 <b>% Completed:</b> 0 No progress was made on this request. The College and Division do not provide any clerical support for our Department as they do for other departments. The Department has grown over 30% in the last 3 years. Adjunct faculty outnumber full time faculty ~ 3 to 1. (05/29/2018)</p> <hr/> <p><b>Reporting Year:</b> 2016-17 <b>% Completed:</b> 0 No progress was made on this request. The College and Division do not provide any clerical support for our Department as they do for other departments. The Department has grown over 30% in the last 3 years. Adjunct faculty outnumber us 3 to 1. (06/20/2017)</p> <hr/> <p><b>Reporting Year:</b> 2018-19 <b>% Completed:</b> 25 The college approved and hired one growth position this year. This faculty will assume approximately 32 LHE of teaching load, reducing the need for four classes being taught by adjunct professors. However, even with the new position, we are only at approximately 40% of total LHE being taught by full time faculty. Our second growth position was only a few spots behind the hiring limit, so the college acknowledges the need for the additional growth position. (05/20/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18 <b>% Completed:</b> 0 There was no approval of a growth position. The two new faculty who were hired were replacement positions, (05/31/2018)</p>

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	<p>than 40% for the past several years.</p> <p><b>*Describe Plans &amp; Activities</b></p> <p><b>Supported (Justification of Need):</b> Hire at least 2 new full-time growth positions. These new hires will help get the Department LHE taught by full time faculty closer to the college average.</p> <p><b>*Lead:</b> Todd Clements</p> <p><b>What would success look like and how would you measure it?:</b> The Chemistry department would have a higher percentage of courses taught by full time faculty than currently, approaching the college average.</p> <p><b>Type of Request:</b> STAFFING: Requests for permanent employee positions or temporary/hourly employees.</p> <p><b>Planning Unit Priority:</b> High</p> <p><b>Total Funding Requested:</b> 300000</p> <p><b>Related Documents:</b>  <a href="#">PER0007-A - Faculty Evaluation Report_20180410_115108.pdf</a>  <a href="#">Chemistry Faculty Request form Fall 2019 position 2.docx</a>  <a href="#">Chemistry Faculty Request form Fall 2019.docx</a> </p>	
<p><b>Adequate Facilities to Accommodate Lecture, Lab, Classified Staff and Faculty</b> - In order to provide access to classes for students as demand increases, we need to</p> <ol style="list-style-type: none"> <li>increase the number of appropriately located, properly equipped lecture rooms available to us (we are currently at maximum capacity).</li> <li>increase and modify office space for full-time faculty, adjunct faculty,</li> </ol>	<p><b>In Progress</b> - Facility modification on 7-2123 to safely house organic chemistry classes. This lab was designed for quantitative analysis, a course that is not longer taught. Meanwhile, our organic chemistry program has tripled in size and now requires an additional lab. The current configuration of 7-2123 is inadequate and unsafe for organic chemistry. The result is an underutilized room in close</p>	<p><b>Reporting Year:</b> 2018-19  <b>% Completed:</b> 0          There has been no progress on this goal. (05/20/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18  <b>% Completed:</b> 0          There has been no progress on this goal. (05/31/2018)</p>

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources	
<p>classified staff and clerical assistant (we are currently at maximum capacity)</p> <p>c. increase the number of laboratories and modify 7-2123 to safely accommodate organic chemistry</p> <p>d. modify chemical stockrooms for security, safety, increased capacity to prepare reagents and repair major leaks that occur during the rainy season.</p> <p>e. provide facilities to properly collect and store laboratory waste.</p> <p><b>Status:</b> Active</p> <p><b>Goal Year(s):</b> 2016-17, 2018-19, 2019-20, 2020-21</p> <p><b>Date Goal Entered (Optional):</b> 09/01/2016</p>	<p>proximity to an overused room.</p> <p><b>*Describe Plans &amp; Activities</b></p> <p><b>Supported (Justification of Need):</b></p> <p>Install at least three 8-foot fume hoods.</p> <p>Reconfigure lockers to increase the capacity.</p> <p><b>*Lead:</b> Todd Clements, Jane Ho</p> <p><b>What would success look like and how would you measure it?:</b></p> <p>Adequate hood space will be available so that students can efficiently complete experiments.</p> <p>Organic chemicals can be safely handled in an environment where the fumes are isolated.</p> <p><b>Type of Request:</b> FACILITIES: This section includes minor building improvement projects and alterations to specific rooms or operational areas.</p> <p><b>Planning Unit Priority:</b> High</p> <p><b>In Progress -</b> Increase the number of appropriately located, properly equipped lecture rooms available to us (we are currently at maximum capacity).</p> <p>The chemistry department currently has dedicated lecture rooms for Chem 10, Chem 40, Chem 50 and Chem 51. These dedicated classrooms are equipped with a periodic table, a whiteboard, document camera and assorted model sets. There are no dedicated lecture rooms for our organic program (Chem 20, Chem 80 and Chem 81). Classrooms assigned these courses are randomly located,</p>	<p><b>Reporting Year:</b> 2018-19</p> <p><b>% Completed:</b> 0</p> <p>There has been no progress on this goal. (05/20/2019)</p>	

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	<p>do not have a periodic table, adequate whiteboards or model sets. Whiteboards are essential for problem solving in chemistry lecture rooms. Also, most of these classrooms do not support a reliable internet connection which limits the ability of the professor to show videos or use programs that need internet connection. The rooms assigned are random each semester, making it difficult to properly equip them from semester to semester. They are frequently located outside of the natural science complex, making it difficult to eat and transit between lecture and lab during the 20 minute passing period between classes. Having dedicated lecture rooms for Chem 20, Chem 80 and Chem 81 will enable us to equip the classrooms with basics needed for a chemistry lecture room which ultimately enhances the learning and success of our students.</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b> Two or three classrooms convenient to buildings 7 and 60 that we can use regularly from semester to semester. We can then equip them properly with periodic tables and other items needed to support our curriculum.</p> <p><b>*Lead:</b> Todd Clements <b>What would success look like and how would you measure it?:</b> We would be able to assign our classes to rooms that are properly equipped</p>	



Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	<p>instead of the frantic search we currently undergo. The rooms would be close enough that faculty and students would be able to efficiently make the transition between lecture and lab.</p> <p><b>Planning Unit Priority:</b> High</p> <p><b>In Progress -</b> Upgrade the structural integrity and security of both Chemistry Department stockrooms.</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b></p> <p>Repair severely leaking ceiling and resulting damage in building 7 stockroom</p> <p>Install security system for building 7 stockroom</p> <p>Repair damage to building 7 stockroom from degradation caused by chemicals</p> <p><b>*Lead:</b> Todd Clements, Tatiana Lopez, Jane Ho</p> <p><b>What would success look like and how would you measure it?:</b> There will be significantly reduced downtime of technician productivity due to structural defects in the stockrooms, inadequate chemical storage cabinets or malfunctioning security devices.</p> <p><b>Type of Request:</b> FACILITIES: This section includes minor building improvement projects and alterations to specific rooms or operational areas.</p> <p><b>Planning Unit Priority:</b> High</p> <p><b>Total Funding Requested:</b> 30000</p>	<p><b>Reporting Year:</b> 2018-19</p> <p><b>% Completed:</b> 25</p> <p>Hand readers were replaced by FOB readers in the chemistry stockroom, reducing difficulties in accessing the stockroom. There are still significant facilities problems that arise every time there is rain and the stockroom partially floods if tarps and buckets are not employed. (05/20/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18</p> <p><b>% Completed:</b> 0</p> <p>There has been no progress on this goal. (05/31/2018)</p>
	<p><b>In Progress -</b> Adequate office adjunct professors and technical staff.</p>	<p><b>Reporting Year:</b> 2018-19</p> <p><b>% Completed:</b> 0</p>

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	<p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b> Properly equipped room(s) for adjunct faculty to meet with students during office hours. Office space for classified staff that is convenient to both stockrooms.</p> <p><b>*Lead:</b> Todd Clements</p> <p><b>What would success look like and how would you measure it?:</b> Each adjunct faculty member will have a properly equipped space to meet with students outside of class, during their scheduled office hours. Classified staff will have safe office space in close proximity to the stockrooms.</p> <p><b>Planning Unit Priority:</b> High</p> <p><b>In Progress -</b> The College will create a conveniently located facility with constant temperature control and proper ventilation to store chemical waste.</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b> A temperature controlled, properly ventilated facility conveniently located to the stockrooms to safely store laboratory waste.</p> <p><b>*Lead:</b> Todd Clements, Tatiana Lopez, Jane Ho</p> <p><b>What would success look like and how would you measure it?:</b> Chemical waste will no longer accumulate in the stockrooms, creating cluttered and unsafe work conditions for technicians.</p> <p><b>Planning Unit Priority:</b> High</p> <p><b>Completed -</b> Adequate classified</p>	<p>Adjunct professors are currently in a small room in a separate building from full time faculty. There has been significant loss of mentoring opportunities under this arrangement, and full time faculty feel disconnected from adjunct faculty. (05/22/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18 <b>% Completed:</b> 0 There has been no progress on this goal. (05/31/2018)</p> <hr/> <p><b>Reporting Year:</b> 2018-19 <b>% Completed:</b> 0 There has been no progress on this goal. (05/22/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18 <b>% Completed:</b> 0 There has been no progress on this goal. (05/31/2018)</p> <hr/>

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	<p>staff to cover lab classes in both buildings at all times that classes are in session.</p> <p><b>*Describe Plans &amp; Activities</b></p> <p><b>Supported (Justification of Need):</b> Hire enough lab technicians to have someone available in both buildings while lab classes are session. Lab classes are in session from 8:00 am to 10:10 pm in both buildings. For safety, there should be a technician available in each building when classes are in session.</p> <p><b>*Lead:</b> Todd Clements</p> <p><b>What would success look like and how would you measure it?:</b> One technician would not have to try to be in two places at once.</p> <p><b>Type of Request:</b> STAFFING: Requests for permanent employee positions or temporary/hourly employees.</p> <p><b>Planning Unit Priority:</b> High</p> <p><b>Total Funding Requested:</b> 0</p> <p><b>Request - Full Funding Requested -</b> Glassware washer accessories</p> <p><b>*Describe Plans &amp; Activities</b></p> <p><b>Supported (Justification of Need):</b> Clean glassware is very important in chemistry labs, especially in organic chemistry. Dirty glassware and/or contaminated glassware can affect</p>	<p><b>Reporting Year:</b> 2018-19</p> <p><b>% Completed:</b> 75</p> <p>Due to changes in staffing, we are now at reduced staffing levels, and are not meeting the needs of all of our courses. Saturday coverage is spotty and a part time technician is needed to fill in the gaps. (05/22/2019)</p> <hr/> <p><b>Reporting Year:</b> 2017-18</p> <p><b>% Completed:</b> 100</p> <p>With an increase in staff, we have been able to provide more streamlined labs for everyone. All labs are more up-to-date and organized. There is more time to fine tune the labs and do inventory checks on daily used items such as pipet pumps, ring stands, burets etc. The labs feel safer since all the prep-rooms have GHS sheets, GHS labels, and the safety showers/eyewashes checked on monthly basis. We have increased the amount of lab sections and reduced the amount of waste generated with the new dropper bottles. Waste collection is now cleaner with the addition of using Hazmat pig pads and funnels. Full coverage has helped us provide students and instructors with immediate help when needed. Abandoned glassware bins have helped to remind students to put glassware away.</p> <p>Overall, we are all working together to improve every little thing we can. More signs have been created to direct students and instructors. This includes campus safety information, GHS label information, and where to locate items such as colorimeters and cabbage. Also, instruction manuals/directions for equipment (spec. 20's, pH meters, IR's, NMR) has been re-written to provide a more user friendly approach to instructors and students. (05/31/2018)</p>

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	<p>our students' lab results, causing them to have impure products or false results. CHEM 80 and 81 currently use glassware that is shared by all sections. Manual cleaning of the glassware is not sufficient and the use of a glassware washer is needed to fully clean the glassware. Building 7 stockroom (where CHEM 80 and 81 labs are) currently has a laboratory glassware washer that is unused due to the lack of correct accessories for it. Purchasing the washer accessories will allow the staff to have the glassware cleaned on a regular basis so that students will not have a worry about possible contamination in their results from dirty glassware and avoid the safety hazard of stockroom technicians regularly carting dirty glassware between building 7 and building 60. A comprehensive service contract is also requested so that the washer can continuously function without issues.</p> <p><b>*Lead:</b> Jane Ho, Todd Clements</p> <p><b>What would success look like and how would you measure it?:</b> Success would be measured by having clean glassware available to students in organic labs (Chem 80 and Chem 81, approximately 150 students per term) on a timely basis without having to cart glassware between buildings.</p> <p><b>Type of Request:</b> NON INSTRUCTIONAL EQUIPMENT:</p> <p>Tangible property with useful life of more than one year, other than land</p>	

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	<p>or buildings improvements, equal and over \$500 per individual item. Used for administrative or non-instructional purposes.</p> <p><b>Planning Unit Priority:</b> High</p> <p><b>One-Time Funding Requested (if applicable):</b> 12500</p> <p><b>Related Documents:</b></p> <p><a href="#">Mt San Antonio-Steris Service Contract.PDF</a></p> <p><a href="#">STERIS-Quote-DSPENCER1126608-Rev1-MOUNT SAN ANTONIO COMMUNITY COLLEGE-14-May-2019 04.53.23PM.pdf</a></p> <p><b>Request - Full Funding Requested -</b></p> <p>Podiums designed for technology use</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b> In most of the department classrooms, there is a lab desk up front designed for doing demonstrations. Many faculty in the department now use technology, especially tablet technology, during their lectures. This often means bending over a short desk while writing, which is not very ergonomic and also takes the focus of the faculty away from the students. There are old wooden podiums in many classrooms, but they are not adjustable and certainly not designed for use with technology (many have side lips that make writing while using the podium very difficult).</p> <p>We are requesting new tabletop podiums in our classrooms and labs (12 total) to allow for more</p>	

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	<p>ergonomic and flexible use of the countertop space, especially with technology.</p> <p><b>*Lead:</b> Terri Beam</p> <p><b>What would success look like and how would you measure it?:</b> Success would be faculty using technology in the classroom in an ergonomic fashion, with focus still kept on the students.</p> <p><b>Type of Request:</b> SUPPLIES AND MATERIALS: Instructional supplies and materials are items to be used by students, faculty and other personnel in connection with an instructional program, less than \$500.</p> <p><b>Planning Unit Priority:</b> Medium</p> <p><b>Request - Full Funding Requested -</b> Nitric Acid Cabinet</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b> Highly corrosive nitric acid needs to be stored safely in a corrosive cabinet. These cabinets have a lifespan of about 10 years, and our current cabinet is 14 years old, and is no longer safe. It needs to be replaced ASAP.</p> <p><b>*Lead:</b> Tatiana Lopez, Todd Clements</p> <p><b>What would success look like and how would you measure it?:</b> Safe storage of nitric acid</p> <p><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-</p>	

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	<p>instructional purposes.</p> <p><b>Planning Unit Priority:</b> Urgent</p> <p><b>One-Time Funding Requested (if applicable):</b> 750</p> <p><b>Total Funding Requested:</b> 750</p>	
<p><b>Curriculum (v2)</b> - Continuously improve curricula in courses guided by assessment and collaborative faculty projects and input</p> <ol style="list-style-type: none"> <li>Re-establish appropriate pre-requisites for our courses</li> <li>Continue cycle of assessment and analysis of SLOs</li> <li>Development of new courses or designation of existing courses as teacher prep or honors</li> <li>Develop new experiments/activities for existing courses</li> <li>In light of effects of AB 705, monitor and adapt courses and delivery to meet student needs</li> <li>Develop appropriate certificates and/or degrees within our program to serve the needs of our students</li> </ol> <p><b>Status:</b> Active</p> <p><b>Goal Year(s):</b> 2017-18, 2019-20, 2020-21</p> <p><b>Date Goal Entered (Optional):</b> 05/22/2019</p>	<p><b>In Progress</b> - Purchase Spartan software site license for all Department computers</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b></p> <p>Funding to purchase software. IT personnel to install and maintain software on Department computers.</p> <p><b>*Lead:</b> Todd Clements, Tatiana Lopez</p> <p><b>What would success look like and how would you measure it?:</b></p> <p>Software will be available on all Department computers without any service break.</p> <p><b>Type of Request:</b> IT SUPPORT: Requests for projects related to the implementation, integration, application, delivery, and support of information and instructional technologies.</p> <p><b>Planning Unit Priority:</b> High</p> <p><b>One-Time Funding Requested (if applicable):</b> 6000</p>	
	<p><b>Request - Full Funding Requested -</b></p> <p>Digital subscription to the Journal of Chemical Education</p> <p><b>*Describe Plans &amp; Activities Supported (Justification of Need):</b></p> <p>Faculty will use the Journal as a resource for curriculum development including: experiments for data acquisition equipment, active learning activities, and the</p>	

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
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information about the latest pedagogical techniques in chemical education.

**\*Lead:** Todd Clements, Jenny Chen

**What would success look like and**

**how would you measure it?:** The

faculty will use the current and archived issues to adapt our current experiments to the new data acquisition equipment.

**Type of Request:** IT SUPPORT:

Requests for projects related to the implementation, integration, application, delivery, and support of information and instructional technologies.

**Planning Unit Priority:** High

**One-Time Funding Requested (if**

**applicable):** 300

**Request - Full Funding Requested -**

The STEM center has become an essential resource for our students.

They especially appreciate the coaching, available materials, access to computers and food.\_copy

**\*Lead:** Todd Clements

**What would success look like and**

**how would you measure it?:** The

STEM center will continue to provide resources for our students.

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

**Planning Unit Priority:** High