



Program Review & Planning (PRP)

PART 1: BASIC PROGRAM INFORMATION

Program Review is a self-study of your discipline. It is about documenting the plans you have for improving student success in your program and sharing that information with the college community. Through the review of and reflection on key program elements, program review and planning identifies program strengths as well as strategies necessary to improve the academic discipline, program, or service to support student success. With that in mind, please answer the following questions:

Discipline Name:	Industrial Technology
Department Name:	Design and Manufacturing Technologies
Division Name:	CTEE

Please list all participants in this Program Review:

Name	Position
Dennis Lutz	Department Chairperson

Number of Full Time faculty	0	Number of Part Time Faculty	2
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Please list the Classified positions (and their FTE) that support this discipline:

1 full time ADA for the Design and Manufacturing Department shared with all disciplines

What additional hourly staff support this discipline and/or department:

None

Discipline mission statement ([click here for information on how to create a mission statement](#)):

The Industrial Technology program focuses on fostering a learning environment for the preparation of men and women who desire to enter the manufacturing industry as a qualified design technician. The program provides students with the knowledge and skills using state-of-the-art software (AutoCAD, SolidWORKS and MasterCAM) along with operating CNC machinery (Mills and Lathes) to gain employment in many of the manufacturing fields.

List all degrees and certificates (e.g., AA, AT, Certificates) offered within this discipline:

CAD/CAM Design and Manufacturing (Just approved by the state this past summer)

PART 2: Program Assessment

The first step in completing your self-study is to examine and assess your discipline/program. To accomplish this step, complete the Following Sections:

- Section 1: Program Data and Enrollment
- Section 2: Course Success Rates
- Section 3: Institution and Program Set Course Success Rate Standards
- Section 4: Completions
- Section 5: Labor Market Information (CTE programs only)
- Section 6: Additional Qualitative Information
- Section 7: Curriculum, Scheduling, and Student Learning Outcomes

SECTION 1: PROGRAM DATA & ENROLLMENT

Click on the following link to examine enrollment, efficiency, and instructional FTEF trends for your discipline. Log-in using your network username and password.

<https://sharepoint2.palomar.edu/sites/IRPA/SitePages/Productivity%20Metric%20Summary.aspx>

- A. To access your discipline data, select your discipline from the drop down menu.
- B. To access course level data (e.g., COMM 100 or BIOL 100) use the drop down menus to select “discipline” and “catalog number”.

Use the data to answer the following questions.

1. Discipline Enrollment

Discipline Enrollment (over last 5 years)	Increased	X	Steady/No Change		Decreased	
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Reflect on your enrollment trends over the past five years. Was the trend expected? What factors have influenced enrollment?

There are only two classes offered in this program:

1. IT-108 is an on-line technical math class that is dual listed and paid for by welding. There are two classes every semester that are full, but they do not show up in the summary.
2. IT-191 is the only class that shows up, and was offered for the first time this semester. At Census we filled 42 seats out of 44, and our load was at 95.5%.

2. Course-Level Enrollment and Fill Rates

If there are particular courses that are not getting sufficient enrollment, are regularly cancelled due to low enrollment, or are not scheduled, discuss how your discipline is addressing this. For example, are there courses that should be deactivated?

This is a brand new program that just started so the enrollment numbers will reflect this. I have an advanced class (IT-191) scheduled for this spring. I don't think it will fill. It usually takes two beginning classes to make one advanced class fill. We will see.

3. WSCH/FTEF

Although the college efficiency goal is 525 WSCH/FTEF or 35 FTES/FTEF, there are many factors that affect efficiency (i.e. seat count / facilities / accreditation restrictions).

Discipline Efficiency Trend	Increased		Steady/No Change		Decreased	
Discipline Efficiency:	Above 525 (35 FTES/FTEF)	327	At 525 (35 FTES/FTEF)		Below 525 (35 FTES/FTEF)	

Reflect on your enrollment trends over the past five years. Was the trend expected? What factors have influenced enrollment?

If we get the marketing we need, we will grow this program. I will have machined parts entered in the San Diego County Fair to showcase what our students have designed and manufactured. The LMI for machinists is very strong as the manufacturing sector is on the increase with regards to job opportunities for machinists.

4. Instructional FTEF:

Reflect on FTEF (Full-time, Part-time, and Overload) over the past 5 years. Discuss any noted challenges related to instructional staff resources.

This class will be taught by a full-time instructor on an overload basis.

SECTION 2: COURSE SUCCESS RATES

Click on the following link to review the course success rates (% A, B, C, or Credit) for your discipline. Examine the following course success rates.

- A. On-Campus Course Success Rates
- B. Online Course Success Rates
- C. Course Success Rates by gender, age, ethnicity, and special population (use the filter buttons at the top of the worksheet to disaggregate success rates by demographic variables)
- D. Course Success Rates by class location (Escondido, CPPEN, etc.)

<https://sharepoint2.palomar.edu/sites/IRPA/SitePages/Success%20and%20Retention.aspx>

1. Overall Success Rate:

Reflect on your discipline’s on-campus, online, and by location (ESC, CPPN, etc.) course success rates over the past five years. Compare your success rates to the overall college success rates. Are the rates where you would expect them to be? Have there been changes over time?

Almost everybody in the class is engaged and motivated to learn the software and manufacture their projects. I have two young students that show up late and leave early and don’t do anything. They will not be passing. If you do the math this is about a 95 % success rate.

2. Course Success Rates by gender, age, ethnicity, and special population:

Reflect on your discipline’s success rates by the given demographic variables (gender, age, ethnicity, special population). Are there large differences between groups? If so, why do you think this is happening and what might you consider in the future to address the needs of these groups?

Note: Institutionally, the College has a goal to close the performance gap of disproportionately impacted students, including African-American, Hispanic/Latino, veterans, foster youth, and students with disabilities. You can access the Student Equity Plan on the SSEC website <https://www2.palomar.edu/pages/ssec/>

Gender	Mostly male, all but two are passing. Two women are doing very well.
Age	20 years to 63 years old
Ethnicity	Mostly white/caucasian
Special Population (examples- veteran, foster youth, etc)	Some veteran students and two degreed engineers that are retraining.

3. Disaggregated Course Success Rates (Select at least two other variables):

Disciplines/programs find it useful to examine course success rates by other types of variables (e.g., time of day, level of course (basic skills, AA, Transfer). Examine course success rates disaggregated by at least two other variables and reflect on your findings.

For the first class, I couldn't be happier with the success rate. I would have liked to have observed a little more motivation on the two students that are not passing, but that is their choice.

SECTION 3: INSTITUTION AND PROGRAM SET COURSE SUCCESS RATE STANDARDS

ACCJC requires that colleges establish institutional and program level standards in the area of course success rates. These standards represent the lowest success rate (% A, B, C, or Credit) deemed acceptable by the College. 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.

Discipline Level Course Success Rate:

- A. The College's institutional standard for course success rate is 70%.
- B. Review your discipline's course success rates over the past five years.
- C. Identify the minimum acceptable course success rate for your discipline. When setting this rate, consider the level of curriculum (e.g., basic skills, AA, Transfer) and other factors that influence success rates within your area. If you set your discipline standard below the College's standard, please explain why.

Standard for Discipline Course Success Rate:	70%
Why?	The success rate is well above the school average. We have more to offer than the standard GE classes by offering high paying entry level jobs.

SECTION 4: COMPLETIONS

Click on the following link to review the completions for your discipline.
<https://sharepoint2.palomar.edu/sites/IRPA/SitePages/Degrees%20and%20Certifications.aspx>

- A. To access your discipline data, go to the "Awards" tab at the bottom of the page and click on your discipline.
- B. To access your program level completions, click on the tab titled "Awards by Academic Plan" at the bottom of the page and then click on your discipline.

1. Overall Completions:

Reflect on your discipline’s overall completions over the past five years. Are the completions where you would expect or want them to be? What is influencing the number of completions?

See above, we only have one class to compare.

2. Specific Degree/Certificate Completions:

Do you have degrees or certificates with few or no completions? If so, what factors influence completions within specific programs? If you have degrees/certificates with few completions, are they still viable? What can be done to help students complete programs within your discipline?

New program so this is not applicable at this time.

SECTION 5: LABOR MARKET INFORMATION (CTE PROGRAMS ONLY)

If you have CTE programs in your discipline, refer to the following link to obtain relevant labor market data. This data can be found on the Centers for Excellence website at <http://www.coecc.net/Supply-and-Demand.aspx>

Example of Labor Market Information:

SOC	Description	Counties	2014 Occupations	2017 Occupations	Change	% Change	Openings	Annual Openings	10% Hourly Earnings	Med Hourly Earnings	Entry Level Education (Typical)
13-2011	Accountants and Auditors	Imperial	341	361	20	5.8%	57	19	\$17.70	\$26.09	Bachelor's degree
13-2011	Accountants and Auditors	San Diego	12,554	13,735	1,181	9.4%	2,388	796	\$20.88	\$32.92	Bachelor's degree

1. What is the regional three-year projected occupational growth for your program(s)?

The Adult Education in North County paid to have a study of employers and what they needed students to know for employment. The top items students needed to know were SolidWORKS and MasterCAM and to be able to setup and run CNC machines. This certificate is designed to do just that. The LMI report backs this recommendation, there are huge opportunities for CNC machinist and more importantly programmers that can read blueprints and program tool paths. The industry today requires drafters and machinist to interface with each other to do the programming. Drafters and machinist are not trained in CNC manufacturing, and this certificate accomplishes this. The LMI Report for the areas we are directing this certificate is as follows :

- 51-4011 Computer-Controlled Machine Tool Operators, Metal and Plastic
- 51-4012 Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic
- 51-4041 Machinists

The LMI totals for these areas are 218 annual openings and a 4.1% increase, with an average wage of \$24.57/hour.

2. What is being done at the program-level to assist students with job placement and workforce preparedness?

For drafting, industry calls me for recommendations and I send out the best students for interviews. I am happy to say, my students get the jobs over other college students. I see the same thing happening with this program. Once the word gets out, I will start getting calls for entry level machine programmers.

3. If your program has other program-level outcomes assessments (beyond SLOs and labor market data), including any external mandated regulatory items, discuss how that information has been used to make program changes and/or improvements.

No

4. When was your program’s last advisory meeting held? What significant information was learned from that meeting? (CTE programs are required by Title 5 to conduct a minimum of 1 advisory meeting each year)

Last year, we had a joint advisory meeting with drafting. This program was designed through the recommendations of the drafting advisory board.

SECTION 6: ADDITIONAL QUALITATIVE INFORMATION

Not all information important to reviewing your program is quantitative or included in the section above.

Describe other data and/or information that you have considered as part of the assessment of your program. (Examples of other data and factors include, but are not limited to: external accreditation requirements, State and Federal legislation, four-year institution directions, technology, equipment, budget, professional development opportunities).

N/A

SECTION 7: CURRICULUM, SCHEDULING, AND STUDENT LEARNING OUTCOMES

1. SLO Assessment Results:

How have SLO assessment results impacted your planning over the last three years? Consider curriculum, teaching methodology, scheduling, department discussion (FT & PT faculty included) resources, etc. Refer to the SLO/PRP report – <https://outcomes.palomar.edu:8443/tracdat/>

SLO’s are up-to-date. Too early to make any recommendations as this program has just started.

2. SLO Assessment Methods:

How effective are your current methods/procedures for assessing course and program student learning outcomes? What is working well and how do you know? What needs improvement and why? Refer to the SLO/PRP report – <https://outcomes.palomar.edu:8443/tracdat/>

Assessments are Project based. Machined parts are measured and checked to verify dimensions and to check to see if they meet the specified tolerances. They either pass or not pass just as industry would evaluate.

3. Program SLOs:

How do your program SLOs represent the scope and depth of learning appropriate to the degree/certificate programs offered? What needs improvement and why? Refer to the SLO/PRP report – <https://outcomes.palomar.edu:8443/tracdat/>

Our SLOs are designed as skill-based projects that are evaluated similar to industry requirements.

4. Curriculum overview:

Does your program offer sufficient opportunities for students to learn current disciplinary and professional knowledge, skills, competencies, etc. for the type and level of degree/certificate offered? Discuss how your course/program reviews, since the last PRP, have changed and/or impacted your program. How is the potential need for program/course deactivation addressed by the department?

This curriculum was approved by the advisory committee and infuses industry standards through the coursework.

5. Curriculum scheduling:

Describe how you schedule your courses to include a discussion on scaffolding (how all parts build on each other in a progressive, intentional way), and scheduling of courses so students can follow the best sequence. Address how enrollment issues impact scheduling and student completion/achievement.

This is a daytime class. Like all of our programs in the DA building there is no room in the evening, all three rooms are full with anything we offer in the evening. I know if we offered this in the evening it would fill. We just need the lab space.

6. Curriculum communication:

How does regular communication with other departments that require your courses in their programs occur – scheduling, review scheduling conflicts/overlaps for courses within same program, etc.?

The beginning IT-190 class is dual listed with Drafting, Engineering and Welding. This class teaches how to use 2-dimensional designs to program, set-up and manufacture items using the waterjet, plasma cutter, mill and lathe.

PART 3: Program Evaluation and Planning

Program Evaluation and Planning is completed in two steps.

Section 1: Overall Evaluation of Program

Using the results of your completed assessment (See Sections 1-6 above), identify the strengths and areas for improvement within your program. Also consider the areas of opportunities and any external challenges your program faces over the next three years. Summarize the results of your assessment in the Grid below.

Section 2: Establish Goals and Strategies for the Next Three Years

Once you have completed your overall evaluation, identify a set of goals and strategies for accomplishing your goals for this upcoming three year planning cycle. Use the template in Section 2 below to document your goals, strategies, and timelines for completion.

SECTION 1: OVERALL EVALUATION OF PROGRAM

1. Discuss your discipline’s strengths, weaknesses, opportunities and threats in regards to curriculum, assessment, enrollment, success rates, program completion, etc. For helpful suggestions on how to complete this section, go to <http://www2.palomar.edu/pages/irp/files/2017/02/Helpful-Tips-for-Completing-a-SWOT.pdf>

Strengths:	Up-to-date software to meet industry standards Industry standard CNC machines
Weaknesses:	Not enough room in DA-1 Some of the machines are located in welding
Opportunities:	Great employment and advancement
Threats:	Current faculty teaching this will be retiring and there is no one scheduled to champion the program.

SECTION 2: Establish Goals and Strategies for the Next Three Years

COMPREHENSIVE PROGRAM REVIEW AND PLANNING

1. Progress on Previous Year's Goals: Please list discipline goals from the previous year's reviews and provide an update by placing an "X" the appropriate status box .

Goal	Completed	Ongoing	No longer a goal
Training		Yes	
Certificate Development	Yes		

2. New Discipline Goals: Please list all discipline goals for this three-year planning cycle (including those continued from previous planning cycle):

Goal #1	
Program or discipline goal	Keep Software updated
Strategies for implementation	Have a budget line for software
Timeline for implementation	Every year
Outcome(s) expected (qualitative/quantitative)	Industry standard
Goal #2	
Program or discipline goal	Machine maintenance
Strategies for implementation	Have a budget line for maintenance
Timeline for implementation	Every year
Outcome(s) expected (qualitative/quantitative)	Operational
Goal #3	
Program or discipline goal	Larger machine lab with a computer lab
Strategies for implementation	This should be with Prop M when drafting is moved from DA building
Timeline for implementation	5 years
Outcome(s) expected (qualitative/quantitative)	Everything under one roof
Goal #4	
Program or discipline goal	Marketing and Outreach material development to promote program.
Strategies for implementation	Use SW funding to develop materials and then create a plan for marketing to high schools, military personnel, and industry partners.
Timeline for implementation	Spring 2018 and fall 2019.
Outcome(s) expected (qualitative/quantitative)	Increased enrollment in courses/program.
Goal #5	
Program or discipline goal	

COMPREHENSIVE PROGRAM REVIEW AND PLANNING

Strategies for implementation	
Timeline for implementation	
Outcome(s) expected (qualitative/quantitative)	

3. How do your goals align with your discipline's mission statement?
Better training to job placement

4. How do your goals align with the College's Strategic Plan Goals?
Employment of students

PART 4: FEEDBACK AND FOLLOW-UP

This section is for providing feedback.

Confirmation of Completion by Department Chair	
Department Chair	Dennis Lutz
Date	November 29, 2017

***Please email your Dean to inform them that the PRP has been completed and is ready for their review**

Reviewed by Dean	
Reviewer(s)	Margie Fritch
Date	November 29, 2017

1. Strengths and successes of the discipline as evidenced by the data and analysis:

New program but the strength is the instructor's knowledge and skills and the industry partners that helped create this program based on labor market needs. The equipment is state-of-the-art.

2. Areas of Concern, if any:

Lead faculty will be retiring in the near future and we need to have a faculty champion in order to make this program successful.

3. Recommendations for improvement:

Identify an adjunct that can take ownership of this program and offer NOHE for work that needs to be done to make program successful.

***Please email your VP to inform them that the PRP has been completed and is ready for their review**

COMPREHENSIVE PROGRAM REVIEW AND PLANNING

Reviewed by: Instructional Planning Council PRP Sub-Committee	
Reviewer(s)	
Date	
1. Strengths and successes of the discipline as evidenced by the data and analysis:	
2. Areas of Concern, if any:	
3. Recommendations for improvement:	
4. Recommended Next Steps:	
X	Proceed as Planned on Program Review Schedule
	Repeat Comprehensive Review

Reviewed by: Vice President	
Reviewer(s)	Jack S. Kahn Ph.D.
Date	1/14/18
1. Strengths and successes of the discipline as evidenced by the data and analysis:	
<ol style="list-style-type: none"> 1. Enrollment data makes sense 2. I assume you are adding data because the program is too new and we don't have institutional data yet? 3. Goals make sense given the small program etc. 	
2. Areas of Concern, if any:	
3. Recommendations for improvement:	
4. Recommended Next Steps:	
X	Proceed as Planned on Program Review Schedule
	Repeat Comprehensive Review

Upon completion of PART 4, the Program Review document should be returned to discipline faculty/staff for review, then submitted to the Office of Instruction and Institutional Research and Planning for public posting. Please refer to the Program Review timeline.