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OVERVIEW OF PROGRAM REVIEW AND PLANNING FOR INSTRUCTIONAL PROGRAMS

Program Review is about documenting the plans you have for improving student success in your program and sharing that information with the 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 our new Guided Pathways plan, this review becomes even more crucial for the success of our students and college.

We are using the Strengths, Opportunities, Aspirations, Results (SOAR) strategic planning technique to help us focus on our current strengths and opportunities, create a vision of future aspirations, and consider the results of this approach.

BASIC PROGRAM INFORMATION

Academic Year

2020-2021

Are you completing a comprehensive or annual PRP?

Comprehensive

Department Name

Computer Science and Information Systems

Discipline Name

Computer Science and Information Systems - Networking (CSNT)

Department Chair Name

Anthony Smith

Division Name

Mathematics, Science and Engineering

Website address for your discipline<https://www.palomar.edu/csit>**Discipline Mission statement**

The mission of the Computer Network Administration discipline at Palomar College is to offer our students current and valid training and certification preparation for both transfer and direct employment in the industry of Computer Network Administration. Studies in Computer Network Administration lead towards multiple Associate of Science degrees and preparation for multiple industry certifications from the most accepted and current certification vendors. As a strong CTE program, students will train to be well-rounded professionals in the field and will be prepared to enter a rapidly growing industry.

(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.

A.S. Cybersecurity
A.S. Computer Network Administration - Cisco
A.S. Computer Network Administration - Microsoft
A.S. Computer Network Administration - Linux
C.A. Computer Network Administration - Cisco
C.A. Computer Network Administration - Microsoft
C.A. Computer Network Administration - Linux

Please list the names and positions of everyone who helped to complete this document.

David Meske, Assistant Professor
Nicholas Rand Green, Professor
Aaron Hudson, CSIT Systems Analyst

Use the link to provided to help answer the staffing questions below. This form requires a login and password to access.
Please use your Palomar email and password to log in.

Link: [Permanent Employees Staff Count](#)

Full-time Faculty (total number of FT faculty in your discipline)

2

Full-time Faculty (FTEF)

2

Part-time faculty (FTEF)

3

Classified and other permanent staff positions that support this discipline

Systems Analyst for the CSIT Department 30%
Department ADA 30%

Additional hourly staff that support this discipline and/or department

5 - 10 hours of hourly tutoring when available

PROGRAM INFORMATION

In this section you are asked to consider your programs, their 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 program's learning outcomes communicate a comprehensive scope of learning outcomes students expect to be able to communicate, analyze, and/or demonstrate upon completing individual courses and their respective academic programs. These learning outcomes are associated with major industry learning standards and industry certificates. Since we map our courses to these industry certifications, students can associate the course and program learning objectives to common industry certifications that are generally recognized by those pursuing information technology careers.

How do they align with employer and transfer expectations?

The CSIT Networking discipline learning outcomes map directly to industry learning objectives necessary for equivalent industry certifications. By doing this Palomar College is aligning program learning outcomes with the expectations of employers, leading industry certification bodies, and four-year universities.

Describe your program's plan for assessing program learning outcomes.

The CSNT discipline primarily utilizes exams and labs to assess student learning outcomes. Faculty within the discipline review learning outcomes of the program while reviewing and updating the program courses on a rotating basis. Since technology changes frequently, each of the program's degree offerings are reviewed frequently.

Summarize the major findings of your program outcomes assessments.

The primary finding of the CSNT program outcome assessment is that more quantitative data is needed to most effectively assess the program's outcomes. CSNT faculty will be reviewing options to better correlate course learning assessments with the growing CSNT program learning outcomes.

Reflecting on the major findings you summarized, what are some questions you still have about students' learning in your program that you have not yet been able to address with your outcomes assessments?

The CSNT faculty believe that through the existing course outcome assessments, we are able to generalize that students are meeting the core student learning outcomes used to determine the program's outcomes. However, beyond the major student learning objectives and their respective course assessment tools, we are not yet able to address or provide metrics for learning outcomes beyond the core student learning objectives.

Depending on the degree or transfer goals of our students, they have the choice of three different GE pathways:

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

Palomar College has identified a set of General Education/Institutional Learning Outcomes, 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 General Education/ Institutional Learning Outcomes? In your response, please specify which GE/ILO(s) your discipline supports.

The CSNT discipline supports the GE/ILO(s) in a variety of ways including 1a Written; 2a Quantitative Literacy; 1b Inquiry and Analysis; 3a Critical Thinking; 3b Information Literacy; 3c Teamwork and Problem Solving.

Summarize the major findings from your course outcomes assessments that are related to the General Education/Institutional Learning Outcomes that your discipline supports.

While the CSNT discipline specializes in specific information technology concepts and knowledge such as computer network, server administration, and cybersecurity, the CSNT discipline incorporates as much general education knowledge and skills as possible to ensure that our students are as well rounded as possible. Examples of this include introducing critical thinking, quantitative reasoning, written communication as well as teamwork into assignments and projects in our courses.

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 we will identify a program standard and a stretch goal (what you would like to move toward) for program completions.

The standards represent the lowest number of program completions deemed acceptable by the College. 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.

In this section we will identify a program standard and a stretch goal (what you would like to move toward) for programs.

List the number of completions for each degree/certificate for the previous year.

In the 2019/2020 academic year, the CSNT discipline experienced a slight decrease (20%) in A.S. completions from the previous year. While this academic year introduced the new cybersecurity degree program with 4 early finishers, Administration canceled the Cisco Academy courses due to low enrollment resulting in only 3 students completing the Cisco degree. Total A.S. degree completions included 12 students (including cybersecurity) and 9 certificate completions, down 56% from 16 certificate completions the previous year.

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

Decreased

What factors have influenced your completion trends?

Over the last few years, course cancellations have dramatically impacted the program. Also, the lack of support for dual enrollment by the administration of the college has contributed greatly to the decline. Program completions are impossible if the college will not run the courses needed.

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

No

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

Yes

What steps are you taking to address these completions?

While we have been experiencing declines in some programs, we are creating new programs that reflect the changing technology industry. For instance, as Operating System-specific degree programs have become less popular among students, we are shifting focus to a broader cloud computing focus. Industry-wide, organizations are moving their IT infrastructure to the cloud lessening the need for more system administrators working in organizationally-managed data centers. Faculty in CSNT have recognized this industry shift and will be introducing a new cloud computing degree program in 20/21. Furthermore, the recently introduced cybersecurity degree program has been increasingly popular among students and is believed to be the foundation for the CSNT discipline's steady enrollment. The Linux Administration degree program has recently been discontinued and it is likely a final decision on the Microsoft degree program will occur this year.

What is your program standard for program completion?

30

Why did you choose this standard?

This number is derived from calculating a 5-year average of completions and accounting for an average 93% occupancy in our classes. The discipline's goal is to graduate/complete at least one classroom of students per year.

What is your Stretch goal for program completion?

40

How did you decide upon your stretch goal?

The stretch goal of 40 completions is a number in the vicinity of completions during the height of success for the CSNT discipline. During the 2016/17 and 2017/18 academic years, the CSNT discipline achieved 49 and 38 student completions respectively. CSNT faculty would like to achieve and maintain program completions at this level or higher.

ENROLLMENT AND EFFICIENCY TRENDS

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).

This information can be found by going to the "Program" page in the [PRP Data Dashboard](#).

What was your enrollment trend over the last 5 years?

Increased

What was your efficiency trend over the last 5 years?

Increased

Were these trends expected? Please explain.

While the Fall 2015 semester observed the best course fill rate of 88%, the CSNT discipline is steadily moving back toward the minimum fill rate after a significant drop in Fall 2017 (74% fill rate). The course fill rate has slowly been increasing due to careful course planning and course cancellations. Regarding the WSCH/FTEF metric, our discipline is also steadily increasing this number as our enrollment number continues to climb.

Program Information Summary

Consider your program outcome assessments, completions, and enrollment/efficiency trends, as well as other internal and external factors.

How have these factors contributed to the success of your program(s)?

While the CSNT discipline has seen decreases in these important metrics in recent years, the faculty have adapted to phase out discipline-specific programs that are not performing well and introducing new degree programs that align with the industry trends.

How have these factors presented challenges for your program(s)?

The biggest factor that has been a challenge is maintaining a high fill rate, while providing courses to the greatest number of students. Many of our courses are taught once per semester and many close early leaving students to take similar courses elsewhere when there isn't a second session of a course.

The Chancellor's Office Vision for Success stresses the importance of reducing equity gaps through faster improvements of underrepresented groups.

ACCJC also requires that colleges establish institutional and program level standards in the area of success rates. These standards represent the lowest success rate 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.

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

In this section we will identify a course success rate standards and a stretch goal (what you would like to move toward) for programs.

Course Success 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/>)

COURSE INFORMATION

COURSE SUCCESS AND RETENTION

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

70.0%

Why did you choose this standard?

The CSNT discipline utilizes the institutional standard for the program's success rate. Historically, the program's success rate fluctuates between 71% and 80%, however, due to many institutional and student factors, success rates vary year to year. CSNT faculty are engaged to minimize programmatic and instructional factors that may influence success rates negatively by engaging students at a personal level and attempting to engage students to increase the successful completion of every course on time. In the 19/20 academic year, CSNT discipline saw an uptick in enrollment (+53), however, the overall success rate dropped to 68%.

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

Decreased

Was this expected? Please explain.

It was not expected to observe an 11% drop in the overall success rate in the discipline this past academic year. After reviewing the available data metrics the more significant drop in success rate occurred in the following demographics from the previous year: part-timers (13.7% drop); Hispanics (16% drop); 25-49 age bracket (20.2% drop). It is speculated that environmental factors had a significant effect on students within these demographics.

What is your stretch goal for course success rates?

75.0%

How did you decide upon the goal?

This goal is based on calculating the average success rate over the past five years. While the 2015-2016 academic year had an 80% success rate, the CSNT discipline will be working to achieve 75% to 80% success rates over the next three years.

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.

Considering that CSNT's enrollment increased, maintaining the course retention rate is a significant accomplishment.

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

Age

Ethnicity

Special Pop. (Veteran, foster youth, etc.)

Age: Why do you think age differences exist? What do you need to help close the gap?

First, retention rates were flat across the board with no significant changes from the previous academic year. Generally, we don't see a significant difference between the age brackets in success rates, however, a 20% drop was observed in the 25-49 age bracket though a higher than normal success rate was observed the previous year. It is speculated at this time that this decrease is associated with environmental factors outside the control of Palomar College.

Ethnicity: Why do you think ethnicity differences exist? What do you need to help close the gap?

Additionally, it was observed that the Hispanic population dropped 16% in success rate metrics when the previous year had a higher than average success rate for this group. It is speculated at this time that this decrease is associated with environmental factors outside the control of Palomar College.

Special Populations: Why do you think special population differences exist? What do you need to help close the gap?

Finally, there was also a drop in success in part-time students this past year (13.7%). It is speculated at this time that this decrease is associated with environmental factors outside the control of Palomar College.

Are there differences in success/retention between on-campus and online courses?

Yes

Please share any best practice methods you use for online courses.

Currently, all faculty are pursuing updated training in online pedagogy through POET using the CVC-OEI methodology. We expect that improvements in online student retention will increase over the next few years.

COURSE LEARNING OUTCOMES**How is course assessment coordinated across sections and over time?**

Many of our courses that are taught by multiple instructors utilize the same course assessment tools such as TestOut Lab Simulator, which contains the course assessment tools. All other classes are offered by a primary instructor who is responsible for maintaining and updating course assessment tools for those classes.

How have you improved course-level assessment methods since the last PRP?

Course-level assessment methods are reviewed annually by full-time faculty. This is done through periodic reviews of the CSNT degree program courses' exams and lab requirements.

Summarize the major findings of your course outcomes assessments.

The primary finding is that more quantitative data is necessary to effectively assess all of the CSNT discipline course outcomes.

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?

There are no further questions.

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?

Improvements that can be made is to correlate some of the noncore student learning objectives to individual assessment tools utilized in the courses. However, this will take some time.

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.

How do your course outcomes help your students achieve their program outcomes?

The CSNT program courses are clearly mapped to industry certifications, which are currently used to help students match their achievement needs to the right course. While most of our programs are not directly tied to transfer programs, there is movement at the state level to create an Associate Degree Transfer (ADT) program for cybersecurity. Our current cybersecurity program matches the proposed course sequence almost exactly.

How do your degree maps and scheduling strategy ensure scaffolding (how all parts build on each other in a progressive, intentional way)? How do you share the maps with students?

The CSNT program maps have always been printed in poster form and placed in the classrooms and outside faculty offices. Digitally, we have been promoting Palomar's new degree map website for existing students to review online.

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.

Most of the CSNT courses are offered at night (pre-COVID) or online. We utilize 8-week courses in the Cisco network administration program and we will be utilizing it in the new cloud computing degree program. We anticipate continuing to rely on online education in the near future for most classes and continuing night classes for some courses when allowed.

How do you work with other departments that require your course(s) for program completion?

The CSNT discipline does not have any courses required by other departments. Degree programs within the large Computer Science and Information Technology department do coordinate and discuss courses that cross the intradepartmental disciplines.

Does your discipline offer cross-listed courses?

No

Are there curriculum concerns that need to be resolved in your department? What are they?

There are no curriculum concerns that need to be resolved in the CSIT department.

Are there courses that should be added or removed from your program - please explain?

The CSNT discipline recently deactivated the Linux network administration degree program. There are no other plans to add or deactivate existing courses.

How is the potential need for program/course deactivation addressed by the department?

Generally, after a course or program is not able to be offered due to low enrollment for 2 years, the faculty will discuss potential deactivation of the program/courses.

Is your department pursuing non credit or not-for credit options at this time?

No

Are there areas you would like to expand?

With the recent addition of the Cloud Computing degree program, there are no other expansion plans for the CSNT discipline.

Click here for information about [Noncredit](#) and [Community Education](#)

Is your department offering online classes?

Yes

How do you consider student needs when determining which classes and how many classes should be offered online versus face-to-face?

When possible, the CSNT discipline offers courses in both modalities for courses with multiple sessions. For classes that are only offered once per semester, online classes are provided due to higher enrollment observed with online courses versus face-to-face classes.

Describe other data and/or information that you have considered as part of the evaluation of your program

The CSNT discipline participates in the SD4C Advisory committee as well as ad-hoc discussions with private 4-year institutions. Additionally, faculty have been monitoring the progress of the Governor's Cybersecurity Task Force and the California Cybersecurity Education Workgroup specifically.

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 and if so how would the new or emerging careers impact your future planning?

There are various careers that are available to students that complete programs in the CSNT discipline including network administrator, network specialist, network analyst, server administrator, server OS specialist, systems analyst, cybersecurity analyst, and cybersecurity specialist. Our new programs in cybersecurity and cloud computing are examples of the discipline capitalizing on the emerging careers in the field. The next few years will focus on building out these two programs fully.

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

There are many KSAs that are needed for the above-mentioned occupations and below list just a few:

- Knowledge of computer networking concepts and protocols, and network security methodologies.
- Knowledge of cyber threats and vulnerabilities.
- Knowledge of system and application security threats and vulnerabilities (e.g., buffer overflow, mobile code, cross-site scripting, Procedural Language/Structured Query Language [PL/SQL] and injections, race conditions, covert channel, replay, return-oriented attacks, malicious code).
- Knowledge of installation, integration, and optimization of system components.
- Knowledge of network security architecture concepts including topology, protocols, components, and principles (e.g., application of defense-in-depth).
- Skill in designing the integration of hardware and software solutions.
- Skill in conducting vulnerability scans and recognizing vulnerabilities in security systems.
- Ability to communicate complex information, concepts, or ideas in a confident and well-organized manner through verbal, written, and/or visual means.
- Ability to collaborate effectively with others.
- Ability to apply network security architecture concepts including topology, protocols, components, and principles (e.g., application of defense-in-depth).

How does your program help students build these KSA's?

Faculty within the discipline work to include activities and assignments that focus on building these KSAs including soft skills such as written and verbal communication through reports, written assignments and presentations.

Work Based Learning

Applied and work-based learning (WBL) allows students to apply classroom content in professional settings while gaining real-world 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?

We primarily rely on the Communications, Marketing, and Public Affairs office for advertising programs within the CSNT discipline. We also participate in the Dual Enrollment program and offer a 4-course sequence to high school students interested in computer networking and cybersecurity.

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

Based on the San Diego Workforce Partnership data, occupational growth for network administration occupations will be increasing over the next three years and continue to increase through 2029. For information security analyst positions, employment counts in the region will also be increasing at an even higher rate. According to cyberseek.org, the San Diego region has nearly 9,000 open positions in the cybersecurity field and the supply of workers is listed in the Very Low category.

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

At the program level, assistance or students with job placement is performed on a student-by-student basis by individual faculty members. The CSNT discipline does not have a formal job placement or workforce preparedness program in place.

When was your program's last advisory meeting held? What significant information was learned from that meeting?

May 25, 2018.

What are the San Diego County/Imperial County Job Openings?

Most job openings are for cybersecurity analysts and according to cyberseek.org, there are nearly 9,000 job openings in the San Diego metro area for cybersecurity-based jobs. According to the San Diego Workforce Partnership data, occupational growth for network administration occupations will be increasing over the next three years and continue to increase through 2029.

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](#).

Goals

Goal 1

Brief Description

Increase enrollment in CSNT discipline to more than 700 students by 2020/2021 academic year.

Is this a new or existing goal?

Existing

Goal Status

Ongoing

How will you complete this goal?

This goal will be accomplished by concentrating on marketing and communication efforts on the two primary degree programs within the discipline - Cybersecurity and Cisco networking. We will also attempt to revive the Microsoft networking degree program in 2019/2020 after a one-year hiatus in offering the core courses for this degree. With the expected two new cybersecurity courses starting 2019/2020, the program should be able to increase enrollment by 60 students per year with these two courses. With additional Cybersecurity marketing, we will target for full capacity each semester for CSNT 181 adding an additional 32 students. Furthermore, marketing the Cisco program more should add another 7 students times 4 courses (28 students) to the Cisco program. This program has been very successful in the past but needs more institutional marketing to maintain maximum enrollment in the program. In 2018/1019, the institution canceled the Microsoft courses due to low enrollment, however, there are numerous students that would like to finish the degree program. Reintroducing the 4-course Microsoft track with minimal enrollment will produce 80 students. Finally, with additional marketing for the Cybersecurity and Cisco Networking degree programs, the department expects to be able to add one additional CSNT 110 or CSNT 111 course per semester increasing enrollment by another 60 students. Through strategic marketing of the CSNT programs and continuing support of Dual Enrollment programs at various local high schools, the CSNT discipline expects to meet this goal during the 2020/2021 academic year. As of Fall 2019 metrics, the discipline has 574 student enrollments.

Outcome(s) expected (qualitative/quantitative)

Outcome metrics expected include:

2020/2021 +90 student enrollment in Cybersecurity (CSNT 181, 250, 255)

2020/2021 +28 student enrollment in Cisco (CSNT 160, 161, 260, 261)

2020/2021 +80 student enrollment in Microsoft

2020/2021 +60 student enrollment in general CSNT 110/111 courses

2020/2021 Total enrollment increase in CSNT +258

How does this goal align with your department mission statement, the college strategic plan, and /or Guided Pathways?

This goal aligns with all three of these areas in support of reaching as many students as possible and ensuring they meet their student and career objectives. Once students are enrolled in the CSNT courses, department instructors will be able to work with students to ensure their success in the program.

Expected Goal Completion Date

6/1/2021

Goal 2

Brief Description

Add 2 new certificate of achievements for Cybersecurity

Goal Status

Completed

Is this a new or existing goal?

Existing

How will you complete this goal?

To provide a completion goal for students that are on a degree path other than cybersecurity, but have taken the necessary cybersecurity courses, the CSNT discipline will offer two new "stackable" certificate of achievements that will compliment another CSNT Associate degree or ensure completion for students that do not wish to pursue a full A.S. degree program.

Outcome(s) expected (qualitative/quantitative)

By the end of the 2020/2021 academic year, two certificates of achievements will be established. The first one will be called C.A. Cybersecurity Analyst (12 units) and C.A. Penetration Tester (24 units).

How does this goal align with your department mission statement, the college strategic plan, and /or Guided Pathways?

This goal aligns with all three of these areas in support of reaching as many students as possible and ensuring they meet their student and career objectives. Once students are enrolled in the CSNT courses, department instructors will be able to work with students to ensure their success in the program.

Expected Goal Completion Date

6/1/2021

Goal 3**Brief Description**

Implement new Amazon Web Services courses and program.

Is this a new or existing goal?

New

Existing

Goal Status

Completed

How will you complete this goal?

Propose new curriculum and train full-time faculty to instruct the courses.

Outcome(s) expected (qualitative/quantitative)

By the end of the 2020/2021 academic year, a certificate of achievement and an A.S. degree will be established.

How does this goal align with your department mission statement, the college strategic plan, and /or Guided Pathways?

This goal aligns with all three of these areas in support of reaching as many students as possible and ensuring they meet their student and career objectives. Once students are enrolled in the CSNT courses, department instructors will be able to work with students to ensure their success in the program.

Expected Goal Completion Date

6/1/2021

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 2018, 2019, 2020. 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?

No

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

This year the College is implementing two new processes related to resource needs coming from the PRP process.

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?

No

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

No

PART 4: 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?

No

I confirm that the Program Review is complete and ready to be submitted.

Yes

Enter your email address to receive a copy of the PRP to keep for your records.

dmeske@palomar.edu

Review

Chair Review

Chair Comments

Looks good.

Chair Name

Tony Smith

Chair Sign Date

10/29/2020

Dean Review

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

The program has remained focused on developing and modifying curriculum to align with industry needs, especially in Cybersecurity. They have done an excellent job in collaborating with marketing and the dual enrollment program to increase awareness of the many degrees available to students.

Areas of Concern, if any:

Several courses within the different degrees are often cancelled due to low enrollment which would make it difficult for students to complete a degree or certificate.

Recommendations for improvement:

I have no recommendations for improvement but would like to meet with the department faculty to gain a better understanding of the degrees/certificates so that I can better support the marketing, scheduling, and dual enrollment efforts of the program.

Dean Name

Patricia Menchaca

Dean Sign Date

11/4/2020

IPC Review

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

This program is at the forefront of the industry, particularly Cybersecurity. Great programs for an ever-changing industry.

Areas of Concern, if any:

Class cancellations due to low enrollment.

Recommendations for improvement:

The department needs more marketing to attract more students.

IPC Reviewer(s)

Najib Manea and Shanon Beach

IPC Review Date

12/4/2020

Vice President Review**Strengths and successes of the discipline as evidenced by the data and analysis:**

understanding of and flexibility in need to address programs that need to be deactivated to make way for new programming, given changes in the field; work being done through POET and desire for improvement in that area; goals with clearly defined, measurable outcomes.

Areas of Concern, if any:

1. perceived lack of support for dual enrollment by admin?
2. use of student learning outcomes to understand drop in success rates?
3. possible lack of input from advisory council on curriculum and/or deactivation of courses?
4. no WBL

Recommendations for improvement:

1. Discuss dual enrollment with dean to clarify your role and that of admin in those offerings; admin is supporting where the programming is requested by high schools -- what's happening in the program that is preventing growth in this area? This sounds like a resolvable issue.
2. Discuss SLOs as a means to understanding where students are struggling in the curriculum; those are the points to focus potential changes to instruction and other areas to address support. Work with tutoring to ensure that tutors are aware of those challenging areas and know best how to support instruction.
3. Meet with Nichol Roe to discuss WBL and Career Continuum for a better understanding of the institutional support available for students in your program.

Vice President Name

Shayla Sivert

Vice President Sign Date

1/3/2021