1. Assessment Plan - Four Column

PIE - Natural Sciences: Physics & Engineering Unit

Narrative Reporting Year

2018-19

Contact Person: Phil Wolf / Martin Mason
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Program Planning Dialog: PENG is successfully offering more than 50 distinct lecture and laboratory sections. There is more demand for credit courses in physics and engineering than there are rooms, staff, equipment, and qualified faculty. Full waitlists in most courses show the strong demand for courses in the department. The department has a strong legacy of successful transfer as the top engineering transfer program in California and the department is always looking to improve retention and success. The continued success of the robotics and rocketry teams and their impact on student research and student transfer is a point of pride for the department. The continued integration of engineering program courses with the MakerSpace is having a positive effect on engineering program outcomes. There is strong demand for certificated engineering technicians across several engineering disciplines and the department is poised to support students in their workforce aspirations. The department has been fortunate to receive significant one time money to support laboratories and course equipment. However, there are insufficient resources to sustain the current levels of course offerings and student activity. The PENG department lacks resources to complete any additional work on workforce preparation unless the college elects to support those efforts particularly with staff, and ongoing budgets for supplies and equipment.
External Conditions, Trends, or Impacts: Increased demand for engineering technicians. Growth of automation in local economy requires more technology workers.
CPP has transitioned from a quarter to semester system with significant curricular changes.
Increased numbers of students interested in engineering careers. Engineering majors are more impacted at 4 year institutions so there is less availability for transfer.
ASSIST is not being updated leaving a gap in transfer information. Special admission requirements for impacted engineering majors.
Increased desire from 4 yr schools to develop partnership transfer programs.
State mandate that community college funding being tied to program completion.
Multiple measures mandates has potential effects on the preparation of students in our program.
Funding is tied to apportionment, so there is limited opportunity for non-classroom programs like the MakerSpace that are exceedingly beneficial to students.
Increased minimum wage results in fewer worker hours for the existing budget.
Internal Conditions, Trends, or Impacts : The physics and engineering program has experienced explosive growth.
Our students continue to be successful on transfer.
Mt. SAC continues to be the largest engineering transfer institution to the CSU system.
SWF proposal for engineering technology was not funded as a result development activity in engineering is stalled.
Continued dependence on one time funding means that meaningful planning can't take place. Certificates are stalled due to a lack of state funding.
The division has asked the PENG department to increase course offerings beyond room availability.
Math department changes effect course prerequisites.
Insufficient SIs available to the department.
MATH 285 is no longer available, so our students cannot get their requisite courses within their available units.
Insufficient office space for faculty and staff.

Facilities are not adequate. Rooms lack appropriate lighting, modern AV systems, and seating.
The division lacks sufficient administrative staff to support the department.

Critical Decisions Made by Unit: Pursue an ongoing MakerSpace grant to support campus-wide making.
Offer all engineering courses year round to support student completion.
Increase offerings of Engineering Physics courses.
Obtained a new full-time physics faculty and an replacement engineering faculty.
Active recruitment of adjunct faculty.
The department has supported an increased role in campus governance.
Received guided pathways funding for engineering transfer programs.
Modified PHYS 1 curriculum.
Updated PENG curriculum.

Notable Achievements for Theme A: To Advance Academic Excellence and Student Achievement: 1. Met with California State University and University of California faculty to discuss transfer associates degree in engineering. Engineering faculty met with department representatives from CSULA mechanical, civil and electrical engineering and developed new articulation agreements. Met with ELC FDRG to discuss statewide KGB optimization.
2. Met with engineering dean of CPP to determine future collaboration.
3. Met with UCR dean of engineering to determine transfer path for Mt. SAC engineering students to UCR with guaranteed tuition.
4. Implemented ENGR 8 lab
5. Provided faculty hours in STEM center.
6. Met with CPP Civil Engineering liaison to align curriculum.
7. Continued a engineering faculty workgroup to focus on the development of Engineering 1 lab consisting of full and part time faculty.
8. Faculty are serving as advisors for Society of Physics Students, Society of Women Engineers, Society of Hispanic Engineers and Circle K Club.
9. Attended CPP outreach meeting to determine concerns about CPP articulation and transfer to semester system.
10. Continued the implementation of the flipped model in engineering physics.

Notable Achievements for Theme B: To Support Student Access and Success: 1. Secure Resources Sufficient courses were provided in Spring to meet student demand over capacity.
2. Took students to VonKarman Lecture at JPL
3. Robotics team competed an international event and won the Judge's Trophy
4. One student received academic achievement award
5. FAR rocket sponsorship for Rocketry Team.
6. Students won 3rd highest award at the So Cal regional Lower division research conference for work on rocket telemetry and avionics
7. Many students attended the Conference of Undergraduate Women in Physics.
8. Student competed in international robotics competition in China.
9. SWE on campus was recognized by the national organization. Students in SHPE attended national meetings.
10. Wrote and implemented grant to support MakerSpace on campus.
11. Collaborated with ASTR department on characterization of telescope mount.
12. Met with chemistry faculty to co-develop chemistry for engineers course. CHEM 55 has been submitted
13. Awarded three scholarships from Anderson Memorial Fund
Notable Achievements for Theme C: Secure Human, Technological, & Financial Resources: 1. Staffed all courses
2. Secure Resources: Obtained 5 new additional laptops for 11-2101 classroom.

3. Secure Resources: Laboratory technician created organization structures that allowed for streamlined laboratory setup and tear down and more efficient use of student workers under the supervision of the Laboratory Technician.
4. One time lottery money to support ENGR
5. Permanent students assistant budget.
6. Awarded Stars of Excellence funding for robotics team participation in international event.

Notable Achievements for Theme D: To Foster an Atmosphere of Cooperation and Collaboration: 1. Held new faculty workshop on curriculum in the Mountie MakerSpace
2. Delivered spring flex activity on curriculum in the Mountie MakerSpace.
3. Attended department meetings for Manufacturing and Astronomy and many others to build bridges between departments and MakerSpace.
4. POD presentation on dual enrollment
5. Met with chemistry faculty to co-develop chemistry for engineers course.
6. Department faculty are holding regular capoeira classes through the wellness center to support fitness and community.
7. Faculty continue to serve in the following capacity:
+ Academic senate exec board
+ Faculty liaison for dual enrollment
+ Chair the faculty association scholarship committee
+ Serve on Ed design committee
+ Circle K Club advisor
+ Co-chair task force on faculty hiring prioritization
+ Engineering 1 curriculum co development committee
+ Chair FA election committee
+ Participation in Engineering Liason council, CSULA transfer advisory board, CPP transfer advisory board, CCCP transfer advisory board.
+ SWE Advisor
+ SHPE Advisor
+ SPS Advisor
+ Campus sustainability committee.
+ Faculty lead for campus MakerSpace.
+ Academic Senate
+ Faculty association.
+ Academic advising for STEM programs.
+ Lead of SCPTA
+ Serve on class size task force
+ Serve on class size committee
+ Participated in dual enrollment hiring
+ Attended faculty retreat on Guided Pathways
+ Participated in reviewing Perkins Grant applications
+ Members of Anderson Memorial scholarship committee
+ Site Director for Engineering Innovations through Johns Hopkins
+ Conducted information session for internship for New Indy paper company
+ Attended SCAAPT meetings
+ Participated in ELC conferences
8. Attended statewide meeting for Physics Technicians.
Contributors to the Report: Martin Mason

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Unit Goals	*Resources Needed*	*Where We Make an Impact: Closing the Loop on Goals and Plans*
Lab Technician - Obtain a second full time, qualified, professional, permanent Lab Technician to support the Physics, Engineering, Surveying and Physical Science programs. **Status:** Active **Goal Year(s):** 2016-17, 2017-18, 2018-19, 2019-20 **Date Goal Entered (Optional):** 09/01/2016	**In Progress -** Second Full Time Permanent Lab Technician **Describe Plans & Activities Supported (Justification of Need):** additional staff and ongoing budget **Lead:** Martin Mason **What would success look like and how would you measure it?:** New staff is hired. **Type of Request:** STAFFING: Requests for permanent employee positions or temporary/hourly employees. **Planning Unit Priority:** High **Documentation Attached?:** No **One-Time Funding Requested (if applicable):** 5000 **On-Going Funding Requested (if applicable):** 90000	**Reporting Year:** 2018-19 **% Completed:** 0 The second lab tech position was approved BUT without sufficient budget to actually pay for a full time position. Our Dean will be taking this position request forward again with a budget request of $90000-95000 to cover salary and benefits. There will possibly be $2000-$4000 of additional one-time monies needed to get them a computer and set up an office space. At present we have been getting by, barely and poorly, using student workers. Since our student worker budget has been reduced, this places unreasonable demand on the time and resources of our one lab technician. For Fall we will anticipate opening three additional sections of Physics, and two additional sections of Engineering. If this position is NOT filled, our department will be facing a continued lack of lab support for evening classes, which are often taught by adjunct professors who are often not very familiar with the labs or where things are. In addition we will need a significant increase to our student worker budget just to keep things limping along. (05/31/2019) **Reporting Year:** 2017-18 **% Completed:** 0 Our current lab technician is going above and beyond to keep students safe, but the work far exceeds what can be done by one person and is not consistent with other laboratory programs within the division. We still do not have a second Full Time Permanent Lab Technician. We

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
		explored obtaining a position through Strong Workforce funding but that hasn't happened. Unsafe environment persists. Lack of night supervision persists. (04/05/2018) **Reporting Year:** 2016-17 **% Completed:** 0 Did not obtain lab technician. Present staffing level is drastically below accepted level within the division. Inadequate support persists for safe effective labs. No supervision for student employees at night. (06/16/2017)
	Request - Full Funding Requested - $90,000-95,000 for salary, benefits, and start up of new staff member **Lead:** Eugene Mahmoud **What would success look like and how would you measure it?:** A new staff member would be hired and begin working in the department. If they are working in the department, it is successful. **Type of Request:** STAFFING: Requests for permanent employee positions or temporary/hourly employees. **Planning Unit Priority:** High **One-Time Funding Requested (if applicable):** 5000 **On-Going Funding Requested (if applicable):** 95000	
Course Approval - Obtain approval and implement new Engineering, Physical Science, Physics and Surveying courses. **Status:** Active **Goal Year(s):** 2016-17, 2017-18, 2018-19, 2019-20 **Date Goal Entered (Optional):** 09/01/2016	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 50 Physics 4D approved Engineering 8 lab approved Modifications for PHYS 1 submitted to EDC ENGR 50B (Robotics 2) has been submitted. CHEM 55 (Chemistry for Engineers) has been submitted by the Chemistry department. VOC MKR (noncredit) course has been submitted to EDC. This is a lab course that would allow the Makerspace to collect noncredit apportionment.

Unit Goals	*Resources Needed*	*Where We Make an Impact: Closing the Loop on Goals and Plans*
	Report directly on Goal	We will be working on a digital electrical engineering course. (05/31/2019)
	In Progress - Increase Dept. Chair reassign time to 6 LHE/ semester **Describe Plans & Activities Supported (Justification of Need):** funding for 3 more LHE per semester to the dept. chair. **Lead:** Phil Wolf **What would success look like and how would you measure it?:** Additional reassign time is allotted. **Planning Unit Priority:** Medium **Documentation Attached?:** No **One-Time Funding Requested (if applicable):** 8400	**Reporting Year:** 2018-19 **% Completed:** 50 Dept. Chair Reassigned time has been increased to 7 LHE +2 Flex LHE due to the increased size of the department, the increased number of adjunct and probationary faculty, and the number of probationary faculty (one in 2017-2018, two in 2018-2019, three for 2019-2020). (05/31/2019)
		Reporting Year: 2017-18 **% Completed:** 0 No progress on chair reassigned time. Engineering 8 lab was approved. Physics 4D was approved. Engineering 1C was locally approved. (05/10/2018)
		Reporting Year: 2016-17 **% Completed:** 25 Engineering 1 lab approved Engineering 6 implemented Updated Engineering 24, 40, 41, 42, and 44 for CID compliance. Submitted Physics 4D Submitted Engineering 8 lab (06/16/2017)
Transfer Degree - Complete the Transfer Associates Degree in Engineering, Robotics Certificate program in collaboration with the Electronics Department, and surveying certificate. **Status:** Active **Goal Year(s):** 2016-17, 2017-18, 2018-19, 2019-20 **Date Goal Entered (Optional):** 09/01/2016	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 25 Applied for SWF funding to support engineering technology. Our requests have been prioritized at CTEAC but not currently funded for 2019-2020. (05/31/2019)
		Reporting Year: 2017-18 **% Completed:** 25 Applied for SWF funding to support engineering technology. Goal on hold until support exists. (05/10/2018)
	In Progress - Develop and submit engineering and engineering technology degrees and certificates. **Describe Plans & Activities Supported (Justification of Need):** 2LHE per semester reassign time	**Reporting Year:** 2018-19 **% Completed:** 25 Received Guided Pathways funding for 2019-2020 to develop transfer programs in Mechanical and Civil Engineering. (05/31/2019)
		Reporting Year: 2017-18

Unit Goals	*Resources Needed*	*Where We Make an Impact: Closing the Loop on Goals and Plans*
	Lead: Eugene Mahmoud **What would success look like and how would you measure it?:** Degrees and certificates are approved. **Planning Unit Priority:** Medium **Documentation Attached?:** No **One-Time Funding Requested (if applicable):** 5600	**% Completed:** 25 Filed LAOCRC request. Completed letter of intent process. Ladder degree programs submitted. Surveying certificate approved. (05/10/2018) **Reporting Year:** 2016-17 **% Completed:** 25 developed program outline. received approval from electronics. (06/16/2017)
Staffing - Obtain sufficient teaching and support staff to both support the significant growth in the department and to allow for additional growth in new high demand programs. **Status:** Active **Goal Year(s):** 2016-17, 2017-18, 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 09/01/2016	**In Progress -** Continue to mentor adjunct instructors **Describe Plans & Activities Supported (Justification of Need):** 1 LHE per 5 / adjunct or 4 LHE per semester of faculty time. **Lead:** Malcolm Rickard **What would success look like and how would you measure it?:** Criteria for Success: Adjunct faculty are retained and student, faculty, and self evaluations are positive. **Planning Unit Priority:** Medium **One-Time Funding Requested (if applicable):** 11200	**Reporting Year:** 2018-19 **% Completed:** 25 Individual full-time faculty continue to meet with some adjunct faculty. Some adjuncts come in extra hours and/or on extra days to be prepared for lab. Engineering 1 FDRG continues to meet. (05/31/2019) **Reporting Year:** 2017-18 **% Completed:** 50 Development of Engineering 1 FDRG consisting of full and part time faculty. However, there are more adjunct faculty, and one fewer full time faculty due to death. Overall evaluations for adjunct continue to worsen. We may have the opportunity to hire a full time faculty member if the instruction office approves. (05/10/2018) **Reporting Year:** 2016-17 **% Completed:** 0 due to increase and turnover of adjuncts instructors. Insufficient full time faculty to mentor. (06/16/2017)
	In Progress - Increase permanent funding for student laboratory support **Describe Plans & Activities Supported (Justification of Need):** 50 hours / week of student support for 50 weeks. **Lead:** Martin Mason **What would success look like and how would you measure it?:** Criteria for success: Funding for student workers is institutionalized.	**Reporting Year:** 2018-19 **% Completed:** 50 We have obtained ongoing permanent funding of $8000 per year. This is less than half of what the department spent in 2017-2018 for student workers. An across-the-board wage increase is not reflected in this budget amount going forward. In addition, without the hiring of a second full-time lab technician, this budget will be completely insufficient to attempt to meet the growing lab support needs of the department. (05/31/2019) **Reporting Year:** 2017-18 **% Completed:** 0

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	Type of Request: STAFFING: Requests for permanent employee positions or temporary/hourly employees. **Planning Unit Priority:** High **One-Time Funding Requested (if applicable):** 30000 **On-Going Funding Requested (if applicable):** 30000	Again, no progress. The division continues to experience frustration because they recognize the necessity of these students to support safe and functioning laboratory programs and there is no ongoing budget to support this. (05/10/2018)
		Reporting Year: 2016-17 **% Completed:** 0 no progress, no budget line item for student lab support. (06/16/2017)
	In Progress - Reinstate funding for part time Laboratory Assistant **Describe Plans & Activities Supported (Justification of Need):** part time laboratory staff. **Lead:** Malcolm Rickard **What would success look like and how would you measure it?:** New staff is hired. **Type of Request:** STAFFING: Requests for permanent employee positions or temporary/hourly employees. **Planning Unit Priority:** Medium **One-Time Funding Requested (if applicable):** 30000 **On-Going Funding Requested (if applicable):** 45000	**Reporting Year:** 2018-19 **% Completed:** 0 No progress. (05/31/2019)
		Reporting Year: 2017-18 **% Completed:** 0 The position promised when the department had labs split between building 60 and building 11 has still not materialized. (05/10/2018)
		Reporting Year: 2016-17 **% Completed:** 0 no additional support. (06/16/2017)
	In Progress - Clerical assistance **Describe Plans & Activities Supported (Justification of Need):** 19 hour week clerical support for division office to support programs. and departments **Lead:** Matthew Judd **What would success look like and how would you measure it?:** Division hires a shared clerical assistant. **Planning Unit Priority:** High **One-Time Funding Requested (if applicable):** 30000	**Reporting Year:** 2018-19 **% Completed:** 50 The Division Office struggles to keep up with their workload. That office requires additional skilled full-time and part-time support. (05/31/2019)
		Reporting Year: 2017-18 **% Completed:** 75 The division has hired clerical support for the division. (05/11/2018)

Unit Goals	*Resources Needed*	*Where We Make an Impact: Closing the Loop on Goals and Plans*
Laboratory Support - Enhance department laboratory support to include detailed inventory, planning, utilization balancing, maintenance, and logistics. Include support of department open lab hours. **Status:** Active **Goal Year(s):** 2016-17, 2018-19 **Date Goal Entered (Optional):** 09/01/2016	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 25 Open hours have been eliminated, in part because our rooms are operating close to capacity; we don't have student lab hours to supervise the space; and we don't have the lab technician bandwidth to additionally support open lab hours. Rooms have been reorganized and we continue to shift courses between rooms as our enrollment grows. Inventory and utilization management is a dynamic process. (05/31/2019)
		Reporting Year: 2017-18 **% Completed:** 50 Physics laboratory technician and student assistants have started a reorganization and inventory of some of the department laboratories. One time funding has been spent to crease classroom sets of equipment. (05/11/2018)
		Reporting Year: 2017-18 **% Completed:** 0 Lab open hours have been cut or eliminated due to lack of budget. As credit course program has expanded the lab technician's minimum duties have expanded to push out the ability plan and inventory. (05/10/2018)
	In Progress - Develop videos and screencasts to support Engineering/physics curriculum. **Lead:** Phil Wolf	**Reporting Year:** 2018-19 **% Completed:** 25 One section of PHYS 4A uses videos as part of its flipped format. Some additional videos were developed this year. (05/31/2019)
	In Progress - Hire additional laboratory support staff. Continue to inventory and organize the laboratories and laboratory equipment. **Describe Plans & Activities Supported (Justification of Need):** Staff for open lab hours. Four hours / week for inventory management. **Lead:** Maria Vaughn **What would success look like and**	**Reporting Year:** 2018-19 **% Completed:** 0 No staff hired. (05/31/2019)
		Reporting Year: 2017-18 **% Completed:** 0 No staff hired. Not only the promised person associated with building expansion not being hired, but the program has expanded offerings by over 70% since that time. (05/10/2018)

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	how would you measure it?: Staff is hired and inventory is completed and maintained. **Planning Unit Priority:** Medium **One-Time Funding Requested (if applicable):** 6000	
Full Time Faculty - Secure another full time physics faculty member and full time engineering faculty member to support new courses. **Status:** Active **Goal Year(s):** 2016-17, 2017-18, 2018-19, 2019-20 **Date Goal Entered (Optional):** 09/01/2016	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 50 We were granted permission to hire, and have hired, an additional full time Physics faculty member and a replacement full time engineering faculty member, each to begin teaching in Fall 2019. (05/31/2019)
	In Progress - Hire new Full Time Engineering Faculty. Hire new Full Time Physics Faculty. **Describe Plans & Activities Supported (Justification of Need):** Two new full time faculty positions. **Lead:** Martin Mason **What would success look like and how would you measure it?:** Two new faculty is hired. **Type of Request:** STAFFING: Requests for permanent employee positions or temporary/hourly employees. **Planning Unit Priority:** Medium **One-Time Funding Requested (if applicable):** 240000 **On-Going Funding Requested (if applicable):** 240000	**Reporting Year:** 2017-18 **% Completed:** 50 We have been approved to hire a new tenure-track Physics faculty member for Fall 2018. We will be gaining a full-time Engineering professor who will be transferring over from LERN. As she will be on retraining leave for the 2018-2019 Academic Year, she will not come fully on board until Fall 2019. We have had a faculty member pass away in the last month which means that this does not reflect a net growth in physics faculty. (04/05/2018)
		Reporting Year: 2016-17 **% Completed:** 0 No new faculty hired. All sections of physics 1 taught by adjunct instructors. Engineering 1, 8, 18, 40, and 42 are currently taught entirely by adjunct. All surveying courses are currently taught entirely by adjunct. (06/16/2017)
		Reporting Year: 2016-17 **% Completed:** 0 There is no full time instructor able to devote attention to physics one, in particular the student learning outcomes and the lab manuals. (05/12/2017)
	Request - Full Funding Requested - Furniture and computer for new full time faculty member **Describe Plans & Activities**	**Reporting Year:** 2018-19 **% Completed:** 50 The campus has provided budget for a new adjustable desk, office chair, shelves, and a small storage unit for each of our

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	Supported (Justification of Need): Faculty member will have a place to sit in their office and a chairs for students. Faculty will have a computer to develop course materials. **Lead:** Wolf **What would success look like and how would you measure it?:** New faculty has office furniture and a computer **Type of Request:** FACILITIES: This section includes minor building improvement projects and alterations to specific rooms or operational areas. **Planning Unit Priority:** Medium **Documentation Attached?:** No **One-Time Funding Requested (if applicable):** 10000 **Request - Full Funding Requested -** Equipment to update the Physics 1 laboratory course. **Describe Plans & Activities Supported (Justification of Need):** Our new hire continues to revamp the Physics 1 laboratory course which was last updated by Tom Smith in 1999. The faculty member will develop and implement new laboratories to update the curriculum to modern standards and change the course to a new model. **Lead:** Sarah Nichols **What would success look like and how would you measure it?:** New laboratory model implemented in Physics 1. **Type of Request:** SUPPLIES AND MATERIALS: Instructional supplies	new faculty members. We anticipate that they will each be granted a new computer as well, as is standard. We do not have enough space within our presently allocated offices so that each of our new faculty members has an office within the department. We have developed a plan and working with the Division Dean to secure additional office space so that each of our new faculty members has a place. The Dean has assured us that this additional space will be arranged. At the moment we are not aware of what the exact final arrangement will be. (05/31/2019)

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	and materials are items to be used by students, faculty and other personnel in connection with an instructional program, less than $500. **Planning Unit Priority:** High **Documentation Attached?:** No **One-Time Funding Requested (if applicable):** 5000	
Replacement Full Time Faculty - Secure full time physics faculty member and full time engineering faculty member to replace anticipated retiring faculty. **Status:** Archive **Goal Year(s):** 2017-18, 2018-19 **Date Goal Entered (Optional):** 06/29/2017	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 0 We anticipate the retirement of a Physics faculty member in June 2020. In order to maintain our ability to serve our increasingly large number of Physics students, we will be requesting a replacement position through the campus Faculty Prioritization Process. (05/31/2019) **Reporting Year:** 2017-18 **% Completed:** 0 We have one faculty member who has died, another who has missed 2 of the last 4 semesters due to illness and is missing the end of spring semester and a third who has indicated that they intend to retire within 2 years. (05/10/2018)
	In Progress - Hire Full Time Engineering Faculty. Hire Full Time Physics Faculty. **Describe Plans & Activities Supported (Justification of Need):** Two full time faculty positions. **Lead:** Malcolm Rickard, Martin Mason **Planning Unit Priority:** Medium	**Reporting Year:** 2016-17 **% Completed:** 0 This is a new goal. (06/29/2017)	**:** Presently nearly 50 LHE are taught by two faculty members who are approaching retirement. As was observed in Spring of 2017, the loss of just one of these veteran instructors creates a huge negative impact on students. (06/29/2017)
Engineering Supply and Repair Budget - Enhance the Engineering Supply and Repair budget to be consistent with other laboratory programs in the division. Given that engineering offers 10 distinct laboratory courses the current	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 0 Still no permanent Engineering Supply Budget. (05/31/2019) **Reporting Year:** 2017-18 **% Completed:** 0

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budget of $965 per year is highly inadequate. Make permanent a larger engineering supply and repair budget to allow the program to implement modern labs. Make permanent the temporary enhancements to the supply budget. Need additional course sets of laboratory materials to support increased course offerings. **Status:** Active **Goal Year(s):** 2016-17, 2017-18, 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 09/01/2016	**Report directly on Goal** **In Progress -** Acquire engineering laboratory supply budget in line with per class expenditures of the division average for laboratory courses. **Describe Plans & Activities Supported (Justification of Need):** Site licenses for engineering software including NI Labview, MATLab, AutoDesk Suite. Laboratory equipment and supplies to support engineering laboratories. This includes servo motors, 3D printer supplies, stepper motors, Vernier probe ware, VEX structural elements. Motor control modules, rocket airframes and ammonium perchlorate motors, 32 bit microcontrollers development boards, test equipment including spectrum analyzers, frequency generators, digital waveform generators and other supplies. Budget for repair of equipment. Ongoing supply budget of $40,000 / year. **Lead:** Martin Mason **What would success look like and how would you measure it?:** Budget is increased to $40,000.	Number of sections of engineering laboratory is growing to 27, which at $800 per section which is consistent with the division average would be a yearly budget of $21,600. (05/11/2018) **Reporting Year:** 2017-18 **% Completed:** 0 No additional budget. Additional sections were added to support student transfer and workforce goals which has made the amount of support per laboratory decrease even further. The department has received one time funds to support courses. (05/10/2018)

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	Type of Request: 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. **Planning Unit Priority:** High **One-Time Funding Requested (if applicable):** 40000 **On-Going Funding Requested (if applicable):** 40000 **Request - Full Funding Requested -** Ongoing support for annual updates of MATLab and LabView software . **Describe Plans & Activities Supported (Justification of Need):** This is software that forms the basis for our ENGR7 course. Software should be updated annually to to stay current with industry requirements. **Lead:** Maria Vaughn/Martin Mason **What would success look like and how would you measure it?:** We would have funding available to update software in the classroom when necessary. **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 **Documentation Attached?:** No **One-Time Funding Requested (if**	**Reporting Year:** 2018-19 **% Completed:** 0 Updates to licenses has been intermittent, depending on the availability of funds from the Division. There is not permanent funding for this highly predictable expense. (05/31/2019)

Unit Goals	*Resources Needed*	*Where We Make an Impact: Closing the Loop on Goals and Plans*
	applicable): 0 **On-Going Funding Requested (if applicable):** 3600	
Supplemental Instructors - Secure long term financial support for providing Supplemental Instructors and tutors in the STEM center in the Physics and Engineering department. **Status:** Active **Goal Year(s):** 2016-17, 2017-18, 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 09/01/2016	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 0 No progress. The department could use an SI in each of our Physics and Engineering sections. We currently have three SI's in the department. We could use over 20. The coaching in the STEM center is apparently available only for gateway courses such as PHYS 2AG. And, the emphasis in the STEM center is focused on study skills and deconstructing the concepts in the course rather than the more problem-solving focus that SIs bring to the course. Each of these two approaches are valuable to our students. We need both approaches to be funded. (05/31/2019)
		Reporting Year: 2017-18 **% Completed:** 0 The STEM center has been transitioning its role to be in line with its equity funded mission so this goal is no longer appropriate as written. The STEM Centers approach to coaching is in transition and the department hopes that there will be strong resources to support physics students. The continues to be a lack of resources for engineering students. (05/10/2018)
	In Progress - Acquire funding for supplemental instructors that is external to the LAC. **Describe Plans & Activities Supported (Justification of Need):** Budget to support Supplemental Instructors in the department. 10 hours / week * 8 SIs * 40 weeks / year * $13 = $41600 **Lead:** Malcolm Rickard **What would success look like and how would you measure it?:** Presently we have only two SI's for	**Reporting Year:** 2018-19 **% Completed:** 0 No progress (05/31/2019)
		Reporting Year: 2017-18 **% Completed:** 50 Engineering students are told to be study group leaders instead of SIs which don't work when the program requires access to equipment. (05/11/2018)

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	the entire department. We have over 25 sections of Physics courses that could benefit from having an SI and multiple Engineering sections that would likewise benefit. Our data, going back over a decade and continuing to the present, show that courses with SI's have average grades up to a full letter grade higher, and that success and retention is typically 20-25% higher than in courses without SI's. The standard arrangement of requesting SI's through the LAC has not resulted in the LAC hiring SI's for our department. In addition, the needs of Physics and Engineering students differs from the standard SI model used by the LAC. Success would look like us having an ongoing budget for hiring SI's; the department holding at least 8 SI sessions per week; and student retention and success in SI-assisted courses being at least 20% higher than what is standard in the department now. **Planning Unit Priority:** Medium **Documentation Attached?:** No **One-Time Funding Requested (if applicable):** 41600 **On-Going Funding Requested (if applicable):** 41600	
Computer Resources - Secure adequate computing resources for all classrooms. **Status:** Active **Goal Year(s):** 2016-17, 2017-18, 2018-19, 2019-20, 2020-21	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 50 60-1503 will be getting new Mac laptops. 11-2107 will be getting new SD hardrives but no RAM at the end of Spring 2019. All other department computers are one year older and so draw closer to their replacement

Unit Goals	*Resources Needed*	*Where We Make an Impact: Closing the Loop on Goals and Plans*
Date Goal Entered (Optional): 09/01/2016	**Report directly on Goal**	date. Annual Software renewal licenses for Matlab and labview need to be supported on an ongoing basis. Need replacement laptops for 60-1620 (11 of them). Need replacement laptops for 11-2304 (16 of them). Need 7 additional PC laptops for 11-2101. We will need EveryCircuit software for PHYS 4B and ENGR 44 for 2019-2020. (05/31/2019)
		Reporting Year: 2017-18 **% Completed:** 50 11 New computers have been authorized for 11-2101. 14 additional computers are required. 60-1620 has been exchanged with 60-1503 where those computers are now 5 years old and due for replacement. All other department computers are one year older and so draw closer to their replacement date. Annual Software renewal licenses for Matlab and labview need to be supported on an ongoing basis. Computers in 11-2107 need upgraded SD harddrives and ram to support modern software as recommended by the division tech. (05/10/2018)
	Request - Full Funding Requested - Replace 11 laptops in 60-1620 and 16 laptops in 11-2304 for student laboratory use. **Describe Plans & Activities Supported (Justification of Need):** Replace laptops in rooms where the computers are five years old or older. **Lead:** Maria Vaughn **What would success look like and how would you measure it?:** Obtaining new computers for the requested classroom laboratories **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	**Reporting Year:** 2018-19 **% Completed:** 75 computers upgraded in 2018. They will be updated to Windows 10 over Summer 2019 and will SSD hard drives but not additional RAM (05/31/2019)

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	materials in an instructional program, equal or over $500. **Planning Unit Priority:** High **Documentation Attached?:** No **One-Time Funding Requested (if applicable):** 54000 **Request - Full Funding Requested -** Secure 7 PC laptops for student laboratory use for ENGR 50A and 50B and ENGR 99. **Describe Plans & Activities Supported (Justification of Need):** Students should have reasonable resources to conduct computational activities for laboratory projects in these courses. **Lead:** Eugene Mahmoud **What would success look like and how would you measure it?:** Students would have the ability to use computers for the ENGR 50A, ENGR 50B and ENGR 99 courses. **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):** 8000	
Other Goals - 1) Institutionalize projects into the core program curriculum. There are an increasing number of units of Physics 99 / Engineering 99 being mentored by	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 25 We have discussed with the Math department having them create a single 3 or 4 unit combined differential equations/linear algebra course. They have failed to act on

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
faculty, and the Departments sees this number increasing with the proposed increased emphasis on projects. We are at a point where this is having a substantial impact on faculty load, and as such it is a union issue to get load equivalent for project courses. 2) Discussions with Math Department about how math service courses can better meet the needs of engineering students. o Unit count o Content o Outcomes 3) Implement a robotics certificate program in collaboration electronics and manufacturing CTE programs. 4) Develope a one-semester Chemistry for Engineers course. **Status:** Active **Goal Year(s):** 2016-17, 2017-18, 2018-19, 2019-20 **Date Goal Entered (Optional):** 09/01/2016	**Report directly on Goal**	this. We have submitted such a course through the curriculum process. (05/31/2019) **Reporting Year:** 2018-19 **% Completed:** 50 Projects have been institutionalized in every Engineering course. These projects fully use the resources of the Makerspace. This is ongoing, as courses develop new projects. (05/31/2019) **Reporting Year:** 2018-19 **% Completed:** 50 The Chemistry department has, in collaboration with our department, developed a Chemistry for Engineering course (CHEM 55) and submitted it through the curriculum process. (05/31/2019) **Reporting Year:** 2017-18 **% Completed:** 0 Math department has/is eliminating combined Differential equations and Linear algebra class in favor of two separate classes, but the units have gone from 5 to 7 and a potentially 5 course sequence. Changes at CSU system schools mean that current math sequence is not suiting engineering student needs. Engineering students are recommended to complete Math 180, 181 and 280 prior to transfer. Ongoing concerns about high unit count of the math sequence which has an impact on engineering students financial aid eligibility. (05/10/2018) **Reporting Year:** 2017-18 **% Completed:** 50 Chemistry department faculty have collaborated with physics and engineering faculty to develop the Chem for Engineers course. There were some challenges at the campus curriculum level that put the course on hold. The course is developed to the initial satisfaction of chemistry, and engineering faculty. (05/10/2018)
	In Progress - Faculty compensation for teaching research courses. **Describe Plans & Activities Supported (Justification of Need):** 2	**Reporting Year:** 2018-19 **% Completed:** 0 No progress. The campus does not prioritize compensating faculty for mentoring research projects. (05/31/2019)

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	LHE per semester **Lead:** Martin Mason **What would success look like and how would you measure it?:** Compensation is Enacted **Type of Request:** STAFFING: Requests for permanent employee positions or temporary/hourly employees. **Planning Unit Priority:** Medium **One-Time Funding Requested (if applicable):** 6000 **On-Going Funding Requested (if applicable):** 10000	**Reporting Year:** 2017-18 **% Completed:** 0 No progress. Discussed with areas that have incremental compensation supervision for work experience students. (05/10/2018)
	In Progress - Funding for PHYS 99 and ENGR 99 projects. **Describe Plans & Activities Supported (Justification of Need):** Students greatly benefit from research projects in these courses. To provide this opportunity for these students, the faculty time involved needs to be part of load and there are materials needed. **Lead:** Eugene Mahmoud **What would success look like and how would you measure it?:** A budget for projects is created. **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):** 2000 **On-Going Funding Requested (if**	**Reporting Year:** 2018-19 **% Completed:** 25 Robotics certificate program in collaboration electronics and manufacturing CTE programs has not been implemented. This is mostly a lack of bandwidth to work on it. (05/31/2019)

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	applicable): 10000 **In Progress -** Funding and space to support growing student research including MakerSpace facilities **Describe Plans & Activities Supported (Justification of Need):** MakerSpace is used by 1300 members and is used for projects in all ENGR courses. **Lead:** Martin Mason **What would success look like and how would you measure it?:** MakerSpace has guaranteed ongoing funding. **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):** 40000 **On-Going Funding Requested (if applicable):** 50000	**Reporting Year:** 2018-19 **% Completed:** 25 Makerspace has over 1300 members and is used for projects for all Engineering courses. Funding is not assured on an ongoing basis past the end of September 2019. (05/31/2019) **Reporting Year:** 2017-18 **% Completed:** 75 Makerspace opened. Over 700 members including support for numerous research and student projects. (05/10/2018) **Reporting Year:** 2016-17 **% Completed:** 75 applied for maker space grant to support facilities. President Scroggins has pledged F7 building for maker space. (06/16/2017)
	In Progress - Establish complete classroom sets of lab equipment **Lead:** Maria Vaughn **Type of Request:** 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. **Planning Unit Priority:** Medium **One-Time Funding Requested (if applicable):** 50000	**Reporting Year:** 2018-19 **% Completed:** 75 We continue to put together classroom sets of equipment. (05/31/2019) **Reporting Year:** 2016-17 **% Completed:** 75 much progress was made. (06/16/2017)

Unit Goals	*Resources Needed*	*Where We Make an Impact: Closing the Loop on Goals and Plans*
	On-Going Funding Requested (if applicable): 25000 **In Progress -** Implement new set of SLOs for some physics and engineering courses **Lead:** All Faculty **Type of Request:** STAFFING: Requests for permanent employee positions or temporary/hourly employees. **Planning Unit Priority:** Medium	**Reporting Year:** 2016-17 **% Completed:** 25 uniform SLO exam questions were developed for physics 2A only. (06/16/2017)
Calculus based physics tracks - Research the separation of calculus based physics tracks for CSU and UC bound engineering, science majors. **Status:** Active **Goal Year(s):** 2017-18, 2018-19, 2019-20 **Date Goal Entered (Optional):** 06/16/2017	**In Progress -** Work with local CSU and UC transfer programs and align courses to meet expectations **Describe Plans & Activities Supported (Justification of Need):** 1 LHE per semester of faculty time. Continue to meet with CPP ant UCR to develop transfer programs. Utilize Guided Pathways proposals to facilitate this process. **Lead:** Carolyn Robinson **What would success look like and how would you measure it?:** Students transfer and are successful at the transfer institutions. **Type of Request:** STAFFING: Requests for permanent employee positions or temporary/hourly employees. **Planning Unit Priority:** Medium **One-Time Funding Requested (if applicable):** 2800 **On-Going Funding Requested (if applicable):** 5000	**Reporting Year:** 2018-19 **% Completed:** 25 Continued to meet with CPP and UCR to develop transfer programs. This work should expand greatly in 2019-2020 with the funding of our Guided Pathways proposals. (05/31/2019) **Reporting Year:** 2017-18 **% Completed:** 25 Met with CPP and UCR to develop transfer programs. At the earliest stages of discussion. (05/10/2018)
AS Degree in Robotics - Develop a two year CTE degree in robotics that leads students to job placement in the automation field. **Status:** Active	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 25 No additional progress. No SWF funding was provided. (05/31/2019) **Reporting Year:** 2017-18

Unit Goals	*Resources Needed*	*Where We Make an Impact: Closing the Loop on Goals and Plans*
Goal Year(s): 2017-18, 2018-19, 2019-20 **Date Goal Entered (Optional):** 06/16/2017	**Report directly on Goal**	**% Completed:** 50 Applied for SWF to support engineering technology. On hold until campus supports workforce programs in engineering technology. (05/10/2018)
	In Progress - Meet and form industry advisory committee. Work with advisory committee to develop curriculum. Work with industry advisors to obtain support for graduates transitioning into the work force through internship and co-ops. Implement new courses. Recruit and manage robotics cohort. Advertise and market the program. Collect workforce data and shepherd the program through the chancellors office. **Describe Plans & Activities Supported (Justification of Need):** 3.75 LHE / semester full time faculty commitment. According to the curriculum process document for new certificate programs, each certificate needs 0.25 FTF devoted to support it. **Lead:** Martin Mason **What would success look like and how would you measure it?:** Certificates will be developed and offered **Type of Request:** STAFFING: Requests for permanent employee positions or temporary/hourly employees. **Planning Unit Priority:** Medium **One-Time Funding Requested (if applicable):** 5250 **On-Going Funding Requested (if applicable):** 25000	
	Request - Full Funding Requested - Ongoing budget to support the	

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	robotics team **Describe Plans & Activities Supported (Justification of Need):** The robotics team competes in a state wide league and a number of regional competitions. This team is a under a course in the engineering program. The course requires new field elements every year with a cost of $1500, a yearly $500 registration fee plus event competition fees on the order of $1000 **Lead:** Martin Mason **What would success look like and how would you measure it?:** There is funding to support ongoing robotics team activities consist with division average funding for laboratory courses. **Type of Request:** 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. **Planning Unit Priority:** High **Documentation Attached?:** No **On-Going Funding Requested (if applicable):** 3000	
Surveying equipment and supply budgets - Create ongoing surveying equipment and supply budgets **Status:** Active **Goal Year(s):** 2017-18, 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 06/16/2017	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 0 Received one time funds to support purchase of new surveying equipment. Still no budget to support ongoing calibration and repair of equipment. (05/31/2019) **Reporting Year:** 2017-18 **% Completed:** 0 Received one time funds to support purchase of new surveying equipment. Still no budget to support ongoing calibration and repair of equipment. (05/10/2018)

Unit Goals	*Resources Needed*	*Where We Make an Impact: Closing the Loop on Goals and Plans*
	In Progress - Create a budget to support the surveying lecture and laboratory courses. Surveying calibration alone currently accounts for more than the entire available engineering budget. Surveying needs to expand into GIS to support the certificate but there is no funding to support ongoing equipment and supply needs. **Describe Plans & Activities Supported (Justification of Need):** $4000 Surveying labs need to be supported at $800 / section consistent with the division standard. **Lead:** Zahir Khan **What would success look like and how would you measure it?:** Budget is implemented. **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 **On-Going Funding Requested (if applicable):** 4000	
Develop Department Webpage - Develop Department Webpage that represents the department and department program to serve students and the public.	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 0 no progress. Requires time. (05/31/2019) **Reporting Year:** 2017-18 **% Completed:** 0

Unit Goals	*Resources Needed*	*Where We Make an Impact: Closing the Loop on Goals and Plans*
Status: Active **Goal Year(s):** 2017-18, 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 06/16/2017	**Report directly on Goal**	Attended training for websites. Contacted Eric turner. Old website content was not migrated as IT keeps changing the Mt. SAC website. Now lots of broken links and missing images. This task requires significant time on the part of faculty and tech to update. Currently entering "engineering" into the search bar takes students to CTE. (05/10/2018)
	In Progress - Ongoing faculty release time to develop and maintain department web page. **Describe Plans & Activities Supported (Justification of Need):** 2 LHE / Semester faculty time. Develop department web page that contains: Faculty Bios, Course descriptions. Course plans, Certificate maps, Pathways to transfer, contact information, Demonstration examples and links to resources, robotics, rocket and other department team webpages. Pages for Department affiliated clubs including SPS, SWE, SHPE, CORE and SOS. **Lead:** Malcolm Rickard **What would success look like and how would you measure it?:** A web page is created that contains the elements suggested above. **Type of Request:** STAFFING: Requests for permanent employee positions or temporary/hourly employees. **Planning Unit Priority:** Medium **One-Time Funding Requested (if applicable):** 10000 **On-Going Funding Requested (if applicable):** 10000	
Update PIE - Department complete a thoughtful ongoing planning process **Status:** Active	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 25 Little progress. (05/31/2019)

Unit Goals	*Resources Needed*	*Where We Make an Impact: Closing the Loop on Goals and Plans*
Goal Year(s): 2017-18, 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 06/16/2017	**Report directly on Goal**	**Reporting Year:** 2017-18 **% Completed:** 0 Insufficient time between release of PIE forms and due date. This year, the year long ongoing process takes place over 10 days. (05/10/2018)
	In Progress - Faculty release time for training, discussion, and documentation. **Describe Plans & Activities Supported (Justification of Need):** 1.5 LHE / semester of Faculty release time for training, discussion, and continuous thoughtful and ongoing updating of department planning documents. **Lead:** Karen Schnurbusch **What would success look like and how would you measure it?:** Thoughtful planning occurs **Type of Request:** STAFFING: Requests for permanent employee positions or temporary/hourly employees. **Planning Unit Priority:** Medium **One-Time Funding Requested (if applicable):** 5000 **On-Going Funding Requested (if applicable):** 5000	
Integrate Mountie Makerspace into project based curriculum - Integrate making into the engineering curriculum in line with overall goal of moving to a project based curriculum. **Status:** Active **Goal Year(s):** 2017-18, 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 05/10/2018	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 75 More Engineering courses have developed projects that can be completed in the Makerspace. The Makerspace is only funded through the end of September 2019. (05/31/2019)
		Reporting Year: 2017-18 **% Completed:** 25 Mountie makerspace created and grant funded. 3 engineering courses have developed projects that require the makerspace. (05/10/2018)
	Request - Full Funding Requested - Ongoing funding to keep	

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	MakerSpace open. **Describe Plans & Activities Supported (Justification of Need):** Multiple ENGR courses will complete projects in the MakerSpace. This allows students to use the course skills to plan and complete the projects as well as gain hands on skills. **Lead:** Martin Mason **What would success look like and how would you measure it?:** The MakerSpace obtains long term, ongoing funding. **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):** 50000 **On-Going Funding Requested (if applicable):** 50000	
Enhance Physics department supply budget to match section growth. - The department continues to grow and as a result the existing supply and equipment budgets are stretched among more sections. The department continues to add sections and their sustained by one-time money which doesn't address the ongoing costs of running sections. $650 / section has been the historic level of physics section funding. Each	**Report directly on Goal** **Request - Full Funding Requested -** Supply budget to match section growth. At least $650/section of supply budget. **Describe Plans & Activities**	**Reporting Year:** 2018-19 **% Completed:** 50 We have been able to get Lottery Funds to pay for new lab equipment and to support the increasing number of sections. This is not the same thing as having an ongoing budget, but it has been sufficient for our needs at present. (05/31/2019)

Unit Goals	*Resources Needed*	*Where We Make an Impact: Closing the Loop on Goals and Plans*
new section should have an additional $650 to support supplies and equipment. **Status:** Active **Goal Year(s):** 2017-18, 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 05/11/2018	**Supported (Justification of Need):** Fully supplied lab sections will allow students to master the skills associated with each course. **Lead:** Maria Vaughn **What would success look like and how would you measure it?:** Ongoing funding is secured. **Type of Request:** 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. **Planning Unit Priority:** High **On-Going Funding Requested (if applicable):** 20000	
Improved room audio video systems - Some rooms have no sound. Some rooms have constant static coming from speakers. There is an inability to connect faculty speech amplification device to room equipment. Projectors are mounted crooked. Digital projectors are not pointed appropriately at the screen. **Status:** Active **Goal Year(s):** 2017-18, 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 05/11/2018	**Request - Full Funding Requested -** Working amplification systems in classrooms. Projectors that are mounted correctly and pointed at screens. **Describe Plans & Activities Supported (Justification of Need):** The amplification systems in classrooms either don't work or hiss. Faculty who have amplification accommodations and are using rooms that have specific laboratory equipment are unable to use the classroom amplification systems. In addition the department paid for upgraded screen to meet student visibility needs and the projectors were mounted in such way that the screens cannot be used. The projectors need to be moved back and centered on the screens. **Lead:** Zahir Khan	**Reporting Year:** 2018-19 **% Completed:** 0 Not much progress since last year. Projectors use VGA connections, and all of the newer computers have only HDMI video output. Sound systems as sometimes adequate. There continues to be issues with a faculty member's amplification accommodations. (05/31/2019)

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	What would success look like and how would you measure it?: amplification systems work. Projectors point at and fill screens. **Type of Request:** FACILITIES: This section includes minor building improvement projects and alterations to specific rooms or operational areas. **Planning Unit Priority:** Low **Documentation Attached?:** No **One-Time Funding Requested (if applicable):** 15000 **Request - Full Funding Requested -** Sound system and interactive white board in 11-2107. The sound system has not been updates in 10 years and is not fully functional. **Lead:** Zahir Khan **What would success look like and how would you measure it?:** Sound system and interactive white board are installed and fully functioning. **Type of Request:** FACILITIES: This section includes minor building improvement projects and alterations to specific rooms or operational areas. **Planning Unit Priority:** Low **One-Time Funding Requested (if applicable):** 20000	
	Request - Full Funding Requested - Sound system and interactive white board in 11-2101. The sound systems have not been updated in 10 years and are not fully functional. **Lead:** Zahir Khan **What would success look like and how would you measure it?:** Sound system and interactive white board	

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	are installed and fully functional. **Type of Request:** FACILITIES: This section includes minor building improvement projects and alterations to specific rooms or operational areas. **Planning Unit Priority:** Low **One-Time Funding Requested (if applicable):** 20000 **Request - Full Funding Requested -** Upgrade projectors to HDMI in 60-1503, 60-1506, 60-1620, 60-1628, 11-2304, 11-2101, 11-2107. **Describe Plans & Activities Supported (Justification of Need):** Projectors currently used VGA which is no longer accessible on new computers. **Lead:** Sarah Nichols **What would success look like and how would you measure it?:** New projectors are installed and fully functional. **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:** Low **One-Time Funding Requested (if applicable):** 20000	
One time funding for Physics 4C lab equipment - Obtain 2 e/m apparatus. 2 helmholtz coil. 2x photoelectric effect apparatus. 2 franc hertz apparatus. 2 vernier computer based spectrometers. $28000 **Status:** Active	**Request - Full Funding Requested -** $28000 One-time Instructional Equipment funding to purchase appropriate equipment. **Describe Plans & Activities Supported (Justification of Need):** Physics 4C includes Modern Physics.	**Reporting Year:** 2018-19 **% Completed:** 0 No progress. This will need to be requested again through the Instructional Equipment request process. (05/31/2019)

Unit Goals	*Resources Needed*	*Where We Make an Impact: Closing the Loop on Goals and Plans*
Goal Year(s): 2017-18, 2018-19, 2019-20 **Date Goal Entered (Optional):** 05/11/2018	Experiments in Modern Physics require specialized equipment more sophisticated than masses and springs! With this equipment we would be able to do several lab experiments that presently we can only tell students about. **Lead:** Maria Vaughn **What would success look like and how would you measure it?:** Students will carry out experiments in Modern Physics. **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):** 28000	
Complete AAT in physics - Complete the associates degree of transfer in physics **Status:** Active **Goal Year(s):** 2017-18, 2018-19, 2019-20 **Date Goal Entered (Optional):** 05/11/2018	**Report directly on Goal** **Request - No Funding Requested -** Faculty time to get this completed. **Describe Plans & Activities Supported (Justification of Need):** Finish writing the AAT-Physics degree. Shepherd it through the curriculum process **Lead:** Phil Wolf/Martin Mason **What would success look like and how would you measure it?:** AAT	**Reporting Year:** 2018-19 **% Completed:** 25 Some work has been done on the AAT but it has not yet been submitted past level 1 of the curriculum process. (05/31/2019)

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	degree is complete, through curriculum and approved. Students transfer with an AAT-Physics degree. **Type of Request:** STAFFING: Requests for permanent employee positions or temporary/hourly employees. **Planning Unit Priority:** Medium	
Develop flipped classroom and update labs for Physics 2AG - Create video resources to support physics 2AG students that can be used optionally by physics faculty. Update physics 2AG labs to reflect changes in procedure and equipment. **Status:** Active **Goal Year(s):** 2017-18, 2018-19, 2019-20 **Date Goal Entered (Optional):** 05/11/2018	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 0 No new flipped videos for 2AG were developed in the 2018-2019 academic year. One adjunct instructor has been experimenting in two PHYS 2AG sections with a set of labs from Cornell University. We hope to get a report from him on how that went. One task being assigned to our new PHYS faculty member is to look at and get a handle on the department's present approaches to PHYS 2AG lab (presently there are four different approaches various faculty members are taking), to identify best practices and activities, and to make a recommendation going forward in bringing more unity to our PHYS 2AG lab program. (05/31/2019)
	Request - Full Funding Requested - Access to Windows Surface Pro tablet or laptop **Describe Plans & Activities Supported (Justification of Need):** The department has had some success with the flipped format in Physics 4A. One section of PHYS 2AG has used some modified 4A flipped material with some promise. Present flipped materials have been developed on a professor's personal iPad, but many folks on campus who have created some materials for their own flipped classroom has been very satisfied with the simplicity of developing these on a Windows Surface Machine. The	**Reporting Year:** 2018-19 **% Completed:** 25 The campus does not provide Window Surface machines. We have been given permission to purchase a new iPad and Apple Pencil, which has some of the same capabilities but has not yet arrived. (05/31/2019)

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	ability to experiment with such a machine might facilitate a much faster production of flipped videos. PHYS 2AG labs need to be updated to take advantage of newer equipment that was not available when the original lab manuals were written. **Lead:** Phil Wolf **What would success look like and how would you measure it?:** All PHYS 2AG instructors would have access to flipped content to use in their courses. PHYS 2AG lab manuals would explicitly take advantage of newer physics lab apparatus. **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):** 5000 **Request - Full Funding Requested -** Additional class set of rotary motion sensors and two class sets of accessory kits to make them fully useful. **Describe Plans & Activities Supported (Justification of Need):** Our present labs do not make use of these digital rotational motion sensors. Prof Wolf has put together	

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	demonstrations that take advantage of them. Updating the labs and then integrating these sensors into two spatially distinct classroom labs will allow us to run a whole series of rotation labs in all of our PHYS 2AG sections. **Lead:** Phil Wolf/Maria Vaughn **What would success look like and how would you measure it?:** Equipment would be purchased and distributed among the two PHYS 2AG classrooms. Student would be running rotational motion labs using digital equipment tied to computer-based measurement systems. **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):** 4500	
Provide thoughtful and effective mentorship for new full time faculty. **-** The department is adding new faculty who will need acculturation. **Status:** Active **Goal Year(s):** 2017-18, 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 05/11/2018	**Report directly on Goal** **Request - No Funding Requested -** Additional faculty time to work with and mentor the new faculty joining	**Reporting Year:** 2018-19 **% Completed:** 50 Our sample size of one says that they felt sufficiently mentored. We will have two new faculty members in the department for 2019-2020, neither of which has experience teaching here before. We have not developed a formal mentoring process. (05/31/2019)

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	the department. **Lead:** Karen Schnurbusch **Type of Request:** STAFFING: Requests for permanent employee positions or temporary/hourly employees. **Planning Unit Priority:** High	
Update and modify the curriculum for Introductory Physics 1 courses - This course is in need of investment in lab and lecture curricular transformation. The course curriculum is based on projects that are two decades old and is no longer optimally meeting students needs. **Status:** Active **Goal Year(s):** 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 05/11/2018	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 25 Prof. Sarah Nichols has completed one year of full-time teaching with the department and has had the opportunity to teach the PHYS 1 course over the Fall, Winter, and Spring terms. In each semester she has made thoughtful and incremental changes to the course. Based on her experience with the course and in consultation with the department, Prof. Nichols submitted a Course Modification through the campus curriculum process, in part to recognize some needed additions to the course material (in consultation with the programs on campus for which PHYS 1 is a prerequisite for admission), and in part to recognize some different ways that the same material can be approached. In addition, it was concluded that many of the course modifications that we are considering can be accomplished within the existing Course Outline of Record. Prof. Nichols and the department will continue to make changes to the course (consistent with the existing COR) over the next year and in anticipation of EDC approval of the amended COR for Summer 2020. (05/31/2019)
	Request - Full Funding Requested - Faculty time to continue to modify the course. New materials to support the new activities in the modified course. **Describe Plans & Activities Supported (Justification of Need):** A course modification has been submitted to the campus curriculum process. Time and materials will be needed to enact the modification.	

Unit Goals	*Resources Needed*	*Where We Make an Impact: Closing the Loop on Goals and Plans*
	This will create a course that better serves students and is a meets the needs of the other departments on campus. **Lead:** Sarah Nichols **What would success look like and how would you measure it?:** The modified course is successfully implemented. **Type of Request:** 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. **Planning Unit Priority:** High **One-Time Funding Requested (if applicable):** 20000 **On-Going Funding Requested (if applicable):** 3000	
Expand the coverage of course material in SLOs - Continue to develop new SLOs that cover a broader range of course content. **Status:** Active **Goal Year(s):** 2017-18, 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 05/11/2018		
Promote life science course to appropriate audience - Increase enrollment in physics 6A and 6B and ensure that the course is serving the needs of its client population. **Status:** Active **Goal Year(s):** 2017-18, 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 05/11/2018	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 50 Enrollment continues a steady increase each term. (05/31/2019)

Unit Goals	*Resources Needed*	*Where We Make an Impact: Closing the Loop on Goals and Plans*
Paid laboratory activity training for adjunct faculty - Create a paid laboratory activity training for adjunct faculty to allow them to develop laboratory skills and familiarity specific to the particular equipment used in Mt. SAC laboratories. **Status:** Active **Goal Year(s):** 2017-18, 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 05/11/2018	**Request - Full Funding Requested -** Hourly compensation at the non-teaching rate or a stipend for training adjunct instructors how to carry out some of the various labs we teach across the department **Describe Plans & Activities Supported (Justification of Need):** Our department teaches in workshop-style, integrated lecture-lab format that has the potential to strongly leverage the connection between lab activities and the material presented in lecture. While part of a full-time instructors' compensation is for testing and preparing for labs, adjunct instructors are paid only for time in the classroom and not for the time required to master the lab apparatus or to develop a familiarity with equipment that would give them the ability to anticipate and troubleshoot questions that come up in lab. As a result, the students in some adjuncts' courses do not have the same quality of lab experience that occurs in full-time instructors' courses. Funding would provide a stipend for a full-time professor to plan workshops for our adjunct instructors and to do the work to get these workshops approved through POD for staff-development credit; and to compensate adjunct instructors for attending workshops. **Lead:** Phil Wolf/Malcolm Rickard **What would success look like and**	**Reporting Year:** 2018-19 **% Completed:** 0 no progress made. (05/31/2019)

Unit Goals	*Resources Needed*	*Where We Make an Impact: Closing the Loop on Goals and Plans*
	how would you measure it?: Adjunct faculty will attend workshops and be better prepared for labs. Lab equipment would not get burned out or broken as often as presently. Students in adjuncts' course sections will finish with a richer lab experience. **Type of Request:** STAFFING: Requests for permanent employee positions or temporary/hourly employees. **Planning Unit Priority:** Medium **Documentation Attached?:** No **One-Time Funding Requested (if applicable):** 5000 **On-Going Funding Requested (if applicable):** 5000	
Coaching status for Engineering 50A instructor - Engineering 50A is a team course which requires substantial travel, Saturday and late night commitment beyond the standard scheduled course hours. This work is consistent with other teams that receive coaching support. **Status:** Active **Goal Year(s):** 2017-18, 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 05/11/2018	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 0 No progress. Team travel has been funded through Stars of Excellence. But there is no compensation for any of this travel to competitions. (05/31/2019)
	Request - Full Funding Requested - Funding to support team coaching, travel, and competitions. **Lead:** Eugene Mahmoud **Type of Request:** STAFFING: Requests for permanent employee positions or temporary/hourly employees. **Planning Unit Priority:** Medium **On-Going Funding Requested (if applicable):** 20000	
Parity for all engineering labs - Engineering labs require substantial teaching in the laboratory and substantial evaluation of laboratory work consistent with the parity criteria.	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 100 All ENGR labs except ENGR 50A have parity, and it is the view of the department that this is appropriate. (05/31/2019)
	Request - No Funding Requested -	

Unit Goals	*Resources Needed*	*Where We Make an Impact: Closing the Loop on Goals and Plans*
Status: Inactive **Goal Year(s):** 2017-18, 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 05/11/2018	Time. **Describe Plans & Activities Supported (Justification of Need):** Submitting a course for Lab Parity requires time. **Lead:** Martin Mason/Eugene Mahmoud/new Physics instructor **What would success look like and how would you measure it?:** All Engineering Lab Courses would receive parity. **Planning Unit Priority:** High **Documentation Attached?:** No	
Improve Lighting in Classrooms - Many rooms have insufficient lighting to allow student to properly see the board or equipment. **Status:** Active **Goal Year(s):** 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 05/31/2019	**Request - Full Funding Requested -** Additional Lighting in 11-2101. There is insufficient lighting in this room. Students in this room are working with electronics and other small pieces of equipment and need improved lighting to facilitate this work. **Lead:** Martin Mason **What would success look like and how would you measure it?:** Additional lighting would be installed in the room. **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):** 80000	
	Request - Full Funding Requested - Additional Lighting in 11-2107. **Lead:** Zahir Khan **What would success look like and how would you measure it?:**	

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	Additional lighting is installed. **Type of Request:** FACILITIES: This section includes minor building improvement projects and alterations to specific rooms or operational areas. **Planning Unit Priority:** Medium **One-Time Funding Requested (if applicable):** 80000 **Request - Full Funding Requested -** Lighting directly above white board in 60-1620. An additional row of lighting needs to be installed directly above the white board to make it easier for students to read the board. This lighting exists in 11-2304 and this room needs lighting in the same placement. **Lead:** Maria Vaughn **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):** 60000	
	Request - Full Funding Requested - Lighting directly above white board in 60-1628. An additional row of lighting needs to be installed directly above the white board to make it easier for students to read the board. This lighting exists in 11-2304 and this room needs lighting in the same placement. **Lead:** Maria Vaughn **Type of Request:** FACILITIES: This section includes minor building improvement projects and alterations	

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	to specific rooms or operational areas. **Planning Unit Priority:** High **One-Time Funding Requested (if applicable):** 60000 **Request - Full Funding Requested -** Lighting directly above white board in 60-1503. An additional row of lighting needs to be installed directly above the white board to make it easier for students to read the board. This lighting exists in 11-2304 and this room needs lighting in the same placement. **Lead:** Maria Vaughn **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):** 60000	
	Request - Full Funding Requested - Lighting directly above white board in 60-1506. An additional row of lighting needs to be installed directly above the white board to make it easier for students to read the board. This lighting exists in 11-2304 and this room needs lighting in the same placement. **Lead:** Maria Vaughn **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**	

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	applicable): 60000	
Room Remodeling - Rooms in the department need to be remodeled to improve accessibility and functionality of the rooms. **Status:** Active **Goal Year(s):** 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 05/31/2019	**Request - Full Funding Requested -** Room 60-1506 needs to have the orientation shifted by 1/4 turn. This will move cabinets and lab tables so that the whiteboard is along the long side of the room. **Describe Plans & Activities Supported (Justification of Need):** This is needed to facilitate the integrated lecture/lab format that is supported by physics education research. It will also make and work on the board or screen more visible to all students in the room. **Lead:** Maria Vaughn **What would success look like and how would you measure it?:** The room is fully remodeled. **Type of Request:** FACILITIES: This section includes minor building improvement projects and alterations to specific rooms or operational areas. **Planning Unit Priority:** Medium **One-Time Funding Requested (if applicable):** 200000	
	Request - Full Funding Requested - Room 60-1503 needs to have the orientation shifted by 1/4 turn. This will move cabinets and lab tables so that the whiteboard is along the long side of the room. **Describe Plans & Activities Supported (Justification of Need):** This is needed to facilitate the integrated lecture/lab format that is supported by physics education research. It will also make and work	

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	on the board or screen more visible to all students in the room. **Lead:** Maria Vaughn **Type of Request:** FACILITIES: This section includes minor building improvement projects and alterations to specific rooms or operational areas. **Planning Unit Priority:** Medium **One-Time Funding Requested (if applicable):** 200000 **Request - Full Funding Requested -** Raise the ceiling in 11-2107. **Describe Plans & Activities Supported (Justification of Need):** This will allow students throughout the room to see the screen and received full instruction. **Lead:** Zahir Kahn **Type of Request:** FACILITIES: This section includes minor building improvement projects and alterations to specific rooms or operational areas. **Planning Unit Priority:** Low **One-Time Funding Requested (if applicable):** 80000	
Classroom Furniture - Many rooms need new or replacement furniture **Status:** Active **Goal Year(s):** 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 05/31/2019	**Request - Full Funding Requested -** Rolling Whiteboard for 60-1506 to allow effective classroom presentation. **Lead:** Maria Vaughn **Type of Request:** 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. **Planning Unit Priority:** High	

Unit Goals	*Resources Needed*	*Where We Make an Impact: Closing the Loop on Goals and Plans*
	One-Time Funding Requested (if applicable): 500 **Request - Full Funding Requested -** New rolling lab chairs or stools. Approximately 180 chairs need to be replaces at $225 per chair. The current chairs are falling apart and becoming a safety issue. **Lead:** Maria Vaughn **What would success look like and how would you measure it?:** A full set of new chairs are placed in each room. **Type of Request:** 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. **Planning Unit Priority:** High **One-Time Funding Requested (if applicable):** 40500	
Updated Lab Equipment - Specific equipment is needed for Physics and Engineering labs. The appropriate and updated equipment needs to be purchased. **Status:** Active **Goal Year(s):** 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 05/31/2019	**Request - Full Funding Requested -** Pasco function generators. 13 function generators are needed to replace broken and to create a set for a second lab room. **Lead:** Maria Vaughn **What would success look like and how would you measure it?:** Function generators are purchased. **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,	

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
	equal or over $500. **Planning Unit Priority:** Low **One-Time Funding Requested (if applicable):** 12000 **Request - Full Funding Requested -** Ingstrom stress tester. This is needed to test materials in the ENGR 8 materials lab. **Lead:** Eugene Mahmoud **What would success look like and how would you measure it?:** Stress tester is purchased and installed. **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):** 45000	
	Request - Full Funding Requested - Micro Measurements strain gauge. Required for ENGR 8 lab to test materials. **Lead:** Eugene Mahmoud **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**	

Unit Goals	*Resources Needed*	*Where We Make an Impact: Closing the Loop on Goals and Plans*
	applicable): 10000	
Additional Office Space - Additional office space is needed for faculty and technician offices. **Status:** Active **Goal Year(s):** 2018-19, 2019-20, 2020-21 **Date Goal Entered (Optional):** 05/31/2019	**Request - Full Funding Requested -** Additional faculty office space. **Describe Plans & Activities Supported (Justification of Need):** With all offices filled, there is insufficient office space for all full time PENG faculty. **Lead:** Phil Wolf **Type of Request:** FACILITIES: This section includes minor building improvement projects and alterations to specific rooms or operational areas. **Planning Unit Priority:** High	
	Request - Full Funding Requested - Additional technician office space. **Describe Plans & Activities Supported (Justification of Need):** There is only one small technician office space that will be shared by multiple technicians. An additional office is needed. **Lead:** Maria Vaughn **Type of Request:** FACILITIES: This section includes minor building improvement projects and alterations to specific rooms or operational areas. **Planning Unit Priority:** Low	