1. Assessment Plan - Three Column

PIE - Natural Sciences: Makerspace Unit

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
Facilities - Develop an outdoor fabrication area to serve the needs of members and non-credit program participants, providing a working location for equipment (already in MakerSpace possession) which is too large or has ventilation requirements that cannot easily be accommodated inside the MakerSpace. In addition, re-configure the existing layout inside the Space to make equipment usage more effective and to increase the margin of safety. Install outdoor lighting to support outdoor build area. Finally, create outdoor storage for larger-scale materials. Leveraging our existing space more effectively is key to achieving our project goals. We have an opportunity to work with contract education to provide a high-value welding and manufacturing training program, driven by our welding faculty, that will serve as a pipeline for our students into high paying technical jobs. The construction of the outdoor building area is directly tied to one of our core goals of supporting contract education	**Request - Partial Funding Requested -** Outdoor building area ***Describe Plans & Activities Supported (Justification of Need):** The makerspace will collaborate with architecture, engineering and construction engineering technology to design and build an outdoor building area on the west side of building F7. This space will support current makerspace activities, and community ed programs. It will provide a space to locate the 4 donated Industrial lathes to support the contract education water district apprentice program. It will also support the use of the sand blast cabinet, compressor, grinding table, kiln, potters wheel, oven and paint booth, plus other equipment as appropriate. The one-time funds will provide used chain-link fencing material, poles for chain-link fencing, a gate and some more cinder blocks to enable building a wall on one side of the outdoor area. ***Lead:** Mason **What would success look like and**	**Reporting Year:** 2018-19 **% Completed:** 25 The overhead steel structure which will support the roof has been completed. The steel for the actual roof has been purchased. The roofing steel needs to be lifted to the height of the structure and fastened securely. The fasteners have been purchased. The PE to do the work has been hired and will be available in June to do the work. We need to find a source for very inexpensive or free chain-link fencing, poles for that fencing and a gate, plus more cinder blocks and mortar for the side wall (to keep mud from flowing into the work area). The machines and equipment which will be used in the new outdoor build area have been acquired, will need to be moved with a forklift when the structure is completed. They may need some maintenance because they have been stored outside under tarps for up to a year. (06/03/2019)

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
programs. Without this area, Mt. SAC will lose the opportunity to offer this program. **Status:** Active **Goal Year(s):** 2018-19, 2019-20 **Date Goal Entered (Optional):** 05/31/2018	**how would you measure it?:** The outdoor build area would be constructed, members could use the equipment there and programs could schedule activities. In addition, the equipment in the outdoor area will be secure and safe from theft or unauthorized use. **Type of Request:** FACILITIES: This section includes minor building improvement projects and alterations to specific rooms or operational areas. **Planning Unit Priority:** High **Request - No Funding Requested -** Reconfigure the existing makerspace layout. ***Describe Plans & Activities Supported (Justification of Need):** Apply best practices to machine layout, and apply experience of members in makerspace. Further define safe clearance zones around each machine with safety stripes. These activities support safe use of the makerspace facility by current and future users. ***Lead:** Mason **What would success look like and how would you measure it?:** Equipment is more safely and efficiently arranged; the space and safe clearance zones are clearly delineated for each. **Type of Request:** FACILITIES: This section includes minor building improvement projects and alterations to specific rooms or operational areas. **Planning Unit Priority:** High	

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	Request - Partial Funding Requested - Create three-wall (with roof) outdoor material storage area in the eastern area of the makerspace yard, for construction materials to support projects in the space. ***Describe Plans & Activities Supported (Justification of Need):** Current storage space is up a narrow non-ada compliant staircase which is not accessible to students. Creating an outdoor storage structure would provide safe and convenient storage of project materials (including larger items) and allow the indoor space to be used for makerspace activities. ***Lead:** Mason **What would success look like and how would you measure it?:** Construction of an outdoor storage yard in the front (eastern) portion of the makerspace. **Type of Request:** FACILITIES: This section includes minor building improvement projects and alterations to specific rooms or operational areas. **Planning Unit Priority:** Medium **Request - Partial Funding Requested** - Install outdoor lighting for the new outdoor work area (west side of F7) to support making and learning activities there. ***Describe Plans & Activities Supported (Justification of Need):** There will be high utilization of the new outdoor work area in the evening hours, by individuals and by classes. There is very little lighting in this location, which means that	

| | students can choose to operate tools with insufficient light.

Circuits must be connected to unused circuits in one of the electrical panels, probably via a sub-panel located in the outdoor work area. Wires in weatherproof conduits must be run to weather-proof outlets, including at least two 220V outlets and at least eight 110V outlets.
*Lead: Mason
What would success look like and how would you measure it?: Outdoor lighting is installed on the western side of building F7 to provide lighting for the outdoor work area. ?
Type of Request: FACILITIES: This section includes minor building improvement projects and alterations to specific rooms or operational areas.
Planning Unit Priority: High | |
| **Digital Badging -** Create and award digital badges to members. Badges enable recipients to validate experience and can be posted on job-search sites or listed on CVs, helping the recipient to prove qualifications for work, internship or other aspiration.

The creation of digital badges ties directly to our core goal of developing employable skills by providing a clear indicator of student accomplishment using a particular tool or technique.
Status: Active | **Report directly on Goal** | **Reporting Year:** 2018-19
% Completed: 25
We have an account with Badgr, a free online electronic badging company, and have awarded almost 20 badges. With a little graphics design, this is a simple process.

We currently are able to track how many hours each member uses each machine using our unique RFID system, and so far have awarded badges based on either workshop attendance or hours of experience.

However, our corporate and manufacturing contacts tell us that badges awarded for strict number of hours of experience are not preferred, but badges awarded based on assessments of skill and knowledge are preferred. We are |

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
Goal Year(s): 2018-19, 2019-20 **Date Goal Entered (Optional):** 05/31/2018	**Report directly on Goal**	setup to provide the former but until we have more knowledgeable faculty available on a periodic basis (perhaps twice a month) for assessment appointments, we do not have a mechanism for skill/knowledge badges. (06/03/2019)
	Request - Partial Funding Requested **-** Initial purchase of badging equipment is grant funded. However, repairs and supplies will incur some ongoing cost. Both technical, administrative and support staff is needed to oversee the badging program. Initially a half time technician and 1/4 time support person are grant funded to establish the program and start tracking students. These staff resources will be required for it to continue. ***Describe Plans & Activities Supported (Justification of Need):** Badges enable recipients to validate experience and can be posted on job-search sites or listed on CVs, helping the recipient to prove qualifications for work, internship or other aspiration. ***Lead:** Mason / Roslof **What would success look like and how would you measure it?:** Digital badging is implemented on multiple hardware platforms and digital badges are awarded to members. **Type of Request:** STAFFING: Requests for permanent employee positions or temporary/hourly employees. **Planning Unit Priority:** High	
Advisory Committee - Formalize the role of an advisory committee to	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 75

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
support the MakerSpace with input from faculty, staff, administrators, students and the community. The support of an advisory committee ties to all of our core goals by providing regular input from our campus and external mentors, to better facilitate meeting each of our core goals: *Being a hub for project-based learning in instructional programs *Developing employable skills *Enabling collaboration in the creation of tangible things *Support contract ed and non-credit programs *Place to practice technical skills *Raise profile of Mt. SAC in the community *Support entrepreneurship. **Status:** Active **Goal Year(s):** 2018-19, 2019-20 **Date Goal Entered (Optional):** 05/31/2018	**Report directly on Goal** **Request - Partial Funding Requested** **-** Ongoing campus support for meetings between campus faculty, staff, administrators, students, interested community members and employers to support and enhance the community of practice at the makerspace. Develop and market the space to recruit additional support. ***Describe Plans & Activities Supported (Justification of Need):** An advisory committee to support the MakerSpace with input from faculty, staff, administrators, students and the community , including employers	Our original Advisory Team has consisted of Mt. SAC faculty, staff, administrators, industry partners and fellow makerspace organizers. We also have had a student Advisory Team. Both were instrumental in setting up the MakerSpace, reaching out to the initial contacts, getting the "feel" of the place right, setting policies and procedures in place, especially with regards to safety. As time has passed, attendance by each team has shrunk and members appear to have less enthusiasm for the day-to-day questions than they did for the excitement of a new beginning. The MakerSpace Team needs to re-assess the qualities we want for our Advisory Team and actively seek out members who have those qualities and who are interested in supporting day-to-day questions, and who will step up to help us on a regular basis. We plan to work on this and to approach both current Advisory Team members and potential new members in order to fully staff the Advisory Team. The balance between industry, makerspaces, faculty, staff and administrators is critical. It is likely that the student Advisory Team will remain separate. (06/03/2019)

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	***Lead:** Mason / Arthur **What would success look like and how would you measure it?:** An active makerspace advisory committee which meets at least three times per school year. **Type of Request:** OTHER OPERATING EXPENSES AND SERVICES: Requests for contracted, legal/ audit, personal/ consultant, rent/ leases, repairs/ maintenance, and other misc. services. May also include request for travel and conference that does not require the assistance of POD. **Planning Unit Priority:** Medium	
Publicity - Promote the MakerSpace activities including monthly community events, the art show, open houses, competitions and other special events or projects. The MakerSpace has put on over a dozen community events in 2017/18 and over 20 community events in 2018/19, including open houses, meetups, art shows, robot fighting competitions etc which have been attended by students, faculty, staff, administrators and community members. Our community members serve as advocates to raise the profile of Mt. SAC. **Status:** Active **Goal Year(s):** 2018-19, 2019-20 **Date Goal Entered (Optional):** 05/31/2018	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 75 We currently promote our activities through Facebook (most posts reach 300-400 people), Google Business (each month we get over 2000 views), email lists (one for members, one for people interested and one for Advisory Team), plus paper flyers around Mt. SAC campus and placed in local senior centers, local libraries and local coffee houses. We have a strong and recognizable brand, created originally by Mt. SAC Marketing Dept, and have carried that through onto all of the marketing that we do. We are at the point where we need a greater reach, both into the community and into parts of the student, faculty and staff population that we have not yet reached. The Marketing Dept is likely to have resources for both of those reaches, perhaps including local newspapers, local community blogs or web pages, student activities or locations on campus where students are likely to read about our activities. (06/03/2019)
	Request - Partial Funding Requested **-** Work with marketing department	

to develop flyers, banners, signs and graphical assets to support the promotion of the maker space.

*Describe Plans & Activities Supported (Justification of Need): The makerspace works with both the Mt SAC community and the external community to promote collaboration between students, faculty, staff and community members. There are events held at least monthly to recruit new interest in the space, and occasional special events such as the art exhibit.

*Lead: Arthur

What would success look like and how would you measure it?: Promotional materials generated to support recruiting membership to the space.

Type of Request: MARKETING: Requests for services in the areas of graphic design, news, and photography, posting information, communication and social media.

Planning Unit Priority: Medium

Request - No Funding Requested - Work with Marketing, IT and interested people and groups from the Mt. SAC campus and from the community, to reach potential new members with promotional materials. Reach out to employers, members of related groups and encourage existing members to bring friends and other interested people.

*Describe Plans & Activities Supported (Justification of Need): The makerspace works with both the

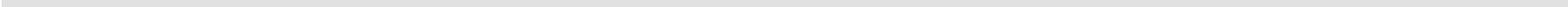| Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	Mt SAC community and the external community to promote collaboration between students, faculty, staff and community members. There are monthly events to recruit new interest in the space, and occasional special events such as the art exhibit. Distribution of marketing and promotional materials via electronic means, including email, social media and blogs, and other means. Also distribution of printed materials, especially at local locations including libraries and senior centers. ***Lead:** Arthur **What would success look like and how would you measure it?:** Promotional materials are distributed to new audiences, producing first-time visits to makerspace, resulting in new members **Type of Request:** MARKETING: Requests for services in the areas of graphic design, news, and photography, posting information, communication and social media. **Planning Unit Priority:** Medium	
Internships - Promote appropriate internships and the establishment of a funded Internship Presentation Day to connect current interns and employers with future interns and employers. Supporting internships fits with our core goal of promoting employability of our students.	**Request - Partial Funding Requested -** Marketing and campus communication. Mt. SAC has a number of resources to support students completing internships. The MakerSpace will help to connect students with existing opportunities and provide a resource for students to develop useful skills for their internship and for future success in	

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
Status: Active **Goal Year(s):** 2018-19, 2019-20 **Date Goal Entered (Optional):** 05/31/2018	their lives. Will encourage non-participating students to find an internship, and will encourage local employers to offer internships to Mt. SAC students. ***Describe Plans & Activities Supported (Justification of Need):** Annual internship support conference to bring together employers, students and internship completes in addition to campus community. ***Lead:** Arthur **What would success look like and how would you measure it?:** Successful internship presentation conference. **Type of Request:** MARKETING: Requests for services in the areas of graphic design, news, and photography, posting information, communication and social media. **Planning Unit Priority:** Medium **Request - Full Funding Requested -** Refreshments for Internship Presentation Day event ***Describe Plans & Activities Supported (Justification of Need):** Refreshments for participants and audience at Internship Participation Day, an annual internship support conference to bring together employers, students and internship completes in addition to campus community. ***Lead:** Arthur **What would success look like and how would you measure it?:** Internship Presentation Day has many happy and gratified participants, both	

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

Mentorship - Promote mentor relationships between experienced and new members, between entrepreneurial experts and makers wanting to sell products or services, and between employers and potential employees or interns.

The MakerSpace has a core goal to enable collaboration in the creation of tangible things, but in the process of working together there are countless side benefits to developing the soft skills that our employers request.
Status: Active
Goal Year(s): 2018-19, 2019-20
Date Goal Entered (Optional): 05/31/2018

Request - No Funding Requested - Use MakerSpace facilities to support collaborative events with Cal Poly Pomona ILab and/or other local universities to bring Mt. SAC, Cal Poly and community members together to support regional entrepreneurial activity.
*Describe Plans & Activities Supported (Justification of Need): Co-host a collaborative event with Ilab in the fall.
*Lead: Arthur
What would success look like and how would you measure it?: Co-host collaborative meeting
Type of Request: OTHER OPERATING EXPENSES AND SERVICES: Requests for contracted, legal/ audit, personal/ consultant, rent/ leases, repairs/ maintenance, and other misc. services. May also include request for travel and conference that does not require the assistance of POD.
Planning Unit Priority: Medium

Curriculum Integration - Continue outreach to faculty through professional development and visits

Report directly on Goal

Reporting Year: 2018-19
% Completed: 50
Over the year-and-a-half the MakerSpace has been open,

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
to department meetings. Publicize successful models. The MakerSpace is the hub for project-based learning in instructional programs. The MakerSpace has already had a transformative effect on curriculum in engineering, engineering technology and architecture and is seeing integration into curriculum in diverse areas such as music, oceanography and industrial design. **Status:** Active **Goal Year(s):** 2018-19, 2019-20 **Date Goal Entered (Optional):** 05/31/2018	**Report directly on Goal**	we have had 147 faculty from nine different divisions spend over 4100 hours in the MakerSpace. 63 classes have visited the MakerSpace, some just touring and some beginning to work on projects at that time. We have held one CPD Day workshop, three FLEX Day workshops and two FLEX Day open houses. We have again applied for a FLEX Day and a CPD workshop for fall 2019. In addition, we held a two-meeting POD session for faculty interested in the MakerSpace in fall 2018. Some faculty members have begun to formally integrate makerspace into their curriculum, but most are including it informally. We are encouraging faculty members and departments to revise their curricula and to submit the changes to the curriculum committee, in order to facilitate hands-on project-based learning for as many students as possible. The MakerSpace Team has traditionally used departmental meetings as a vehicle for encouraging participation, but we may need to expand our reach by presenting at Faculty Senate or other forums where faculty members exchange ideas. We are exploring our options for outreach to faculty. (06/03/2019)
	Request - No Funding Requested - Ongoing professional development presentations at Flex days, for the new faculty seminar and other interested staff and faculty groups. ***Describe Plans & Activities Supported (Justification of Need):** Host makerspace orientations and curriculum workshops as professional development activities to support faculty and staff. ***Lead:** Mason **What would success look like and how would you measure it?:** Multiple professional development activities	

hosted in the Makespace to support faculty use of makerspace resources in their classrooms and staff use to support their areas.

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

Planning Unit Priority: High

One-Time Funding Requested (if applicable): 0

On-Going Funding Requested (if applicable): 0

Request - No Funding Requested - Ongoing visitations to department and division meetings to support faculty curriculum integration into the makerspace.

*Describe Plans & Activities Supported (Justification of Need): Makerspace lead faculty member will visit department meetings across campus to share how the makerspace can be useful to programs.

*Lead: Mason

What would success look like and how would you measure it?: Visits to department meetings increase engagement of campus faculty with the makerspace.

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.

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	Planning Unit Priority: High **One-Time Funding Requested (if applicable):** 0 **On-Going Funding Requested (if applicable):** 0	
Data Collection - Track and analyze the membership usage of the space, detailed information about what tools and equipment is used and by what types of users. Data collection serves to inform all of our goals by providing the critical information about accomplishments at any given time, and how best to move forward to address our core goals. **Status:** Active **Goal Year(s):** 2018-19, 2019-20 **Date Goal Entered (Optional):** 05/31/2018	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 50 We now have extremely detailed tracking of each member's time in the MakerSpace and time spent on each machine, thanks to our unique RFID card reading system, which is installed on many of our machines. Thanks to our robust login/logout system, we also have a detailed profile of which members come in at which times, how often and whether they come in with a club or as an individual. What we would like to gather in addition, is data about the students as far as membership in Equity classes, persistence in their class sequences, how many complete a degree, certificate or transfer etc. That data can only be acquired by way of the Research Dept. We are interested in this data so we can apply for Equity funding when they again are accepting applications, and so that we can contribute to educational research by demonstrating whether there is a relationship between amount of time spent doing hands-on learning and progression/completion. In addition, the data will help us to target future workshops or short-term classes to the needs and wants of our members. (06/03/2019)
	Request - Partial Funding Requested **-** Ongoing IT support to integrate the Mountie MakerSpace data collection with appropriate methods which allow collection of apportionment. ***Describe Plans & Activities**	

Supported (Justification of Need): In order to collect apportionment, data collection for credit and non-credit students working in the makerspace must fit a particular format. The data must be sent to IT at least once per day

*Lead: Mason / Roslof

What would success look like and how would you measure it?: Effective data collection, formatting and delivery to IT which enables collection of apportionment.

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

Request - Full Funding Requested - Ongoing internet backbone services

*Describe Plans & Activities Supported (Justification of Need): Since the MakerSpace relies on both on campus and off campus network infrastructure, reliable internet access is a key component to accurate tracking.

*Lead: Mason / Roslof

What would success look like and how would you measure it?: Continued reliable internet connection

Planning Unit Priority: Medium

One-Time Funding Requested (if applicable): 0

On-Going Funding Requested (if applicable): 0

Request - Full Funding Requested -

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	Information about MakerSpace members who are credit or non-credit students ***Describe Plans & Activities Supported (Justification of Need):** In order to qualify for grants such as Equity funding, Hispanic-Serving Institution funding etc, MakerSpace needs to be able to identify members who meet the standards for those types of funding. In addition, it will be productive and informative to attempt to correlate student success/ persistence with hours spent in the MakerSpace. In both cases, Research staff are the only people who can provide these pieces of data. ***Lead:** Arthur **What would success look like and how would you measure it?:** MakerSpace would have data about its student (credit and non-credit) members, and thus could provide documentation of qualification for Equity, HSI and other funding, and can calculate correlation between student success/ persistence and time spend in the MakerSpace. **Type of Request:** RESEARCH SUPPORT: Evaluating or researching the impact of your educational intervention (cross sectional, cohort tracking). **Planning Unit Priority:** Medium	
Institutionalization - Plan for the MakerSpace and its associated costs to be supported on a continuing basis once grant funding ends in May 2019.	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 50 Although the MakerSpace does not yet have a steady and reliable stream of funding for the future, the MakerSpace

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
With the CCCMaker grant ending in May 2019, it is critical that the MakerSpace find other funding sources in order to continue to serve as a hub for project-based learning on campus. Like the library, the MakerSpace has a broad appeal across the different campus populations. 2017/18 saw more than 600 members join the space and contribute nearly 10,000 hours. 2018/19 saw a total of almost 1000 active members accumulating an additional 20,000 hours. This level of utilization shows that the MakerSpace is an important part of the campus community. As an important resource for students to focus on project-based learning through hands-on experiences, the MakerSpace is unique, valuable and provides services and equipment that are available nowhere else. **Status:** Active **Goal Year(s):** 2018-19, 2019-20 **Date Goal Entered (Optional):** 05/31/2018	**Report directly on Goal**	Team has applied for: * an NSF AISL grant, applications are still being processed, 5 year grant will fully fund the MakerSpace * Strong Workforce through the Engineering Dept, will fund approx 2-3 student workers in the MakerSpace * Associated Students grant for supplies to be provided for student work * Immediate Needs funds, granted for June, August and September 2019, minimal staffing and reduced activities The Team is in-process, working closely with Madelyn Arballo and Tami Pearce from Community Ed and working with Chuong Tran from IT and his team, to setup the framework which will enable the MakerSpace to collect apportionment. Since we had to create a new class for the MakerSpace, and that class has to go through the Curriculum Committee, we do not expect to be able to collect apportionment until January 2020 at the very earliest. We will also apply for: * Equity Money, when the application period re-opens * Regional Strong Workforce, we will attempt to propagate our data collection and RFID system to other community colleges with makerspaces or machine shops. We have already discussed this with many of the other colleges * there is an NSF HSI grant which the Natural Sciences Division is considering applying for; if so we will participate in that application Finally, we are working with the Contract Ed department to get some workshops or short-term classes setup in the MakerSpace, probably for Fall or Winter 2019 (we have no AC so way too hot in the summer) (06/03/2019)
	Request - Full Funding Requested - Full-Time Technician support ***Describe Plans & Activities Supported (Justification of Need):** In order for the MakerSpace to stay open as the grant ends in May 2019,	

the staff who supervise the space need to be funded from some other source. We have identified equity, strong workforce and general campus funds as potential funding sources to support the ongoing mission of the Mountie MakerSpace. The full-time technician will provide about 35 hours of open time in the MakerSpace (one hour of prep or cleanup per day for 5 days) The part-time technician will provide about 15-18 hours of open time in addition, perhaps with some overlap for especially busy times (such as when two classes will be working in the MakerSpace or other special events) Optimally the MakerSpace will be open 50 hours/week including some daytime hours.

Technician will:
*research new equipment and the appropriateness and cost of acquisition
*plan any changes to the layout of the MakerSpace to facilitate safer, easier and more effective use
*do the re-organization
* implement safety procedures and policies, and modify as needed
*plan activities and then manage student workers who clean, install and repair items in the building
*assemble hardware for machines
*manage, maintain and/or build software and database to monitor, measure and record the use of machines with RFID cards
*maintain, adjust and execute a way

for RFID cards to be personalized by staff as needed by members, including a way to label them individually
*implement the database to track machine usage both for MakerSpace records and for badging
*work with Lead Faculty and Director to activate new badges and setup awarding system for members
*update current member database to reflect new requirements for reporting
*repair and maintain existing equipment, provide safety upgrades and write use and maintenance memos
*install and service newly acquired equipment, provide training for staff and write use and maintenance memos
*plan for activities, including monthly meetup activities, cooperative workshops, Regional Meetings, CalPoly iLab workshops, Open House activities, Flex Day and new faculty tour activities, robot fighting competitions,
other activities TBD including class visits
*present information at Steering Committee meetings, other special workshops or meetings including Flex
Day, new Faculty Tour, Regional Meetings and possibly Board meetings (Trustees and/or Foundation) if appropriate
*plan for and implement monthly maintenance for each piece of

equipment, write documentation
and train
staff
*plan for standardized safety tests
for equipment in yellow and red
levels, especially for new equipment;
train rest of staff on how to do
*attend MakerSpace-related
workshop or conference if
appropriate
*Lead: Mason
**What would success look like and
how would you measure it?:** Full
time makerspace technician hired in
summer 2019
Type of Request: STAFFING: Requests
for permanent employee positions or
temporary/hourly employees.
Planning Unit Priority: High
**One-Time Funding Requested (if
applicable):** 0
**On-Going Funding Requested (if
applicable):** 65000
Request - Full Funding Requested -
Half time Technician support
***Describe Plans & Activities
Supported (Justification of Need):** In
order for the MakerSpace to stay
open as the grant ends in May 2019,
the staff who supervise the space
need to be funded from some other
source. We have identified equity,
strong workforce and general
campus funds as potential funding
sources to support the ongoing
mission of the Mountie MakerSpace.
The full-time technician will provide
about 35 hours of open time in the
MakerSpace (one hour of prep or
cleanup per day for 5 days) The part-

time technician will provide about 15-18 hours of open time in addition, perhaps with some overlap for especially busy times (such as when two classes will be working in the MakerSpace or other special events). Optimally the MakerSpace will be open 50 hours/week including some daytime hours.

Technician will:
*research new equipment and the appropriateness and cost of acquisition
*plan any changes to the layout of the MakerSpace to facilitate safer, easier and more effective use
*do the re-organization
* implement safety procedures and policies, and modify as needed
*plan activities and then manage student workers who clean, install and repair items in the building
*assemble hardware for machines
*manage, maintain and/or build software and database to monitor, measure and record the use of machines with RFID cards
*maintain, adjust and execute a way for RFID cards to be personalized by staff as needed by members, including a way to label them individually
*implement the database to track machine usage both for MakerSpace records and for badging
*work with Lead Faculty and Director to activate new badges and setup awarding system for members
*update current member database

	to reflect new requirements for reporting *repair and maintain existing equipment, provide safety upgrades and write use and maintenance memos *install and service newly acquired equipment, provide training for staff and write use and maintenance memos *plan for activities, including monthly meetup activities, cooperative workshops, Regional Meetings, CalPoly iLab workshops, Open House activities, Flex Day and new faculty tour activities, robot fighting competitions, other activities TBD including class visits *present information at Steering Committee meetings, other special workshops or meetings including Flex Day, new Faculty Tour, Regional Meetings and possibly Board meetings (Trustees and/or Foundation) if appropriate *plan for and implement monthly maintenance for each piece of equipment, write documentation and train staff *plan for standardized safety tests for equipment in yellow and red levels, especially for new equipment; train rest of staff on how to do *attend MakerSpace-related workshop or conference if appropriate **Lead:** Mason	

What would success look like and how would you measure it?: Half time makerspace technician hired in June 2019.

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

Planning Unit Priority: High

One-Time Funding Requested (if applicable): 0

On-Going Funding Requested (if applicable): 35000

Request - Full Funding Requested - Supply budget

*Describe Plans & Activities Supported (Justification of Need): The MakerSpace is a high utilization laboratory facility and has ongoing costs associated with keeping the equipment supplied. In order for the MakerSpace to stay open as the grant ends in May 2019, the supply budget needs to be funded from some other source. We have identified equity, strong workforce and general campus funds as potential funding sources to support the ongoing mission of the Mountie MakerSpace.

*Lead: Mason/Wilson

What would success look like and how would you measure it?: Ongoing supply budget established and is able to be spent starting in June 2019.

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): 0
On-Going Funding Requested (if applicable): 10000
Request - Full Funding Requested - Student Workers (1-SW5, 4-SW3)
***Describe Plans & Activities Supported (Justification of Need):** In order for the MakerSpace to stay open as the grant ends in May 2019, the staff that supervises the space needs to be funded from some other source. We have identified equity, strong workforce and general campus funds as potential funding sources to support the ongoing mission of the Mountie MakerSpace.

Under supervision of Technicians and Director, Student Workers:
*assist MakerSpace members with the use of equipment and materials to create items, as needed
*clean MakerSpace and put items away
*maintain and repair the hardware for each machine, including RFID equipment
*provide safety upgrades as needed
*install and service newly acquired equipment, provide training for other staff as appropriate
*write usage memos for members as needed
*assist in any other tasks as requested by any of the other staff
***Lead:** Mason
What would success look like and how would you measure it?: Student

worker budget is established and student workers are able to be paid from it starting in June 2019

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

Planning Unit Priority: High

One-Time Funding Requested (if applicable): 0

On-Going Funding Requested (if applicable): 15000

Request - Full Funding Requested - Repair budget

*Describe Plans & Activities Supported (Justification of Need): The Mountie MakerSpace has a significant investment in equipment that, with the work of the expert technical staff, can function for years to come with a small budget to support the purchase of repair parts. In order for the MakerSpace to stay open as the grant ends in May 2019, the repair parts need to be funded from a non-grant source. We have identified equity, strong workforce and general campus funds as potential funding sources to support the ongoing mission of the campus makerspace.

*Lead: Mason/Wilson

What would success look like and how would you measure it?: Repair budget established to support repairs of equipment, and that budget can be used for repairs in 2019/20

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
On-Going Funding Requested (if applicable): 8000
Request - Full Funding Requested - Director position; at least half-time.
***Describe Plans & Activities Supported (Justification of Need):** Provide overall leadership and direction for the makerspace. Interface with faculty, students, staff, administration, employers, and the community.

*write the year-end narrative report to describe MakerSpace successes. Confirm analysis by Administrative Aide of the fiscal data, and provide to appropriate Office.
*working with Lead Faculty, plan for the achievement of next year goals, ensuring that items and staff necessary for achieving those goals are put into place before fall semester begins. This also includes planning training for any new employees
*arrange, track and modify as needed the schedules of technicians, admin assistant and student workers
*put into place the rubrics and structures necessary to track information that reporting requires
*plan and manage acquisition of equipment, software, guidelines/rules and training necessary to

implement new procedures or
activities, so that all MakerSpace
employees are prepared and
able to help members with issues or
questions and to be sure that
members follow the guidelines
*document the changes,
improvements and additions with
photos, videos and written
descriptions for
inclusion in articles, blog entries and
other PR materials; update current
PR materials
*update regularly the LinkedIn group
for Mountie MakerSpace and
publicize, especially the badging
options
*plan for and help implement the
badges and achievements that our
RFID system will activate, the limits
for each of those and strong
descriptions and graphical
representations of each
*plan for and help implement the
data structure necessary for tracking
machine use by members, both as
far as the limitations and
requirements of our database and
RFID equipment, and the
requirements of the
administering Division/Department
and the badging companies
*assist in the re-organization of and
planning for any future expansion of
the MakerSpace, in light of current
and expected future uses
*publicize the changes in the Space,
expected activities for next year to
students, faculty, staff and
community members in addition to

other community colleges who have MakerSpaces
*plan and implement monthly meetup activities, cooperative workshops, Regional Meetings, CalPoly iLab workshops, Open House activities, Flex Day and new faculty tour activities, robot fighting competitions and/or other activities TBD including class visits
*write a MakerSpace Blog
*continue to update the administrators with information upon request
*plan and implement changes for the MakerSpace sub-web page on mtsac.edu
*assist the Faculty Lead in reaching out to faculty, staff and departments to increase participation at the MakerSpace
*work with the Foundation to continue to facilitate the system which enables purchase of materials by members at the MakerSpace
*work with the Foundation to plan for Alumni Day
*work with the Foundation to involve the Foundation Board in the MakerSpace
*plan for the MakerSpace Team to present progress to the Board of Trustees at a convenient meeting
*work with campus sources to acquire funding for MakerSpace
*present to President about progress of and potential funding needed for MakerSpace
*setup Steering Committee meetings as needed, arrange

| | agendas and food items, invite people and
document attendance
*attend workshops or conferences about MakerSpaces in Education as appropriate
*Lead: Mason
What would success look like and how would you measure it?:
Makerspace leadership is provided for at least 20 hours/week throughout the entire calendar year
Type of Request: STAFFING: Requests for permanent employee positions or temporary/hourly employees.
Planning Unit Priority: High
On-Going Funding Requested (if applicable): 55000
Request - Full Funding Requested - Administrative assistant support for the makerspace
*Describe Plans & Activities Supported (Justification of Need): A part time Administrative Assistant to support the MakerSpace Director and Technicians in compliance with safety regulations, student data tracking and reporting to administrators as required.

*collect and monitor all invoices, packing slips and other ordering information to track expenditures
*collect, analyze, correct and verify timecards, deliver to appropriate Office and then if needed take to Payroll or other Office
*analyze and present data as needed for reports to Deans, Administration, grant managers and BOT | |

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	*at request of Faculty Lead, Director and/or Project Experts, create new documents for management of space, management of grant etc and have printed for use by members or staff and/or placed online *add new members and interested persons to email lists as appropriate, manage those members whose email addresses change, are bad or members wish to change status *assist to train new staff in how to use existing equipment *create signs and instructional sheets for equipment in space *help plan and administer special events, including sign-in sheets, related purchases *track, record and store membership agreements (paper) *track, record and store membership level agreements and proof of testing (paper) *track, record and store data about non-members who spend time in the space at events, workshops etc *manage, update and correct member database *collect data in new ways depending on needs of reporting *equipment database maintenance and support including documenting equipment in our database (donations and purchased), for web page and for RFID/badging project including serial numbers, make and model, tech manuals online etc *create illustrations and text for future website page illustrating equipment available in space	

| | *consult with Director and Project Experts on MakerSpace activities
*assist with monthly meet up activities, cooperative workshops, Regional Meeting, CalPoly iLab workshops, Open Houses, Flex Day and new faculty tour activities, other activities TBD including class visits
*manage RFID fobs or other login devices for members
*Lead: Arthur
What would success look like and how would you measure it?:
Administrative assistant is hired
Type of Request: STAFFING: Requests for permanent employee positions or temporary/hourly employees.
Planning Unit Priority: High
On-Going Funding Requested (if applicable): 22000
Request - Full Funding Requested - Release Time for Faculty Lead
*Describe Plans & Activities Supported (Justification of Need):
Faculty Lead provides general oversight and design of usage of MakerSpace, especially with regard to making most effective for students success.
Also:

*outreach by attending various department meetings throughout the campus Divisions
*encourages faculty to tour the MakerSpace, especially with their classes
*offers assistance to faculty in incorporating making into the curriculum | |

*Designs and implements "Flex Day" development activities each semester, and New Faculty workshops each semester
*supports once-a-month faculty get-togethers to discuss issues and solutions for implementing project-based learning
*invites administrators to visit MakerSpace, to create in the Space, to hold meetings in Space
*keeps Board of Trustees and Foundation informed about activities and details, invites them to the MakerSpace
*work with campus sources to acquire funding for MakerSpace
*present to President about progress of and potential funding needed for MakerSpace
*setup Steering Committee meetings as needed, arrange agendas and food items, invite people and document attendance
*as appropriate and needed, provide outreach via social media

6 LHE per semester plus 3 LHE for summer or winter maintenance/repairs/upgrades. Currently, 6 LHE/semester paid by grant and 3 LHE for summer paid by College.
Below $ amount reflects summer 2019, plus fall and spring 2019/20

Lead: Mason
What would success look like and how would you measure it?: Faculty Lead is able to plan and implement

	MakerSpace activities during two semesters of fiscal year, and is able to plan and guide improvements etc for MakerSpace during summer term **Type of Request:** STAFFING: Requests for permanent employee positions or temporary/hourly employees. **Planning Unit Priority:** High **On-Going Funding Requested (if applicable):** 23857	
Sustainability - Recycle and reuse items from campus and from members, providing materials to make items and preventing those items from entering the landfill. Having sustainable programs on campus helps to both promote collaboration and to show that we are good members of our larger community. **Status:** Active **Goal Year(s):** 2018-19, 2019-20 **Date Goal Entered (Optional):** 05/31/2018	**Report directly on Goal**	**Reporting Year:** 2018-19 **% Completed:** 75 We are currently accepting scrap wood from the theater dept, which enables our members to test cuts, engraving and paint or finish work before doing their final project. We also are accepting pieces of metal, leftover nuts and bolts and other miscellaneous tooling from the IDE department. Members often can explore possibilities using these items. We have several small bins full of extra cloth from a disbanded quilting club that everyone is welcome to use. Finally, we encourage members who bring in materials to leave any excess that they have, so there are often pieces of acrylic and other materials available for use. It would be great to get more materials brought over from other areas, although since there are mice in the area, we do have to be very careful to only accept clean materials (06/03/2019)
	Request - Partial Funding Requested - Drop off area integrated into the makerspace to recycle goods and raw materials from other campus areas. ***Describe Plans & Activities Supported (Justification of Need):**	

Unit Goals	Resources Needed	1. Where We Make an Impact: Closing the Loop on Goals and Resources
	Build on the ongoing relationship with the theater, architecture and welding departments (and others as appropriate) to recycle used material from campus programs into MakerSpace and student projects. Develop a covered drop off and sorting area proximate to the dumpster to allow for processing of donated materials. Develop method for pickup of excess materials as needed. ***Lead:** Arthur **What would success look like and how would you measure it?:** Material sorting area established and appropriate campus personnel notified. **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):** 5000	