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Entry #: 94

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OVERVIEW OF PROGRAM REVIEW AND PLANNING FOR INSTRUCTIONAL PROGRAMS

Program Review and Planning is about evaluating and assessing programs and documenting plans for improving student success rates. Through review of and reflection on key program elements, Program Review and Planning identifies program strengths and strategies necessary to improve the academic discipline, program, and/or services to support student success.

The College also uses Program Review and Planning as the conduit to request resources (human, technology, facilities and funding) to further help improve and support programs.

BASIC PROGRAM INFORMATION

Academic Year
2021-2022

Are you completing a comprehensive or annual PRP?
Comprehensive

Division Name
Career, Technical and Extended Education

Department Name
Design and Manufacturing Technologies

Department Chair Name
Anita Talone

Discipline Name
Industrial Technology (IT)

Department Chair email
atalone@palomar.edu

Please list the names and positions of everyone who helped to complete this document.
Michael Wright - Assistant Professor

Website address for your discipline
https://www2.palomar.edu/pages/dmt/machining-formally-industrial-technology/

Discipline Mission statement
In direct alignment with Palomar College's mission statement, the Machining Technology Department is committed and focused on being the leading provider of education to influence positive change and excellence in the technical, mechanical, electrical, and industrial machining disciplines. We celebrate diversity in cultures, beliefs, abilities, and needs. We foster a culture of integrity, professional practices, ethical behavior, environmental responsibility, and global sustainability. Our instructors will educate, nurture, and inspire our creative-minded drafting and design students immersing them in a culture of professional practices designed to evoke passion and inspiration in the pursuit of their professional goals. Our curriculum is inclusive of individuals pursuing educational enrichment, career and technical training and re-training, certificates of achievement, associate degrees, and transfer-readiness to public schools, private schools, and universities. We equip students with the skills and confidence necessary to become engaging leaders of change in society while living respectfully and responsibly in a global society.

Describe how your mission statement aligns with and contributes to the College's Vision and Mission.
The machining department celebrates the diversity of our students and encourages them to be the best versions of themselves by allowing students to choose projects and assignments that honor their cultures and exposes their differences in a positive way.

(click here for information on how to create a mission statement)

Does your discipline have at least one degree or certificate associated with it?
Yes

Are any of your programs TOP coded as vocational (CTE/CE)?
Yes

List all degrees and certificates offered within this discipline.
Machining Technology - Certificate and AS Degree
Entry Level MasterCAM Programmer - Certificate of Achievement
Quality Control/Inspection Tech - Certificate of Achievement

BASIC PROGRAM NFORMATION: FACULTY AND STAFFING RESOURCES

In this section, you will identify how many faculty and staff support your discipline's programs. This information is considered when you request permanent staff and faculty hires. It is also useful as you evaluate your program and the human resources and talent you have to support our students.

To help you answer questions in this section, you will need the two links below. An arrow will appear in the spreadsheet pointing to the data you will enter.

1) **Permanent Faculty and Staff Count**

2) **FTEF LINK**

How many permanent or full-time faculty support your discipline (program)?
1

For this past fall semester, what was your Full-time FTEF assigned to teach classes?
No Data Available

For this past fall semester, what was your Part-time FTEF assigned to teach classes?
0

List the classified and other permanent staff positions that support this discipline.
Michelle Tucker shared division ADA

List additional hourly staff that support this discipline and/or department
None

PROGRAM INFORMATION

In this section, you are asked to consider and evaluate your programs, including their program learning outcomes, the annual number of completions, goals for completions, and enrollment and efficiency trends.

PROGRAM LEARNING OUTCOMES

Begin this section by reviewing the Program Review reports for programs and courses in Nuventive Improve (TracDat). All active course and program learning outcomes should be systematically assessed over a 3-year cycle. First, look at program learning outcomes.

- **Program** = Leads to a degree or certificate
- **Discipline** = A group of courses within a discipline

*Programs will be able to complete program completion and outcome questions.

How well do your program's learning outcomes communicate the scope and depth of the degree/certificate offered?
Our outcomes were based on advisory committee recommendations, COE, and San Diego Workforce Partnership Labor Market Analysis for Advanced Manufacturing and Machining, along with site visits and interviews from area machining and manufacturing facilities. I feel our outcomes perfectly communicate the scope and depth of the degree

How do they align with employer and transfer expectations?
We are confident that our program learning outcomes are directly aligned with employer expectations. After I remodeled our program, we had an industry partners meeting and presented our new programs. They were all very excited, and the feedback was extremely positive. They did however make several suggestions, which we will be implemented in our next round of revisions.

Describe your program's plan for assessing program learning outcomes.
Students will demonstrate techniques on a per-project basis. As students complete each project they will be given an opportunity to correct any mistakes or missing data.

Summarize the major findings of your program outcomes assessments.
Our program assessments are now relevant and current. They are aligned with our mission statement, our Advisory Committee's recommendations, our industry partners, the Director of Employer Engagement for Advanced Manufacturing, and university-level transfer agreements. We will have a better understanding once we have had a chance to run our entire programs for at least two years.

Depending on the degree or transfer goals of our students, there are three different GE pathways to choose from:

- Associate Degree GE Requirements
- CSU GE Requirements
- IGETC Requirements

Palomar College has identified a set of General Education/Institutional Learning Outcomes (GE/ILOs), which represent the overall set of abilities and qualities a student graduating from Palomar should possess. Click here for a link to Palomar's GE/ILOs.

Next, review your course outcomes as they relate to Palomar's GE/ILOs.

How do the courses in your discipline support GE/ILOs? In your response, please specify which GE/ILO(s) your discipline supports. You should refer to the GE/ILOs your program outcomes are mapped to in Nuventive.
Our Program Level SLO's Support;
ILO 2, Computation: B - Inquiry and analysis
ILO 3, Creative, Critical, and Analytical Thinking: B - Information literacy
GE Foundational Knowledge of Discipline - This is a General Education Outcome.

Summarize the major findings from your course outcomes assessments that are related to the GE/ILOsducation/Institutional Learning Outcomes that your discipline supports. You should refer to the GE/ILOs your course outcomes are mapped to in Nuventive.
The Marching program is new and has yet to see any student awarded certificates as a result no outcomes have been assessed. All the work has been in Nueventive to this. (No Red Flags)

PROGRAM COMPLETIONS

Student success is at the core of what we do in assisting students in achieving their goals.

The Chancellor's Office Vision for Success stresses the importance of Program Completion as a major goal for our students. In addition, transfer and career readiness are key components of Palomar College's mission statement. This year, our funding formula has also changed reflecting this emphasis, providing additional funding as a function of the number of completions.

In this section, you will reflect upon the number of completions students earned for EACH degree/certificate you offer. As required for accreditation, you are also asked to set a standard which represents the lowest acceptable number of completions and a stretch goal for increasing the number of awards.

Link to **Program: Completions**

Copy and paste five years of completion data for each of your discipline's degrees and certificates.
The program is 2 years old. The machining courses were in a drafting certificate which would not reflect any completions. As of Fall 2021, the machining program now has three legitimate certificates/AS degree. Additionally, we have not had the space to run all the courses in the certificates resulting in no completions to date.

Have your program completions Increased, decreased, or stayed the same over the last 5 years?
Stayed the same

What factors have influenced your completion trends?
The inability to run all the courses due to lack of space and the Covid-19 Pandemic has created a delay in student completions and enrollments.

Are the courses in your discipline required for the completion of other degrees/certificates?
Yes

Please list them
MACH-190
MACH-191
MACH-228

Do you have programs with 7 or fewer completions in the last 5 years?
Yes

What steps are you taking to address these completions?
We have increased the size and scope of the program over the last year by adding new equipment and we are currently working on the website and social media platforms to advertise. We also will need a larger space to run all classes and labs.

Our accrediting body, ACCJC, and the Federal Department of Education requires that colleges establish standards and goals for student success and completion.

A program-set standard for completion represents the lowest number of program completion you deem acceptable for your program. In other words, if you were to notice a drop below the set standard, you would seek further information to examine why this occurred and strategies to increase completions.

What is your program standard for program completion?
18

Why did you choose this standard?
Based on 2017-2018 Data which was 86% (Pre-Pandemic information) I can not run a full class due to Covid restrictions at Palomar.

A program stretch goal for completions is the number of completions you aspire to award for each program in your discipline.

To determine your stretch goal, consider the number of annual completions you typically award over time, then consider strategies or efforts you are making to increase completions in your program. Then identify the NUMBER you want to set as your goal.

What is your stretch goal for program completion?
24

How did you decide upon your stretch goal?
I would like to see all students complete, that is the goal

ENROLLMENT AND EFFICIENCY TRENDS

Your courses and offerings represent the path students take to complete their goals. Palomar has a very diverse set of programs and offerings and students have many paths they can take to earn a degree, certificate, or transfer.

In addition to student success and completion, enrollment trends, resources (FTEF), and efficiency metrics like FTES/FTEF are factors reviewed by the college when considering needs for staffing and program support. Evaluating these metrics also helps the College when developing class schedules to meet the needs of students.

Palomar College uses the WSCH/FTEF ratio as one indicator of overall efficiency in addition to the overall fill-rate for courses.

Although the college efficiency goal is 525 WSCH/FTEF and 85% fill-rate (minimal), there are many factors that affect efficiency (i.e. seat count / facilities / accreditation restrictions).

In this section, you will examine your enrollments over time and resources (FTEF) utilized to support or generate those enrollments.

This information can be found by looking at enrollment efficiencies.

Link to Program: Enrollment Trends

Have your enrollment trends increased, decreased, or stayed the same for your discipline over the past five years? (check box)
Decreased

Have your efficiency trends increased, decreased, or stayed the same for your discipline over the past five years? (Check box)
Decreased

Were these trends expected? Please explain.
Yes due to the program being new, and launching in 2019 one semester before the Covid pandemic. As soon as we come back at full capacity we anticipate an increase.

Program Information Summary

In this section you are asked to evaluate your programs by considering their program learning outcome assessments, the annual number of completions, goals for completions, enrollment and efficiency trends and any other internal or external factors that had an impact on your program.

What factors have contributed to the success of your program(s)? Describe how they have contributed.
New equipment has been the biggest factor, we are able to now match the technology used in the industry and students are excited to push the limits of what they can achieve with the new machines.

What factors have presented challenges for your program(s)? Describe the impact of these challenges.
Covid is the obvious one, but also purchasing has been slow due to the pandemic as well which created challenges in getting the new equipment ready for classes. The current space is too small to add the needed equipment for safety and student class sizes.

COURSE INFORMATION

In this section, you will review how students perform in the courses you offer as part of your program. The Chancellor's Office Vision for Success stresses the importance of reducing equity gaps through faster improvements of underrepresented groups.

Data are provided to help you examine differences in course success rates (C or better) across student demographic categories (e.g., gender) and course type (e.g., face-to-face, online).

After you complete your review of course success data, you are asked about the assessment of student learning outcomes at the course level, progress you have made in these assessments, and changes you have implemented as a result/

COURSE SUCCESS AND RETENTION

ACCJC also requires that colleges establish institutional and program level standards and stretch goals for course success rates.

Program-set standards for course success rates represent the lowest success rate deemed acceptable by your discipline. In other words, if you were to notice a drop below the rate, you would seek further information to examine why the drop occurred and strategies to address the rate. The College's institution-set standard for course success rates is 70%

Program-set stretch goals for course success rates represent the success rates you aspire your students to achieve.

Link to Course Information

The data includes overall success (% C or better) and retention rates (% No Ws) . The data tables include course rates by gender, age, ethnicity, special population, location, and modality (You can access the Student Equity Plan on the SSEC website https://www2.palomar.edu/pages/ssec/)

What is your program's standard for Discipline COURSE Success Rate?
75.0%

Why did you choose this standard?
The program is Lab Heavy and students have multiple attempts to complete labs which should allow for better results

Have your overall course success rates increased, decreased, or stayed the same over the last 5 years?
Increased

Was this expected? Please explain.
Yes, new equipment made it easier to complete labs on time

What is your stretch goal for course success rates?
85.0%

How did you decide upon the goal?
I feel with new space and equipment this will be achievable

Have your overall course retention rates increased, decreased, or stayed the same over the last 5 years?
Stayed the same

Was this expected? Please explain.
Yes, the retention of students has not been much of an issue

Are there differences in success or retention rates in the following groups? (choose all that apply)

Are there differences in success/retention between on-campus and online courses?
No

Please share any best practice methods you use for online courses.
There are no online Machining courses at this time

COURSE STUDENT LEARNING OUTCOMES (SLOs)

Summarize the major findings of your course level student learning outcomes assessments.
No assessments have been completed at this time as the program is less than 2 years old

Reflecting on the major findings you summarized, what are some questions you still have about student learning in your courses that you have not yet been able to address with your outcomes assessments?
No assessments have been completed at this time as the program is less than 2 years old

What are some improvements in your courses that have been, or can be, pursued based on the key findings from your course learning outcomes assessments?
No assessments have been completed at this time as the program is less than 2 years old

Excluding courses that haven't been offered in the last three years, confirm that all of your courses have been assessed in the last three years.
No

If you answered no, please explain.
No assessments have been completed at this time as the program is less than 2 years old

PROGRAM CURRICULUM ALIGNMENT, MAPPING, SCHEDULING, & PLANNING

The Chancellor's Office Vision for Success stresses the importance of decreasing the average number of units accumulated by CCC students earning degrees.

Palomar College's Guided Pathways plan includes clarifying paths for students by sequencing course offerings so that they support scaffolding and timely completion. Our goal is to ensure learning through:

- The mapping and assessment of clear program outcomes that are also aligned to employer and/or transfer institution expectations.
- Engaging and applied learning experiences.
- Effective instructional practices to support students in achieving success.

What is your departmental strategy on how you schedule your courses, including the time of day you offer courses? Do you use 4-week, 8-week, or block scheduling (putting required classes near each other) to organize required classes to meet the needs of disproportionately impacted students? Please explain.
The program has yet to run all courses so we are assessing scheduling as we go. Eventually, we would like to offer the classes in the mornings and evenings as well as on weekends to accommodate working students. When the program becomes fully developed and new space is available we will offer our full program days evenings and weekends. Currently, the lab space is too small. I only have a tiny shop and one classroom.

How do you work with other departments that require your course(s) for program completion?
We meet every semester to work out a plan.

Does your discipline offer cross-listed courses?
Yes

How do you work with the other department(s) to ensure consistent curriculum per the COR and minimum qualifications? How do you coordinate course scheduling and SLO assessment?
There are six disciplines in our department. Currently, only two of them (machining and drafting) share students and curriculum it is very easy as we all work together to develop curriculum, COR's, and SLO assessments. We meet and do our schedules together.

Are there curriculum concerns that need to be resolved in your department? What are they?
Yes, there is an issue with Palomar College thinking that IT and Drafting are the same Department. IT only has 2 classes, one is being deactivated and Machining has developed a class to replace the other. We are deactivating all IT certificates as they have never been awarded.

Are there courses that should be added or removed from your program - please explain?
None.
IT-108 will be replaced by MACH-108 once approved.

How is the potential need for program/course deactivation addressed by the department?
We look to see if there have been any completions or a current student trying to earn a certificate. Based on this information we will move forward if only a small number of students trying to complete, and will guide those students to other courses that will better serve them, these classes will be substituted so students can still earn certificates.

Are there areas you would like to expand?
Shop space is currently 1200 square feet and needs to be around 15,000 square feet to run a fully developed Machining Program.

Describe any data and/or information that you have considered as part of the evaluation of your program.
I work closely with Ruishan Chow, Reginal Director of Employer Engagement, who is responsible for keeping us current with industry trends. She works with all community colleges in the region. For the past two years, I have been working closely with her to evaluate the current status of the program and make all the necessary changes to create a current, relevant, and industry-standard program. I am very confident in the information I receive and use to evaluate and improve the machining program.

To answer the next two questions, you will need to review your program maps and program information in the 2021-2022 Catalog.

Is the content in the program mapper accurate?
Yes

Is the content in the catalog accurate?
Yes

Has your department or discipline started having discussions about embedding diversity related issues or content in your curriculum?
Yes

If yes, describe your efforts. If no, what type of training or help do you need to do this work?
I have worked with Hossna Sadat Ahadi at Palomar to Decolonize all my syllabi for all my courses

CAREER AND LABOR MARKET DATA

The Chancellor's Office Vision for Success stresses the importance of increasing the percent of exiting students who report being employed in their field of study. It is important for us to consider how ***all*** of our programs connect to future careers.

Go to this website https://www.onetonline.org/ and enter your discipline in the bubble on the top right for ideas about potential occupations. Click on an example to see more detail.

The following websites are for CTE related data:

- Centers of Excellence (many other data resources besides supply and demand) Password: GetLMI
- LaunchBoard
- LaunchBoard Resource Library
- Chancellor's Office Data Mart
- Career Coach-San Diego Workforce Partnership
- EDD Labor Market Info
- Career One Stop

What kinds of careers are available for people who complete your programs (and/or transfer)? (Refer to link above) Are there any new or emerging careers? If so, how would the new or emerging careers impact your future planning?
Machinist
Machine Operator
CNC Machinist
CNC Programmer
Quality Control Inspector

What are the associated knowledge, skills, abilities (KSA's) needed for the occupations listed above? (click examples in the link above to get ideas)

Design — Knowledge of design techniques, tools, and principles involved in the production of precision technical plans, blueprints, drawings, and models.
Engineering and Technology — Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.
Mechanical — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.
Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
English Language — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.
Physics — Knowledge, and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic, and subatomic structures and processes.
Computers and Electronics — Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.
Production and Processing — Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.
Education and Training — Knowledge of principles and methods for curriculum and training design, teaching and instruction for individuals and groups, and the measurement of training effects.
Customer and Personal Service — Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
Skills:
Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.
Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking
questions as appropriate, and not interrupting at inappropriate times.
Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.
Mathematics — Using mathematics to solve problems.
Reading Comprehension — Understanding written sentences and paragraphs in work related documents.
Complex Problem Solving — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
Speaking — Talking to others to convey information effectively.
Coordination — Adjusting actions in relation to others' actions.
Instructing — Teaching others how to do something.
Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most

appropriate one.
Monitoring — Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
Operations Analysis — Analyzing needs and product requirements to create a design.
Social Perceptiveness — Being aware of others' reactions and understanding why they react as they do.
Writing — Communicating effectively in writing as appropriate for the needs of the audience.
Abilities:
Near Vision — The ability to see details at close range (within a few feet of the observer).
Mathematical Reasoning — The ability to choose the right mathematical methods or formulas to solve a problem.
Visualization — The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.
Fluency of Ideas — The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
Oral Comprehension — The ability to listen to and understand information and ideas presented through spoken words and sentences.
Oral Expression — The ability to communicate information and ideas in speaking so others will understand.
Originality — The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
Selective Attention — The ability to concentrate on a task over a period of time without being distracted.
Speech Clarity — The ability to speak clearly so others can understand you.
Speech Recognition — The ability to identify and understand the speech of another person.

Written Expression — The ability to communicate information and ideas in writing so others will understand.
Deductive Reasoning — The ability to apply general rules to specific problems to produce answers that make sense.
Inductive Reasoning — The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
Problem Sensitivity — The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
Written Comprehension — The ability to read and understand information and ideas presented in writing.
Category Flexibility — The ability to generate or use different sets of rules for combining or grouping things in different ways.
Finger Dexterity — The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.
Flexibility of Closure — The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.
Information Ordering — The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations)
.
Number Facility — The ability to add, subtract, multiply, or divide quickly and correctly.

How does your program help students build these KSA's?
Every one of our classes is inclusive of these KSA's. Our curriculum emphasizes all of these. Our students are with us 6 hours per week per course learning these skills. What we do is hands-on. As instructors, we give them knowledge during the lecture. During this lecture, they are sitting in front of their computers or workbenches doing what we ask them to do on the computer. We can see immediately what is happening. If someone is lost, they don't have to tell us, we can see it. We get them back on track immediately and then proceed with the lesson. Our lab time is spent learning and building these skills over and over until they get it. This builds their ability to perform. Some students have a lot of ability when they start class, most students leave with way more ability than they had come into the class. Our Programs reflect the exact knowledge represented above. Our Advisors let us know what is needed in our classes, what is obsolete, and what is changing. As instructors, we educate ourselves by going to conferences and doing professional development that pertains to our Programs.

Work Based Learning

Applied and work-based learning (WBL) allows students to apply classroom content in professional settings while gaining real-word experience. WBL exists on a continuum that reflects the progress of experiences from awareness-building to training. Students often cycle back through the continuum many times throughout college and throughout their career. Faculty play a critical role in ensuring these experiences are embedded into curriculum and support learning.

Have you incorporated work based learning (work experience, internships, and/or service learning) into your program?
No

Do you want more information about or need assistance integrating work-based learning into your program?
No

How do you engage with the community to keep them apprised of opportunities in your program?
Our primary engagement with the community comes from our Advisory Committee meetings. We have spoken with our Advisors about becoming more engaged with the community. The problem is that we do not have enough time in the week to do everything. Since we changed our AS degrees and certificates, we need new marketing material. We have already found that we need to change some of the things we thought would work, but now know they will not work. We are going to have to make these changes before spending money or printed material. What we are doing is updating our website. We just gave all the new information on our Program to the webmaster. We also built tables of all information laid out by semesters for students to easily access to put on the site. We need new pictures of students with new computers and machinery. One person commented on how old our computers and monitors looked on our website. We have gone to several Career Fairs until Covid hit. We have attended Manufacturing Zoom conferences. We have met with an AutoDesk representative to discuss more exposure for the school. We work closely with Bruce Reaves, who is a Job Developer/Case Manager here at Palomar. We articulate with local High Schools. I will be doing more and I am working on a few other ideas.

What is the regional three-year projected occupational growth for your program(s)?
Between 2018 and 2023, Machining and CNC Occupations are projected to increase by 245 jobs or four percent. Employers in San Diego County will need to hire 769 workers annually to fill new jobs and backfill jobs due to attrition caused by turnover and retirement, for example.
http://www.coeccc.net/Search.aspx?id=2622

What is being done at the program level to assist students with job placement and workforce preparedness?
I stay in contact with many local Machine / Manufacturing shops and always post their employment ads in the classroom, I also work closely with Bruce Reeves with helping students prepare resumes and practice employment interviews.

When was your program's last advisory meeting held? What significant information was learned from that meeting?
The last advisory committee meeting was on 3/25/2021. Advanced manufacturing is a growing industry in our region and people are excited to have a program in north county

What are the San Diego County/Imperial County Job Openings?
Between 2012 and 2019, there was an average of 543 online job postings per year for Machining and CNC Occupations in San Diego County. Each year, 65 percent of these online job postings were for Machinists

Program Goals

In the previous sections, you identified opportunities for improvement. Using these opportunities, develop 3-year SMART goals for your department. Goals should be Specific, Measurable, Attainable, Relevant, Time-Specific. Ensure your goals align with the mission of your department and/or the College's Strategic Plan.

Please list all discipline goals for this three-year planning cycle. Click here for previous PRPs and goal information.

If you require any additional resources beyond your exiting budget, please be sure to request those resources in the next section titled "Resources".

Goals

Goal 1

Brief Description
Offer a full Machining program at Palomar

Is this a new or existing goal?
Existing

Goal Status
Ongoing

How will you complete this goal?
Larger budget and larger space, market, and advertising

Outcome(s) expected (qualitative/quantitative)
More completions, higher enrollment, more community presence.

How does this goal align with your department mission statement, the college strategic plan, and /or Guided Pathways?
Offer a full Machining program at Palomar

Expected Goal Completion Date
5/31/2024

Goal 2

Brief Description
Higher enrollment

Is this a new or existing goal?
New

How will you complete this goal?
More marketing and larger shop space

Outcome(s) expected (qualitative/quantitative)
Higher enrollment and completions.

How does this goal align with your department mission statement, the college strategic plan, and /or Guided Pathways?
This aligns with Palomar's strategic plan of focusing on Career and Technical education to provide students with an education to obtain a career in a Middle-Income wage position

Expected Goal Completion Date
5/31/2024

RESOURCES

Congratulations! You are nearing completion. In this section, you will consider the resources you need to implement your three-year program review plan and/or address any findings from your assessment of your discipline.

The section is organized into the following four parts:

PART 1: Staffing Needs (Faculty and Additional Staff)

PART 2: Budget Review

PART 3: Technology and Facilities Needs

PART 4: One Time Request for Other Needs (NonTechnology Equipment, Supplies, Operating Expenses, Travel)

PART 1: STAFFING NEEDS

Requests for faculty will follow the prioritization process currently in place in IPC, and the IPC SubCommittee. Requests for new staff positions will be prioritized at the division level and reviewed at Exec.

Are you requesting additional full-time faculty?
No

NOTE: If you are requesting full-time faculty, you must go back to the Labor Market section of the form to complete that section. It is required when requesting additional faculty positions.

Are you requesting new Classified, CAST or AA positions?
No

PART 2: BUDGET REVIEW

Review your Budget/Expenditure reports for fiscal year 2019, 2020, 2021. Consider your three-year PRP plan.

Click on the link below to access directions to the *Available Budget Report* to complete this section.

How to Request the Available Budget Report

Reflecting on your three-year PRP plan, are there any budget considerations you would like your dean/supervisor to be aware of for the upcoming year?
Yes

What budget considerations would you like your dean/supervisor to be aware of or to consider? Please be as specific as possible. For example, if you need an increase in the 40000 account and a decrease in the 23000 account, describe what increase your department needs, how much, and a description of why the department needs the adjustment.
The Machining does not have a real budget, I need to meet with Dean to create a realistic budget.

NOTE: PARTS 3, 4 and 5 – TECHNOLOGY, FACILITIES AND OTHER NEEDS

1. One-Time Fund Requests. The college is implementing a process for prioritizing and allocating funds for one-time needs/requests tied to Program Review and Planning. Prioritization will take place through participatory governance in planning councils and the Budget Committee. Then, a recommendation will be made to Exec for funding of request utilizing various funding sources.

   For more information about funding sources available, see IELM BLOCK GRANT, LOTTERY, PERKINS AND STRONG WORKFORCE GUIDELINES.

   Consider submitting one-time requests only if you have verified that you cannot fund the request using your general discretionary funds or other funds.

2. Technology and Facilities Review. From now on, ALL requests for technology will go through an institutional review process. If you request technology here, you will see a description of the process below.

PART 3: TECHNOLOGY AND FACILITIES NEEDS

Will you be requesting any technology (hardware/software) this upcoming year?
Yes

Technology Request

Note about technology requests:

All technology requests will now go through a review process before prioritization.

- *Your dean/director will send you a Technology Request Checklist (aka Technology Proposal Analysis Checklist).*
  - *You must complete this checklist and return it to your dean no later than 11/19/2021.*
  - *Once the dean approves the form and the request, the dean will send the document to the Technology Review Committee to determine IS resources needed, any integration issues, and/or potential overlap with existing technology.*
  - *The results of the review will be sent to the dean and chair with feedback.*
  - *The dean will determine whether or not the request moves forward for prioritization and/or implementation.*
    - *Requests for one-time funding will move forward for prioritization.*
    - *Requests that use funding from your department budget may move forward for purchase.*

Part 4: Facilities Requests

Do you have resource needs that require physical space or modification to physical space?
Yes

Facilities Requests

PART 5: OTHER ONE-TIME NEEDS

For more information about funding sources available, see IELM BLOCK GRANT, LOTTERY, PERKINS AND STRONG WORKFORCE GUIDELINES. Please check with your department chair on the availability for this cycle.

Do you have one-time requests for other items (e.g., Non-Technology Equipment, Supplies, Operating Expenses, Travel) that your budget or other funding sources will NOT cover?
Yes

Requests

Item 1

What are you requesting?
Remodeling of DA Building

Estimated Amount of Request.
$500,000.00

Will you accept partial funding?
No

Budget Category
Non-technology Equipment (acct 600010 and per unit cost is >$500)

What PRP plan goal/objective does this request align with?
All

What Strategic Plan 2022 Goal/Objective does this request align with?
1:4

Provide a detailed description of the item requested. What is it, and why do you need it? Please be as descriptive as possible. Include in your description how the requested item aligns with your discipline's PRP goals, analysis of PRP data, SLO/SAOs.

Note: This request will be in both the Machining Technology's PRP and Drafting Technology's PRB since it will impact both Programs.

Approximately 2 years ago Michael Wright was hired as FT Faculty for the Machining Technology Department. Upon relocating his family to California and starting his first semester at Palomar, it was clear that there was not a true Machining Technology Program at Palomar or a Machine Shop. There were a few classes, some measuring tools, and a two CNC Machines in a very small space attached to a converted trailer. Since he was hired, Mike has worked diligently on creating legitimate machining courses, certificates and degrees. He has acquired over $2 million dollars of equipment for the program and cleared out the mess of a space that was called the Machine Shop. The Program is still in need of additional equipment, but more importantly, there is no space/room to run the classes or to put the new, necessary equipment. Currently Machining Technology, Drafting Technology, Architecture and Interior Design share the three classrooms that comprise the DA building. It is cramped, scheduling is a nightmare and Mike cannot run all the courses in his Program due to lack of proper, safe space. There are over 800 unfilled positions in San Diego County for machinists, and no Community College in North San Diego County has a Program to fill these needs. We now have the curriculum in place. We have most of the necessary equipment. We have an incredibly talented FT Faculty instructor with over 20 years of machining experience. All we need is space to run the program and a whole lot of community awareness/marketing.

A temporary (2-5 year) solution to the problem would be make improvements/remodeling to the DA building. The Architecture and Interior Design Programs are in the process of moving their entire Programs to the Rancho Bernardo campus, and the DA12 space is now available. The Machining Technology Program could run courses in this room, which would result in more student enrollment and certificates/degrees being awarded. Even with the additional classroom, it is still not going to be anywhere near enough space for a full Machining Program to run in order to fill labor needs in San Diego County, but it will allow the Machining Technology Program to build enrollment and increase degrees awarded. The remodel will be a temporary solution until an industry standard facility for Advanced Manufacturing can be built. Additionally, the Drafting Technology Program could also run some of their classes in this room. The space is not usable the way it is now. When Architecture and Interior Design move out, the room will not have any furnishing, accessibility or usable space necessary to run Machining classes due to very specific needs that have to do with the nature of the class and safety. Here are some of the needs for improvements/remodel:

Removal of unneeded existing furnishings and items left behind
Demolition of some existing interior walls
Possible exterior/interior wall modification
Slab location/possible concrete pillars poured
Pathways/Doors/Access
Electrical/Wiring/Outlets
Additional Electrical Panel
Drywall/Paint/Trim
Flooring, or possible patching
Lighting/Windows
Cabinetry/Hardware/Locks
Supply/Storage Cabinets
Appropriate Countertops for Mounting Equipment
Floor Mats
Magnetic White Boards
Desks/Computers/Chairs/Printer(s)

Additionally, the Machining Technology Department will need student workers for the shop for safety reasons, several Adjunct Instructors and eventually another FT Faculty.

The SLOs that this request align with are:

Equipment Operation
Perform set-up and operations on CNC Equipment such as CNC Mill, CNC Lathe, 5-Axis CNC Mill.

Operate MasterCAM Software
Draw, Import, and manipulate CAD files and wire-frame using MasterCAM

Programming Skills
Import CAD Files, create geometry, and manipulate WCS Planes using MasterCAM.

Create Programs
Create programs using MasterCAM to run in CNC Equipment such as CNC Mill, CNC Lathe, 5-Axis CNC Mill

Create Tool Paths
Create tool paths and post G-Code files for CNC Machines.

Interpret Industrial Blueprints
Read and interpret industrial blueprints

Use of measuring tools
Upon completion students will be able to properly use and care for measuring tools

Inspection Skills
Upon completion students will have the basic skills needed to use CMM, Faro Arm, and Optical Comparator to measure and inspect manufactured parts and goods

Please upload a copy of the quote, if available.

I confirm that all full-time faculty in this discipline have reviewed the PRP. The form is complete and ready to be submitted.
Yes

Enter your email address to receive a copy of the PRP to keep for your records.
mwright1@palomar.edu