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| **PROGRAM NAME:** Computer Networking | **AUTHORING TEAM CONTACT:** Patrick Evans |
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| GUIDELINES  Time Frames   1. Scope:   The time frame of program review is five years, including the year of the review.  Data being reviewed for any item should go back the previous four years, unless not available.   1. Deadline Dates:   January 15th – Program Review Document due to Department Dean for review (Deans may require submissions at their own, earlier due date)  February 1st – Program Review Document due to Program Review Steering Committee   1. Years:   Years 1 & 3 – Implement Action Plan of (CIP) and collect data  Years 2 & 4 – Analyze data and findings, Update Action Plan  Year 5 – Write Program Review of past 5 years; Write Continuous Improvement Plan (CIP) and create new Action Plan  LENGTH OF RESPONSES: Information provided to each question may vary but should be generally kept in the range  of 1-2 pages or 500-1,000 words.  **EVIDENCE GUIDELINES**: In the following sections, you will be asked to provide evidence for assertions made.   1. Sources: This evidence may come from various sources including professional accreditation reviews, THECB, Texas Workforce Commission’s CREWS, Institutional Research Office (IRO), National Student Clearinghouse, IPEDS, JobsEQ, EMSI Career Coach, and may be quantitative and/or qualitative. If you are unfamiliar with any of these information sources, contact the Institutional Research Office at: [effectiveness@collin.edu](mailto:effectiveness@collin.edu). Use of additional reliable and valid data sources of which you are aware is encouraged. 2. Examples of Evidence Statements: 3. Poor example: Core values are integrated into coursework. (Not verifiable) 4. Good example: Core values are integrated into coursework through written reflections. (Verifiable, but general) 5. Better example: Core values are integrating into coursework through written reflections asking the student to describe how s/he will demonstrate each of the core values in his or her professional life and demonstrated through service learning opportunities. (Replicable, Verifiable)   **FOR MORE INFORMATION:** The Program Review Portal can be found at <http://inside.collin.edu/institutionaleffect/Program_Review_Process.html>*.* Any further questions regarding Program Review should be addressed to the Institutional Research Office ([effectiveness@collin.edu](mailto:effectiveness@collin.edu), 972.599.3102). |

**Introduction/Preface**

EXECUTIVE SUMMARY

**Briefly summarize the topics that are addressed in this self-study, including areas of strengths and areas of concern. (Information to address this Executive Summary may come from later sections of this document; therefore, this summary may be written after these sections have been completed.)** Please do not include information in this section that is not already provided elsewhere in this submission. Using the questions in the template as headings in the Executive Summary can provide structure to the overview document (see below for suggested format).

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| **Executive Summary (suggested sections/format-not required format)**  What does our program do?  Why do we do the things we do: Program relationship to the College Mission & Strategic Plan.  Why we do the things we do? Program relationship to student demand.  Why we do the things we do? Program relationship to market demand.  How effective is our curriculum and how do we know?  How effectively do we communicate, and how do we know?  How well are we leveraging partnership resources and building relationships, and how do we know?  How have past Continuous Improvement Plans contributed to success?  How will we evaluate our success? |

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| **Complete the Executive Summary below after you have completed your review.** Collin College’s Computer Networking program prepares graduates to design, install, monitor and maintain secure network systems based on customer requirements. The program consists of four study tracks: Infrastructure, Systems, Integrated Networking Technologies, and Wireless. The Computer Networking faculty strive to support the college mission by providing an environment which supports and guides students in gaining fundamental knowledge, concepts, and skills in computer systems. In our program we model professional behavior, fairness, and respect for our colleagues and our students.  The rigor of the program and expectation of high-quality work from students challenges the intellect of our students.  The Computer Networking program equips students with competencies that make them highly marketable. Students gain career capital incrementally, allowing them to increase their socioeconomic status while they are still progressing toward an award. The program design is guided by input from industry partners, allowing them to contribute to crafting the training for their potential employees. Most of the courses in the Computer Networking program are aligned to professional certifications so that the students have the tools to gain industry-recognized credentials. The college does not have access to the results from student testing, so what we know is only from the students who share their success stories. What we do know is that in most courses, 70% or better of the students master better than 70% of the curriculum.  Program information is communicated through our web content and through interaction with our Program Coaches. Additionally, efforts are being made to increase communication in the classrooms and through the Canvas course Announcements. Students also have access to Compass software on their student accounts that allows them to do audits to determine what is lacking to gain an award.  We have partnerships with several industry leaders that provide curriculum and resources, including Cisco, Microsoft, Amazon, VMware, and the CWNA organization. We are a CompTIA Academic Partner, which allows our students to take most CompTIA certification exams for half-price.  In the past we have used CIP to improve specific skillsets in the computer networking field. We set specific goals targeting IP addressing, subnetting and practical exams. These are essential core skills in the computer networking field.  Measuring success is challenging. Our program offers training that prepares students for some of the most sought-after skills in the computer industry. Our courses are also some of the most challenging courses in the college. It is difficult to judge success solely by degree completion. Some students find the material too challenging, while others find exceptional employment prior to program completion. These students unofficially change from a degree program to a certification track without notifying the school. They appear as non-completers but they are in reality a success story. We need to find a better way to track student success after they leave Collin. For now, we can only track student success by course completion statistics. |

Section I. *Are We Doing the Right Things?*

**1. WHAT DOES OUR PROGRAM DO?**  
 **What is the program and its context?**This section is used to provide an overview description of the program, its relationship to the college and the community it serves. **Keep in mind the reviewer may not be familiar with your area**. Therefore, provide adequate explanation as needed to ensure understanding.

*Suggested points to consider:*

* *Program’s purpose (Include the program’s purpose/mission statement if one exists.)*
* *Program learning outcomes or marketable skills*
* *Brief explanation of the industry/industries the program serves*
* *Career paths and/or degree paths it prepares graduates to enter*
* *What regulatory standards must the program meet (THECB, Workforce, external accreditation)*

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| Collin College’s Computer Networking program prepares graduates to design and install secure network systems based on customer requirements, monitor and maintain network traffic and security, and maintain network hardware and software. Courses and hands-on labs will prepare students for a variety of Cisco, CompTIA, VMware, EMC, CWNP, Linux and Python certification examinations. The Computer Networking program offers four study tracks: infrastructure, systems, integrated networking technologies, and wireless.  The Computer Networking – Infrastructure track prepares graduates to design and install secure network systems with a focus on managing network devices. Courses and hands-on labs in this track specifically prepare students for the CompTIA A+, CompTIA Network+, Cisco Certified Network Associate (CCNA) the Cisco Certified Network Professional (CCNP), and Certified Wireless Technician (CWT) professional certification exams.  The Computer Networking – Systems track prepares graduates to design and secure network systems with a focus on managing servers. Courses and hands-on labs in this track prepare students for the CompTIA A+, CompTIA Network+, Information Storage Management (EMC), Linux and Python certification examinations.  The Computer Networking – Integrated Networking Technologies track prepares graduates to design and secure network systems with a focus on cloud computing, storage and virtualization networking technologies. Courses and hands-on labs in this track prepare students for the broad spectrum of networking technologies and help ready them for the Cisco Certified CompTIA A+, CompTIA Network+, Networking Associate (CCNA) and Certified Wireless Technician (CWT), as well as Information Storage Management (EMC) certification, among others.  The Computer Networking – Wireless track prepares graduates to design and administer wireless networks. These skills with WLAN and IoT are highly needed in the industry. Courses and hands-on labs in this track prepare students for essential certifications. Courses and hands-on labs in this track prepare students for the broad spectrum of networking technologies and help ready them for the CompTIA A+, CompTIA Network+, Cisco Certified Networking Associate (CCNA), Certified Wireless Technician (CWT), Certified Wireless Network Administrator (CWNA), Certified Wireless Security Professional (CWSP), and Certified Wireless Design Professional (CWDP).  To verify that a student has achieved entry-level workplace competencies, Collin College’s Computer Networking Programs provide two available options in each program.  The first option is a series of industry standard professional certifications such as those sponsored by Cisco Systems (Cisco Certified Network Associate (CCNA), Cisco Certified Network Professional (CCNP), etc.), CompTIA, the IT industry association (A+, Network+, Security+, etc.), or Microsoft Corporation (Microsoft Certified Solutions Associate (MCSA), Microsoft Certified Solutions Expert (MCSE), etc.).  The second option is each award (AAS degree or certificate) has a course identified as a capstone course to provide students with assignments involving simulation of the workplace in the form of case studies and/or employment scenarios.  While each track has some unique skill sets, there is a common body of marketable skills that are expected outcomes of all four tracks enumerated below:  **COMPUTER NETWORKING –MARKETABLE SKILLS COMMON TO ALL FOUR TRACKS**  • Cable and configure setup for network equipment including routers, access points, switches and servers.  • Plan, implement, and troubleshoot IPv4 and IPv6 network addressing.  • Configure, manage, and troubleshoot network routing protocols.  • Create scripts in Python to automate frequently executed sequences of commands.  • Manage accounts, network rights, and assign and update security permissions on the network, including device security  • Identify components of cloud computing core services (compute, storage, networking) and manage resources.  • Demonstrate proficiency in installation and configuration of Linux operating systems.  • Install, configure, and manage VMware ESXi hosts, Virtual Center server.  • Communicate effectively and professionally with peers, managers, customers, and other stakeholders.  • Critically analyze network data to develop inferences and reach sound conclusions.  • Work productively with others to network-related tasks. Provide technical expertise in computer networking to clients or users.  The industry that is served by the Computer Networking program is the entire business sector. Every business requires skilled information technology professionals to design, implement, maintain, and protect digital transmissions. A student trained in networking skills may serve as a sole network administrator for a company, as part of a team for a company, or as part of a Network Operations Center offering network services for a large number of companies. In any case, the Computer Networking Program equips students with the fundamental skill sets needed to keep networks running.  Detailed career path information along with a discussion of regulatory and accreditation standards addressed in Question 4. |

**2. WHY DO WE DO THE THINGS WE DO: PROGRAM RELATIONSHIP TO THE COLLEGE MISSION & STRATEGIC PLAN.**

* **Provide program-specific evidence of actions that document how the program supports the College’s** [**mission statement**](https://www.collin.edu/aboutus/)**:** “*Collin County Community College District is a student and community-centered institution committed to developing skills, strengthening character, and challenging the intellect.”*
* **Provide program-specific evidence that documents how the program supports the College’s strategic plan (2020-2025 Strategic Plan)**: <https://www.collin.edu/aboutus/strategic_goals.html>.

*Suggested/possible points to consider:*

* *What evidence is there to support assertions made regarding how the program relates to the mission and strategic plan?*
* *Think broadly-increasing completion, articulation agreements, pathways from high schools, etc.*
* *Analyze the evidence you provide. What does it show about the program?*

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| The Computer Networking faculty strive to support the college mission by providing an environment which supports and guides students in gaining fundamental knowledge, concepts, and skills in Computer Systems. Our faculty are involved in service to our college and the community (see Question 8). College service ranges from serving on college-wide committees including the Online Advisory Committee (OAB), and Program Review Steering Committee, and the Curriculum Advisory Committee (CAB) to leadership in the Faculty Council by chairing the Technology Committee. With regards to “strengthening character”, the Computer Systems department is dedicated to developing responsible citizens with personal integrity who have respect for those who come from different backgrounds and who have different perspectives. In our program we model professional behavior, fairness, and respect for our colleagues and our students. The rigor of the program and expectation of high-quality work from students challenges the intellect of our students. Addition of project-based assignments built around real world situations is aimed at not only stimulating the intellect but to challenge as well.  **Provide program-specific evidence that documents how the program supports the College’s strategic plan:**  **STRATEGIC GOALS 2020-2025**  **1.** **Improve student outcomes to meet or exceed local, state, and regional accreditation thresholds and goals.**  The Computer Networking tracks provide a broad set of highly valued competencies so that we meet the local job market demands. Our curriculum choices are continually revised with consideration of recommendations from the industry partners in our advisory board. Courses are scheduled with a wide range of time options to accommodate the work schedules of the students. Most courses are offered in 8-week sessions to allow students to complete certifications and begin to increase their career capital in increments. Scheduling in 8-week sessions also allows students to complete prerequisites as needed and complete the degree in two years.  The Computer Networking program follows the institutional effectiveness process, allowing us to examine our student outcomes and make revisions as needed. This process keeps us in compliance with the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).  **2. Develop and implement strategies to become a national exemplar in program and student outcomes.**  Many of the program’s courses and certificate programs correlate to industry certifications. The program emphasizes the importance of these certifications to employers. We offer tutoring, certification reimbursement, and clubs which encourage students to excel in the academic material so they can pass the certification exams. Students who have the goal of achieving industry certifications tend to work and study harder and take the material more seriously.  We have also created a Canvas learning management system course shell that is dedicated to the Cisco Certified Network Associate (CCNA) certification. This is a repository of external CCNA resources. Students who wish to have access to this material are also added to a Microsoft Teams channel so they can network with other like-minded students for help or to plan related study sessions.  **3. Create and implement comprehensive integrated pathways to support student transitions.**  The Computer Networking Program offers dual credit for high school students, credit classes on six campuses, and Continuing Education that link to a number of the credit classes.  Partnerships with local ISDs is expanding, leading high school students to certificates and associate degrees at Collin. Articulation agreements between Collin College and Frisco ISD allow students in their junior year to complete the first two (of four) CCNA courses at Frisco ISD’s CTE Center for dual credit. These same students subsequently take the final two courses (also for dual credit) in the sequence at Collin’s Preston Ridge Campus as seniors, providing them with an opportunity to sit for the CCNA certification exam shortly after high school graduation. In addition, these students have a very strong start toward a certificate or AAS degree in either of Collin’s Computer Networking programs.  The program has reached out to a number of other area school districts, including Allen, Plano, Prosper, Wylie, McKinney, and Rockwall with technical dual credit offering.  We provide Continuing Education courses for a number of the courses that correlate with high-demand industry certification.  The Computer Networking program at Collin College has an articulation agreement that supports all tracks with University of North Texas. Further articulations will be explored in the future.  **4.** **Implement the *sixth* Baccalaureate degree by Fall 2022 and continue adding 2+2 programs with university partners.**  Our specific program does not currently have a Baccalaureate degree. We are in the process of creating a recommendation that we can submit in the future.  **5. Develop and implement a comprehensive staffing and succession model.**  The faculty in Computer Networking are watching for students who have a good grasp of the content and are willing to work with classmates. Faculty are encouraged to recruit diligent students to work toward becoming faculty.  **6. Develop a coordinated and systematic approach to engage external stakeholders.**  The networking program engages our external stakeholders in many ways. Our advisory board works with industry to ensure that our students leave with desired skills. We have members from industry visit our classes to discuss careers in computer networking.  We also emphasize the Cisco Technical Consulting Engineer Apprenticeship with our students. This program has a pre-apprenticeship in which students are engaged in informational sessions while enrolled in Cisco courses. |

**3. Why we do the things we do: Program relationship to student demand**

**Make a case with evidence to show that students want the certificate. Discuss whether or not there appears to be any disproportionate enrollment by gender, race, and ethnicity (compared to Collin College’s overall student demographic distributions** [**http://inside.collin.edu/iro/programreview/prfilehostpage.html**](http://inside.collin.edu/iro/programreview/prfilehostpage.html)**). If any differences exist discuss possible reasons why the gap exists, and plans to address these issues to close gaps in enrollment rates between groups of students (refer to the Program Review portal for Enrollment Reports and Average Section Size data files for your program** **<http://inside.collin.edu/institutionaleffect/Program_Review_Process.html>).**

*Suggested/possible points to consider:*

* *What is the enrollment pattern? Declining, flat, growing, not exhibiting a stable pattern, please explain. For required program courses where there is a pattern of low enrollment (fewer than 15 students), explain your plan to grow enrollment and/or revise the curriculum.*
* *What are the implications for the next 5 years if the enrollment pattern for the past 5 years continues?*
* *Describe any actions taken to identify and support students enrolled in program-required courses early in the degree plan. If no actions are taken at the present, please develop* *and describe a plan to do so.*
* *How does your program support (or plan) to support attraction of a diverse student population?*
* *Check with Institutional effectiveness for Data Reports -names of reports*
* *Analyze the evidence you provide. What does it show about the program?*

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| **Overall Program Trends**  Enrollment Pattern show an upward trend for all AAS programs with a downward trend in the certificate tracks. The AAS – Wireless program has not grown as we had expected. We are considering discontinuing this as a track, but providing the most needed courses in an enhanced skills certificate.   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **Term** | **AAS - Networking -Infrastucture** | **AAS-Integrated Networking** | **AAS- Wireless** | **AAS-Systems** | **Cert/MCSA/MSA/ESC** | **OSA** | | FY 2017- 2018 | 24 | 29 |  | 9 | 104 | 14 | | FY 2018- 2019 | 54 | 81 | 1 | 30 | 128 |  | | FY 2019- 2020 | 56 | 111 | 2 | 40 | 108 | 1 | | FY 2020- 2021 | 63 | 121 | 7 | 68 | 112 | 5 | | FY 2021- 2022 | 89 | 128 | 5 | 94 | 70 | 2 | | FY 2022- 2023 | 80 | 97 | 10 | 60 | 58 |  |   **Average Section Size**  Average course section size data was retrieved from <http://inside.collin.edu/iro/programreview/prfilehostpage.html> and the reports are available in Appendix A – Enrollment and Grade Distributions. The following courses are current and show low enrollment averages.  ITCC1344  ITCC2320  ITCC2377  ITCC2379  ITNW2375   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Average Section Size by Term** | | | | | | | | | | | | | | | | | | | | | **Academic Years 2017 through 2021** | | | | | | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | **Computer Networking** | | | | | | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | **AY2017** | | |  | **AY2018** | | |  | **AY2019** | | |  | **AY2020** | | |  | **AY2021** | | | | **Courses** | **Fall 2016** | **Spring 2017** | **Summer 2017** |  | **Fall 2017** | **Spring 2018** | **Summer 2018** |  | **Fall 2018** | **Spring 2019** | **Summer 2019** |  | **Fall 2019** | **Spring 2020** | **Summer 2020** |  | **Fall 2020** | **Spring 2021** | **Summer 2021** | | CPMT1305 | 17 | 17 | 19 |  | 15 | 13 | 9 |  | 15 | 15 | 15 |  | 16 | 15 | 25 |  | 20 | 17 | 23 | | ITCC1314 | - | - | - |  | 15 | 15 | 11 |  | 15 | 16 | 12 |  | 17 | 16 | 19 |  | 13 | 15 | 16 | | ITCC1340 | - | - | - |  | 12 | 12 | 5 |  | 9 | 11 | 10 |  | 12 | 12 | 15 |  | 12 | - | - | | ITCC1344 | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - |  | - | 13 | 13 | | ITCC2312 | - | - | - |  | 12 | 10 | 8 |  | 11 | 12 | 4 |  | 9 | 7 | 7 |  | 9 | - | - | | ITCC2313 | - | - | - |  | 11 | 13 | - |  | 11 | 13 | - |  | 8 | 7 | - |  | - | - | - | | ITCC2320 | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - |  | - | 7 | - | | ITCC2341 | - | - | - |  | 16 | 16 | - |  | 19 | 16 | - |  | 11 | - | - |  | - | - | - | | ITCC2354 | - | - | - |  | 12 | - | - |  | 7 | 8 | - |  | - | 5 | - |  | - | - | - | | ITCC2355 | - | - | - |  | 14 | - | - |  | 6 | 4 | - |  | - | 4 | - |  | - | - | - | | ITCC2356 | - | - | - |  | - | 9 | - |  | 2 | 4 | - |  | - | 4 | - |  | - | - | - | | ITCC2377 | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - |  | 7 | 5 | - | | ITCC2379 | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - |  | 8 | 3 | - | | ITMT1371 | - | - | - |  | 20 | 17 | 14 |  | 19 | - | 27 |  | 20 | - | 18 |  | 17 | 26 | 28 | | ITMT1372 | - | - | - |  | 18 | - | - |  | 20 | 23 | 26 |  | 20 | 27 | 31 |  | 24 | 33 | 29 | | ITMT1373 | - | - | - |  | 8 | 20 | - |  | 15 | 20 | - |  | 17 | 23 | - |  | 27 | 31 | 30 | | ITMT1374 | - | - | - |  | - | - | - |  | - | 7 | - |  | - | - | - |  | - | - | - | | ITMT2304 | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - | | ITMT2305 | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - | | ITNW1309 | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - |  | - | 16 | - | | ITNW1351 | - | - | - |  | 17 | 15 | 23 |  | 18 | 18 | 11 |  | 12 | 16 | 17 |  | 17 | 12 | 19 | | ITNW1358 | 21 | 22 | 19 |  | 23 | 19 | 18 |  | 23 | 19 | 23 |  | 23 | 22 | 24 |  | 24 | 22 | 19 | | ITNW1364 | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - | | ITNW1370 | 17 | - | - |  | 17 | - | - |  | 17 | - | - |  | 17 | 24 | - |  | 18 | - | - | | ITNW1371 | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - | | ITNW1372 | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - | | ITNW1378 | - | - | - |  | - | - | - |  | - | 10 | - |  | - | - | - |  | - | - | - | | ITNW2371 | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - | | ITNW2372 | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - | | ITNW2373 | - | 19 | - |  | - | 16 | - |  | - | 13 | - |  | - | 18 | - |  | - | 16 | - | | ITNW2374 | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - | | ITNW2375 | - | 12 | - |  | - | 12 | - |  | - | 11 | - |  | - | 11 | - |  | - | 11 | - | | ITNW2376 | - | - | - |  | - | 9 | - |  | - | 2 | - |  | - | - | - |  | - | - | - | | ITNW2377 | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - | | ITNW2378 | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - | | ITNW2379 | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - |  | - | - | - | | ITSC1316 | 20 | 21 | - |  | 20 | 21 | - |  | 24 | 26 | 11 |  | 24 | 25 | 25 |  | 23 | 35 | 25 | | ITSC1342 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   While the Institutional Research Office has not published enrollment data after Summer 2021, course registration information in Cougarweb. ITCC 1344 showed considerable improvement in AY2022 and should not be considered as a low enrollment course.  ITCC2320 shows significant improvement for the Spring of 2023. This is a result of our efforts to make students aware of the Value of CCNA certification. ITCC2320 is a requirement for our Computer Networking Programs but not the Cybersecurity program. We have had significant success encouraging Cyber students in ITCC1314, and ITCC1344 to take ITCC2320 as their Cybersecurity elective. We believe that this strategy will lead to increased interest in the Computer Networking program and improve enrollment for ITCC2377 and ITCC2379.  ITNW2375 shows improved enrollment with 24 enrollments in the Fall of 2022 and 18 enrollments for the Spring of 2023 Semesters.  The below table show AY2022 and AY2023 enrollment data for low enrollment courses. This was taken from Cougarweb portal and screen captures are available in Appendix A – Enrollment and Grade Distributions.   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Enrollment Data Beyond AY2021 For Low Enrollment Courses** | | | | | | | | | | | | | | | | | | |  |  |  |  |  | |  | |  | |  | |  | |  | |  | | | **Fall 2021** | | |  | **Spring 2022** | | | | | |  | | **Summer 2022** | | | | | | | **Course** | **Section** | **Enrollments** |  | **Course** | | **Section** | | **Enrollments** | |  | | **Course** | | **Section** | | **Enrollments** | | | ITCC1344 | 000 | 23 |  | ITCC1344 | | 001 | | 20 | |  | | ITCC1344 | | 000 | | 20 | | | ITCC1344 | 001 | 17 |  | ITCC1344 | | 002 | | 20 | |  | | ITCC1344 | | 200 | | 20 | | | ITCC1344 | 200 | 16 |  | ITCC1344 | | 201 | | 19 | |  | | ITCC1344 | | 500 | | 15 | | | ITCC1344 | 201 | 19 |  | ITCC1344 | | 202 | | 22 | |  | | ITCC2320 | | 200 | | 9 | | | ITCC1344 | 400 | 19 |  | ITCC1344 | | 400 | | 16 | |  | | ITNW2375 | | Didn't Run | |  | | | ITCC1344 | 500 | 16 |  | ITCC2320 | | 201 | | 9 | |  | |  | |  | |  | | | ITCC2320 | 202 | 9 |  | ITNW2375 | | 001 | | 11 | |  | |  | |  | | | | | ITCC2320 | 203 | 9 |  |  | |  | |  | |  | |  | |  | |  | | | ITNW2375 | Didn't Run |  |  |  | |  | |  | |  | |  | |  | |  | | |  |  |  |  |  | |  | |  | |  | |  | |  | |  | | |  |  | |  |  | |  | |  | |  | |  | |  | |  | |  |  |  |  |  | |  | |  | |  | |  | |  | |  | | | **Fall 2022** | | |  | **Spring 2023** | | | | | |  | |  | |  | |  | | **Course** | **Section** | **Enrollments** | | | **Course** | | **Section** | | **Enrollments** | |  | |  | |  |  | | ITCC1344 | 000 | 27 |  | ITCC2320 | | 200 | | 21 | |  | |  | |  | |  | | | ITCC1344 | 001 | 21 |  | ITCC2320 | | 201 | | 9 | |  | |  | |  | |  | | | ITCC1344 | 200 | 20 |  | INTW2375 | | 001 | | 18 | |  | |  | |  | |  | | | ITCC1344 | 201 | 22 |  |  | |  | |  | |  | |  | |  | |  | | | ITCC1344 | 400 | 24 |  |  | |  | |  | |  | |  | |  | |  | | | ITCC1344 | 500 | 21 |  |  | |  | |  | |  | |  | |  | |  | | | ITCC2320 | 202 | 8 |  |  | |  | |  | |  | |  | |  | |  | | | ITCC2320 | 203 | 11 |  |  | |  | |  | |  | |  | |  | |  | | | ITNW2375 | 250 | 24 |  |  | |  | |  | |  | |  | |  | |  | | |  |  |  |  |  | |  | |  | |  | |  | |  | |  | | |  |  |  |  |  | |  | |  | |  | |  | |  | |  | | |  |  |  |  |  | |  | |  | |  | |  | |  | |  | |   Industry-related curriculum changes in offerings, redefined course numbers and titles. The following table highlights discontinued or replaced courses.   |  |  |  | | --- | --- | --- | | **Computer Networking Course Numbers and Descriptions** | | | | **Course** | **Title** | **Current** | | CPMT-1305 | IT Essntials I: PC Hrdwr Softw | Yes | | ITCC-1314 | CCNA 1: Intro to Networks | Yes | | ITCC-1344 | CCNA 2 Switch Rout Wirelss Ess | Yes | | ITCC-2312 | CCNA 3: Scaling Networks | No | | ITCC-2313 | CCNA 3: Scaling Networks | No | | ITCC-2320 | CCNA 3 Entprs Ntwk Secrty Auto | Yes | | ITCC-2330 | CCNP Etpse: Core Ntwkg (ENCOR) | Yes | | ITCC-2335 | CCNP Etpse: Adv Rting (ENARSI) | Yes | | ITCC-2341 | CCNA Security | No | | ITCC-2354 | CCNP R&S ROUTE | No | | ITCC-2355 | CCNP R&S SWITCH | No | | ITCC-2356 | CCNP R&S TSHOOT | No | | ITCC-2377 | Implemnt Entprs Ntwk Core Tech | No | | ITCC-2379 | Implemnt Entprs Adv Routg Serv | No | | ITMT-1371 | Configuring and Supporting Microsoft Windows 10 (MD-100) | Yes | | ITMT-1372 | Install Store Comp Win Ser 16 | No | | ITMT-1373 | Networking Windows Server 2016 | No | | ITMT-1374 | Identity with Windows Server 2016 | No | | ITNW-1309 | Fundamantals of Cloud Computing | Yes | | ITNW-1351 | Fundamentals of Wireless LANs | Yes | | ITNW-1354 | Iplem & Suprt Srvrs (Win Srvr) | Yes | | ITNW-1358 | Network+ | Yes | | ITNW-1364 | Practicum (or Field Experience) - Computer Systems Networking and Telecommunications | Yes | | ITNW-1370 | Cloud+ Computing Essentials | No | | ITNW-1378 | Wireless Network Administration | Yes | | ITNW-2371 | Wireless Network Security | Yes | | ITNW-2372 | Wireless Network Design | Yes | | ITNW-2373 | Information Storage Mgmt (EMC) | Yes | | ITNW-2374 | Emerging Wireless Technology | Yes | | ITNW-2375 | VMware vSphere Instl Conf Mgmt | Yes | | ITNW-2376 | Advanced Topics in Computer Systems Networking and Collaborative Technologies | No | | ITSC-1316 | Linux Install & Configuration | Yes | | ITSC-1342 | Shell Programming - Scripting | Yes | | ITSC-2325 | Advanced Linux (Red Hat RH124) | Yes | | ITSY-1300 | Fundmls Info Secrty (Secrty +) | Yes | | ITSY-2300 | Operating System Security | Yes | |

**4. Why we do the things we do: Program relationship to market demand**

**Make a case with evidence to show that employers need and hire the program’s graduates. Some resources to utilize for information could be: JobsEQ** [**http://inside.collin.edu/iro/programreview/202021/ProgramLaborMarketInfo\_2020-21AY.pdf**](http://inside.collin.edu/iro/programreview/202021/ProgramLaborMarketInfo_2020-21AY.pdf)**, Burning Glass, O-Net** [**https://www.onetonline.org**](https://www.onetonline.org)**, Texas Labor Market Information** [**https://www.twc.texas.gov/businesses/labor-market-information**](https://www.twc.texas.gov/businesses/labor-market-information)**.**

*Suggested/possible points to consider:*

* *How many program-related jobs are available in the DFW Metroplex for program graduates? If the majority of related jobs in the DFW Metroplex require a baccalaureate degree, provide evidence that you have a current signed articulation agreement with one or more transfer institutions or that you plan to develop one.*
* *What proportion of the program’s graduates (seeking employment) found related employment within six months of graduation?*
* *What changes are anticipated in market demand in the next 5 years? Do program completers meet, exceed, or fall short of local employment demand? How will the program address under- or over-supply?*
* *Identify and discuss the program’s strengths and weaknesses related to market demand.*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| The Computer Networking program offers multiple certifications and AAS degree programs. The career fields that best match our programs are listed below.  15-1231.00 Computer Network Support Specialist  15-1241.00 Computer Network Architects  15-1241.01 Telecommunications Engineering Specialists  15-1244.00 Network and Computer Systems Administrators  We review industry demand through ONET, Texas Workforce Commission (TWC), and the Institutional Research Office (IRO)   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Texas Employment Trends - O\*NET Online** | |  |  |  |  | | **Code** | **Description** | **2020 Employment** | **2030 Employment** | **Projected Growth (2020-2030)** | **Projected Annual Job Openings** | | 1231.00 | Computer Network Support Specialists | 16,640 | 19,890 | 20% | 1630 | | 1241.00 | Computer Network Architects | 14,510 | 17,040 | 17% | 1190 | | 1241.01 | Telecommunications Engineering Specialists | 14,510 | 17,040 | 17% | 1190 | | 1244.00 | Network and Computer Systems Administrators | 32,250 | 38,580 | 20% | 2900 |  |  |  |  |  | | --- | --- | --- | --- | | **TWC Career Check Information** | |  |  | | **Code** | **Description** | **Annual Wages** | **Employment Rate** | | 1231.00 | Computer Network Support Specialists | $71,795.00 | 19.48 | | 1241.00 | Computer Network Architects | $115,842.00 | 17.37% | | 1241.01 | Telecommunications Engineering Specialists | $89,632.00 | 19.64 | | 1244.00 | Network and Computer Systems Administrators | $115,842.00 | 17.37% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Computer Networking Jobs Projection for Collin County 2022** | | | | | | | | | | | | | | | **SOC Code** | **Occupation Title** | **Empl, Place of Work 2022Q2** | **Empl, Place of Work 2029Q1** | **Total Demand 2022Q2 to 2029Q2** | **Separations 2022Q2 to 2029Q2** | **Exits 2022Q2 to 2029Q2** | **Transfers 2022Q2 to 2029Q2** | **Empl, # Change 2022Q2 to 2029Q2** | **Empl, % Change 2022Q2 to 2029Q2** | **Empl, Ann % Change 2022Q2 to 2029Q2** | **Entry Level Wages, Annual** | **Experienced Wages, Annual** | **Mean Wages, Annual** | | 15-1231 | Computer Network Support Specialists | 1,131 | 1,398 | 941 | 664 | 175 | 489 | 277 | 24.5% | 3.2% | $48,300 | $95,400 | $79,700 | | 15-1241 | Computer Network Architects | 1,318 | 1,629 | 958 | 635 | 151 | 484 | 323 | 24.5% | 3.2% | $65,700 | $139,300 | $114,700 | | 15-1244 | Network and Computer Systems Administrators | 2,107 | 2,596 | 1,607 | 1,098 | 292 | 806 | 509 | 24.2% | 3.1% | $62,900 | $115,200 | $97,800 | |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  | Exported from Collin IRO data on: Thursday, December 15, 2022 3:12 PM | | | | | |  |  |  |  |  |  |   Our programs greatest strength is that it is a Cisco Networking Academy Facility. We use curriculum developed by Cisco Systems. This ensures that the curriculum is current and consistent with industry demands. Cisco is industry leader in computer networking as indicated in the table below.  Chart, bar chart  Description automatically generated  https://www.idc.com/getdoc.jsp?containerId=prUS48943122  An area we want to improve on is the number of students leaving with Cisco Certified Network Associate Certification (CCNA). This certification is highly sought by industry. We are fortunate to be located near one of two Cisco Customer Experience center in the North America.  Diagram, map  Description automatically generated  Cisco offers an internship program for NetAcad students. We are unable to track how many students enter the program. The CCNA is a challenging exam, but the Cisco Internship Program is an amazing opportunity. We are doing a better job of telling students about the significance of the CCNA. We have also created a Canvas course shell designed to assist students with certification.  Timeline  Description automatically generated  We recently had two students achieve CCNA Certification. They have both accepted lucrative positions. They have shared their success story in the CCNA Exam Preparation canvas course to help motivate others. Their stories can be found in Appendix C.  Collin College has established a common Program Advisory Committee for the Computer Networking program at Collin College due to the significant amount of content that is shared between these programs. The advisory committee serves a crucially important consultative role to guide the development of program goals and objectives, provide real-time input into the occupation-based competencies necessary to be incorporated into the program, suggest program revisions and advise the college on the adequacy of program equipment and facilities as well as to provide input on the selection and acquisition of new equipment. Additionally, the advisory committee assists program faculty in identifying local business/industry leaders that can provide students with external learning experiences, employment, and placement opportunities, it assists in the professional development of the faculty, and it assists in promoting and publicizing the program to the community. Collectively these functions keep the program relevant to industry needs, allowing graduates of these programs the best possible opportunity to secure employment.  The advisory committee is composed of individuals who broadly represent the demographics, including ethnic and gender diversity, of Collin’s service area as well as the occupational fields encompassed by these programs. Members are drawn from both the private and public sectors with an emphasis on business, industry, and labor organizations. All of the members of the advisory committee for the Computer Networking programs are deeply knowledgeable about the knowledge, skills and abilities needed by program graduates to succeed in the workplace.  The THECB requires the advisory committees to meet in person a minimum of once each year and should, if possible, have a quorum present. Collin College strongly encourages that each committee meet face-to-face a minimum of twice during each academic year.   |  |  |  |  | | --- | --- | --- | --- | | **Industry Affiliations of the Networking Advisory Committee Members** | | | | | **Last Name** | **First Name** | **Title** | **Company/Agency/Org.** | | Arnold | Amy | Senior Systems Engineer, III. | Fortinet | | Bagby | Mike | CEO | Skynet Cloud Solutions | | Barrett | Kevin | Senior Network Engineer | Ziosk | | Chesley | Arlyn K. | Hardware and Infrastructure | Raytheon | | Dieringer | Alan J. | Owner | Self employed | | Floyd | Brad | Network Engineer | SMU | | Goold | Jeff | Client Services | Cisco | | Hester | Matt | Senior Partner Technology Strategist | Microsoft | | Hooper | Cody | Engineer Customer Support | Cisco | | Huff | Daniel | Assistant Vice President ,Enterprise Command Center | Citi | | Lovitt | Dan | Network Engineer | Prosper ISD | | McGuigan | Jim | [Sr. IT Engineer-Security](mailto:jmcguigan@collin.edu) | Michaels IT Engineering | | Nelson (chair) | Michael | Systems Engineering Manager | Aruba Networks-HPE | | Nix | Ken | CIO | Roland Technology Group | | Rachui | Scott | Technical Accounts Manager | Microsoft | | Sheppard | Gary N. | System Engineer | Raytheon | | Smith | Jordan | Assistant Vice President ,Enterprise Command Center | Citi | | Smith | Michael | Technical Director | Raytheon |   All meetings of the advisory board are recorded in official minutes, and the minutes are expected to include: (a) identification of committee members (name, title, affiliation); (b) an indication of the committee members’ presence or absence from the meeting; (c) the names and titles of others present during the meeting; (d) the signature of the recorder; and (e) evidence that industry partners have taken an active role in making decisions that affect the program. Advisory committee minutes are archived per college district procedure.  Examples of advisory meeting minutes are shown in Appendix E – Advisory Meeting Minutes. |

Section II. *Are We Doing Things Right?*

**5. How effective is our curriculum, and how do we know?**

**A. Make a case with evidence that there are no curricular barriers to program completion. Review data related to course enrollments, course completion rates, course success rates, and the frequency with which courses are scheduled to identify barriers to program completion.**

*Suggested/possible points to consider:*

* *Number of students who completed the program awards in each of the last 4 years? If the number of graduates does not average 5 or more per year, describe your plan to increase completions and address this issue in the Continuous Improvement Plan (CIP).*
* *At what point(s) are substantive percentages of students dropping out of the program? Use data in the “Program-Based Course Performance” tool to examine enrollment flow through the program curriculum. Does the data suggest any curricular barriers to completion? Address problems in the CIP.*
* *Analyze the course success rates and the course completion rates of each course in your program. Address problems in the CIP.*

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| In order to avoid being labeled as a low producing program, all workforce programs must show each year that they have produced an average of 5 completers per year (AAS degrees and certificates) over the last five year period.  The certified numbers of completers as reported to the Coordinating Board on the CBM-00M report is shown in Table I. (If any student captured more than one award in a given year that student is only counted once for the purposes of the CBM-00M report.) As the data in Table I shows, the program is meeting the THECB threshold to avoid being categorized as low-producing. The draw of a 4-year degree offered in Cybersecurity has correlated with a decrease in students pursuing credentials in computer networking. More marketing is needed to make students aware of the opportunities. A BAT in Computer Networking would create an increase in awards.   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **Counts of Award per Academic Year** | | | | | | | | **Program** | **2017-2018** | **2018-2019** | **2019-2020** | **2020-2021** | **2021-2022** | **Total** | | AAS-Networking Infrastructure | 1 | 5 | 6 | 6 | 3 | 21 | | AAS-Integrated Networking | 11 | 12 | 17 | 7 | 2 | 49 | | AAS-Wireless | 0 | 0 | 0 | 0 | 0 | 0 | | AAS-Systems | 0 | 0 | 2 | 1 | 0 | 3 | | Totals | 12 | 17 | 25 | 14 | 5 | 73 |   While a number of industry standard certifications are available for the students pursuing degrees in these programs to obtain, data about student success rates on the relevant certification exams is protected by the certification agencies. |

**B. Show evidence that the institutional standards listed below have been met. For any standard not met, describe the plan for bringing the program into compliance.**

1. **Completers Standard: Average 25 completers over the last five years or an average of at least five completers per year.**  
   Number of completers: 73 in last five years.  
   If below the state standard, attach a plan for raising the number of completers by addressing barriers to completion and/or by increasing the number of students enrolled in the program. Definition of completer—Student has met the requirements for a degree or certificate (Level I or II)
2. **Licensure Standard: 93% of test takers pass licensure exams.**If applicable, include the licensure pass rate: Click or tap here to enter licensure pass rate  
   For any pass rate below 93% (Collin College’s standard), describe a plan for raising the pass rate.
3. **Retention Standard: 78% of students enrolled in program courses on the census date should still be enrolled on the last class day (grades of A through F).**Include the retention rate: 94%  
   If the retention rate is below 78%, describe a plan for raising the course completion rate.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Course Completion Rates** | | | | | | | **Course** | **2018** | **2019** | **2020** | **2021** | **2022** | | CPMT-1305 | 97% | 97% | 96% | 96% | 94% | | ITCC-1314 | 90% | 92% | 91% | 94% | 95% | | ITCC-1344 |  |  |  | 91% | 95% | | ITCC-2320 |  |  |  | 100% | 96% | | ITMT-1371 | 97% | 100% | 95% | 99% | 98% | | ITNW-1309 |  |  |  | 97% | 97% | | ITNW-1351 | 87% | 97% | 89% | 92% | 97% | | INTW-1354 |  |  |  |  | 83% | | INTW-1358 | 92% | 92% | 94% | 91% | 90% | | INTW-1378 |  | 90% |  |  |  | | INTW-2373 | 100% | 85% | 83% | 94% | 89% | | INTW-2375 | 100% | 100% | 100% | 100% | 100% | | ITSC-1316 | 94% | 95% | 97% | 97% | 96% | | ITSC-1342 |  |  | 94% |  |  | | ITSY-1300 | 99% | 98% | 97% | 96% | 93% | | Average | 95% | 95% | 94% | 96% | 94% |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Course Success Rates** | | | | | | | **Course** | **2018** | **2019** | **2020** | **2021** | **2022** | | CPMT-1305 | 91% | 87% | 89% | 83% | 84% | | ITCC-1314 | 71% | 75% | 80% | 82% | 83% | | ITCC-1344 |  |  |  | 86% | 89% | | ITCC-2320 |  |  |  | 100% | 94% | | ITMT-1371 | 85% | 95% | 88% | 93% | 86% | | ITNW-1309 |  |  |  | 94% | 85% | | ITNW-1351 | 84% | 88% | 75% | 86% | 84% | | INTW-1354 |  |  |  |  | 69% | | INTW-1358 | 80% | 79% | 84% | 72% | 72% | | INTW-1378 |  | 90% |  |  |  | | INTW-2373 | 88% | 77% | 67% | 75% | 63% | | INTW-2375 | 100% | 91% | 100% | 91% | 100% | | ITSC-1316 | 88% | 85% | 90% | 89% | 87% | | ITSC-1342 |  |  | 84% |  |  | | ITSY-1300 | 94% | 96% | 91% | 85% | 84% |   ITNW-1354 is a newly developed course, using new Microsoft Curriculum. We are looking into revising this course.  ITNW-2373 was taught by one instructor. We suspect it was a faculty issue, and this instructor is no longer with us.  ITNW-1358  There is a strong correlation with the number of withdrawals and the percentage of online students. It is the data at the bottom of the second table that shows this.  If you look at the percentages of classes that are online compared to face-to-face, you see that we flipped after COVID.  The higher percentage of classes is now online, and with that the percentage of withdrawals and failures went up.  There is the drop in percentage points in the last two years. Students are more likely to withdraw when there is no one to notice. And it does take a higher level of self-directedness to succeed in an online environment. It is our hope that we will soon be offering more hybrid classes so that student can have a happy medium between the flexibility allowed by online and the support needed for success. |

**C. Make a case with evidence that the program curriculum is current.**

*Suggested/possible points to consider:*

* *How does the program curriculum compare to curricula at other schools? Review programs at two or more comparable colleges. Discuss what was learned and what new ideas for improvement were gained.*
* *How does the program curriculum align with any professional association standards or guidelines that may exist?*
* *Is the curriculum subject to external accreditation? If so, list the accrediting body and the most recent accreditation for your program.*

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *If the program curriculum differs significantly from these benchmarks, explain how the Collin College curriculum benefits students and other college constituents.*  Dallas County Community College and Tarrant Count College are the two main competing programs in the Dallas Ft. Worth area. Their degree plans are very similar to Collin’s. Dallas County has a single degree with multiple specializations that a student can choose from, which is similar to Collin College. Tarrant County has multiple degrees, but the content of the degrees are similar to the content of Dallas County’s specializations and Collin County’s tracks. See Appendix E for complete information  Most of our courses align with industry certification. The certification exams are continuously revised to keep up with industry needs.   |  |  | | --- | --- | | **Course** | **Certification** | | CPMT-1305 | CompTia A+ | | INTW-1358 | CompTia Network+ | | ITSY-1300 | CompTia Security+ | | ITCC-1314 | Cisco CCNA | | ITCC-1344 | | ITCC-2320 | | ITCC-2330 | Cisco CCNP | | ITCC-2335 | | ITNW-1351 | Certified Wireless Technician | | ITNW-1378 | Certified Wireless Network Administrator | | ITNW-2371 | Certified Wireless Security Professional | | ITNW-2372 | Certified Wireless Design Professional | | ITNW-2375 | VMware, Data Cloud, and Virtualization (DCV) | | ITSC-1316 | CompTIA Linux+ | | ITNW-1309 | Amazon Web Services (AWS) Cloud Practitioner | | INTW-1354 |  | | ITSY-2300 |  | | ITSC-2325 | Red Hat Systems Administration (RH-124) | | INMT-1371 | Microsoft Modern Desktop Administrator Associate | |

**D. Present evidence from advisory committee minutes, attendance, and composition that the advisory committee includes employers who are actively engaged on the committee and who are representative of area employers.**

1. How many employers does your advisory committee have? Click or tap here to enter number of employers on advisory committee.

2. How many employers attended the last two meetings? Click or tap here to enter number of employers at last two advisory meetings.

3. How has the advisory committee impacted the program over the last five years (including latest trends, directions, and insights into latest technologies)?

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| who are actively engaged on the committee and who are representative of area employers.  1. How many employers does your advisory committee have? 15  2. How many employers attended the last two meetings? 12  3. How has the advisory committee impacted the program over the last five years (including latest trends, directions, and insights into latest  technologies)?  Our advisory committee meets twice a year and advises us on program changes. An example of their input is from our last meeting in December 2022 when advisory committee members acknowledged that they have members who use Python for network automation. We will follow up with the members to get more detailed information and examples of how they are using Python to automate networks.  The advisory committee expressed interest in participating in more classroom visits and we are considering an online meeting at the beginning of each semester so multiple members of industry can talk to all our networking classes at once. We also have members of the advisory committee who are willing to come into individual classes. |

4. Briefly summarize the curriculum recommendations made by the advisory committee over the last five years.

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| Over the last five years the advisory committee has recommended improvements in Linux, Wireless Networking, Network Automation and Software Defined Networking. They have also affirmed our recommend course changes as industry certifications change.   1. Though the skills needed for the computer networking industry are increasing in complexity, we have been advised to continue teaching the essential foundational skills. 2. Advisors were consulted about the continuance of the more advanced networking courses in the Cisco Certified Networking professional (CCNP). Multiple times the industry partners affirmed the continued need for CCNP skills. 3. We were advised to promote the wireless LAN program since the user end of industry has become mobile which requires knowledge of wireless LAN for effective interior mobility. 4. We were applauded in changing the Python course from a course with a web application focus to one with a network automation focus. 5. We were encouraged to promote software-defined networking as that is essential to the current marketplace. The Cloud Computing Program was birthed from these recommendations |

**E**. **Make a case with evidence that the program is well managed.**

*Suggested/possible points to consider (Data can be found at* [**http://inside.collin.edu/institutionaleffect/Program\_Review\_Process.html**](http://inside.collin.edu/institutionaleffect/Program_Review_Process.html)**):**

* *Average class size*
* *Grade distributions*
* *Contact hours taught by full-time and part-time faculty*
* *Identify all courses that have a success rate below 75%. If any of these are core courses, visit with the discipline lead for the course(s) in question to determine whether or not the content of the course(s) is appropriate to the workforce program learning outcomes. Using assessment evidence and instructor observations, identify the student learning outcomes that are the greatest challenges for students in courses with low success rates. Explain what instructional and other intervention(s) might improve success rates for each identified course.*
* *How well are general education requirements integrated with the technical coursework?*
* *Student satisfaction: What evidence do you have that students are satisfied with the program? What kinds of complaints are made to the associate dean/director by program students?*

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| The Majority of our classrooms only have room for 24 students.  A picture containing table  Description automatically generated  Grade distributions  Complete Grade Distribution data can be found in Appendix A – Grade Distributions  Contact hours taught by full-time and part-time faculty  Identify all courses that have a success rate below 75%. If any of these are core courses, visit with the discipline lead for the course(s) in question to determine whether or not the content of the course(s) is appropriate to the workforce program learning outcomes. Using assessment evidence and instructor observations, identify the student learning outcomes that are the greatest challenges for students in courses with low success rates. Explain what instructional and other intervention(s) might improve success rates for each identified course.  How well are general education requirements integrated with the technical coursework?  Student satisfaction: What evidence do you have that students are satisfied with the program?  See Student Success Stories in Appendix C – Career Information  What kinds of complaints are made to the associate dean/director by program students?  The most common complaint is that the express courses (8-week) are too short. Most of the express courses are sequential. Extending them to 16-week courses would make it impossible to complete the program in two years. Students and advisors need to be of the mindset that if they take an express course, they are essentially taking two courses. |

**6. How effectively do we communicate, and how do we know?**

**A. Make a case with evidence that the program literature and electronic sites are current, provide an accurate representation of the program, and support the program’s recruitment plan, retention plan and completion plan.**

*Suggested/possible points to consider:*

* *Demonstrate how the unit solicits student feedback regarding its website and literature and how it incorporates that feedback to make improvements.*
* *How does the program ensure that students are informed/aware of program literature? Is program literature made accessible to all students (i.e. can they obtain the information they need)?*
* *Designate who is responsible for monitoring and maintaining the unit’s website, and describe processes in place to ensure that information is current, accurate, relevant, and available.*

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| We have Computer Networking Program Information Sheets (flyers) that link to data on the Collin website that is current. The program sheets are used at recruiting events. Program information is disseminated to enrolled students through Program Coach emails, from faculty in the classroom and through the Canvas course templates, all of which relay current information to students. There is also a Computer Networking website that provides the mission statement, available awards and degrees, recent news, and a link to Handshake to allow students to find internships and entry-level jobs in Information Technology.  Additionally, Collin Academic Services provides a program overview with a detailed description of each of the Computer Networking tracks, links to the recommended pathways for each AAS track and each certificate, a link to advising, and a link to the descriptions of marketable skills offered in each degree track to assist students with creating accurate resumes.  There has been no recent systematic mechanism for gathering student feedback regarding student feedback and literature. This is a great area to address in our upcoming improvement plans. |

**B. In the following Program Literature Review Table, document that the elements of information listed on the website and in brochures (current academic calendars, grading policies, course syllabi, program handouts, program tuition costs and additional fees, description of articulation agreements, availability of courses and awards, and local job demand in related fields) were verified for currency, accuracy, relevance, and are readily available to students and the public. Please fill out the table only for this prompt (B.), no analysis is necessary here.**

**Program Literature Review Table**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Type (i.e. URL, brochure, handout, etc.) | Date of Last Review/Update |  | Responsible Party |
| Tuition costs  [Tuition and Fees - Collin College](https://www.collin.edu/bursar/tuition.html) | URL | 3/20/2022 | Current Accurate Relevant Available | Jonathan McAnally |
| Syllabus  http://www.collin.edu/hb2504/ | URL | 11/8/2022 | Current Accurate Relevant Available | Rajesh Michael |
| Program Flyer  http://www.collin.edu/academics/info/computerNetworkingInfoSheet.pdf | PDF  Flyer | 11/9/2021 | Current Accurate Relevant Available | Kathy Fant |
| Program Overview  https://www.collin.edu/academics/programs/CNET\_1Overview.html | URL | 3/18/2022 | Current Accurate Relevant Available | Mari Lopez |
| Program Flyer  http://www.collin.edu/academics/info/compNetworkWirelessTrackInfoSheet.pdf | PDF  Flyer | 11/8/2021 | Current Accurate Relevant Available | Kathy Fant |
| Program Home Page  <https://www.collin.edu/department/computernetworking/> | URL | 11/14/2022 | Current Accurate Relevant Available | Nadia Khedairy |
| Click or tap here to enter text. | Click or tap here to enter text. | Click or tap to enter a date. | Current Accurate Relevant Available | Click or tap here to enter text. |
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**7. How well are we leveraging partnership resources and building relationships, and how do we know?**

**Partnership Resources: On the table below, list any business, industry, government, college, university, community, and/or consultant partnerships, including internal Collin departments, to advance the program outcomes.**

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| Through our relationship with companies such as Microsoft and VMWare students are given access to training materials, software, and discounted certification exams. Some of our students are offered and accept internships through our relationship with the Cisco corporation and the Cisco Networking Academy.  We have partnerships with several local high schools such as the Frisco Independent School District that use some of our lab facilities for dual credit classes.  We also offer co-op courses each semester to students currently working in their field of study. This allows our program to develop new industry relationships. |

**Partnership Resources Table\*\***

|  |  |  |  |
| --- | --- | --- | --- |
| Partner/Organization | Description | Formal Agreement Duration,  if any. | How is it Valuable to the Program? |
| Frisco Independent School District(FISD) | Dual credit courses for FISD utilize our networking lab facilities to teach classes. | Click or tap here to enter text. | High school students enrolled in dual credit courses at Frisco High School come to Collin College classes to take their classes. These students may transfer these credits to Collin College to pursue an AAS degree. |
| Microsoft | Collin College named a Microsoft IT Training Center | Click or tap here to enter text. | Students have access to online lab activities and software downloads |
| Collin College Continuing Education Department (CE) | Non-credit/non-degree seeking students can enroll in some of our program courses. | Click or tap here to enter text. | CE students can enroll in some of out program courses. They are required to meet the same standards as credit students. If they successfully complete the course they may apply for credit at a later date if they decide to pursue a degree. |
| Cisco Systems | Collin College named a Cisco Networking Academy and a National Instructor Training and Support Center | Click or tap here to enter text. | Train Cisco instructors and support Cisco Networking Academies nationally. |
| EMC Corporation | Collin College named a member of the EMC Academic Alliance | Click or tap here to enter text. | Click or tap here to enter text. |
| VMWare | Collin College is a VMWare Academy | Click or tap here to enter text. | Instructors and Students have access to virtualization software and curriculum that is used in our virtualization courses. |
| Palo Alto Inc. | Collin is a Palo Alto Academy | Click or tap here to enter text. | \*Provided with 12 PA200 firewall devices and some curricular materials. |
| CompTIA | We are a CompTIA Academic Partner | Click or tap here to enter text. | Students are able to take most CompTIA Exams at a 50% Discount |
| Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |

**8. What professional developmental opportunities add value to your program?**

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| There is a myriad of sources to enhance understanding of technological advances in computer networking. Whereas faculty in academic areas find most benefit from networking at national conferences, Collin College is located in an area known for being a high-tech center. Additionally, technical training opportunities are prevalent on the Internet.  One of the best opportunities for training for the Computer Networking faculty is the conference hosted yearly on our Frisco Campus for the National Convergence Technology Center, *Working Connections.* Subject Matter Experts from across the nation are contracted run training that is often preparation for professional certifications.  <http://inside.collin.edu/tl/profdev.html> |

**Provide a List of professional development activities employees have participated in since the last program review.**

**Employee Resources Table\*\***

|  |  |  |  |
| --- | --- | --- | --- |
| Employee Name | Role in Unit | Professional Development Summary | How is it Valuable to the Unit? |
| Allen Smith | Full-Time: Cisco | Completed Cisco Instructor Training Qualifications (ITQ)  IT Essentials (ITE)  Introduction to Networks (ITN)  Switching, Routing, Wireless Essentials (SRWE)  Cisco Netacademy  Packet Tracer Class July 2022 | Cisco Network Academy instructor certification.  Simulation lab development and administration. |
| Aparna Godbole | Full-Time: Cisco, cloud | Cisco ITQ  ITE, ITN, SWRE, Enterprise Network Security and Automation (ENSE)  Certifications  CCNP Enterprise  AWS Certified SysOps Administrator (Associate),  AWS Certified Cloud Practitioner  Microsoft Azure Fundamentals  CompTIA Network+  CompTIA Cloud Essentials  Attended IT training at the National Convergence Technology Center Summer Working Connections (Sum 2018, 2019, 2020, 2022)  Attended North Texas Cyber Security Conference, Fall 2018, 2020  Attended, 23rd International Cloud Expo, Santa Clara, CA, Sum 2019  Attended technical webinars via Cisco IPD week | Cisco Network Academy instructor certification.  Virtualization and Cloud certification.  Security, |
| Copeland Crisson | Full-Time: Cisco | Cisco ITQ  ITE, ITN, SWRE, ENSE, CCNA Security, CCNP  Cisco Instructor Professional Development 2019, 2020, 2022 | Cisco CCNA and CCNP qualification |
| Jeremy Prince | Full-Time: Cisco, Microsoft | Cisco ITQ  ITE, ITN, SWRE, ENSE  Certifications  Microsoft Certified Solutions Associate SQL 2016 Database Administration (Charter), Microsoft Certification, 2018  Microsoft Certified Azure Fundamentals, Microsoft Certification, 2020  Microsoft Certified Trainer, Microsoft Certification, 2022  Certified, Security+, CompTIA, 2022  Security+, CompTIA, 2019  Microsoft Certified Trainer, Microsoft Certification, 2021  Microsoft Certified Trainer, Microsoft Certification, 2020  Microsoft 70-765 Provisioning SQL Databases - December 2018  Microsoft 70-764 Administering a SQL Database Infrastructure - September 2018 | Cisco CCNA qualification  Microsoft qualification |
| Patrick Evans | Full-Time: Cisco, scripting | Cisco ITQ  ITE, ITN, SWRE, ENSE  Network+ Certicication (2022) | Cisco CCNA Qualification |
| Raymond Fant | Full-Time: Cisco, wireless | Cisco ITQ  ITE, ITN  Certified Wireless Technician, CWT (July 30th, 2020)  Certified Wireless Specialist, CWS (July 30th, 2020) | Cisco instructor qualification,  Wireless qualification |
| Robert Morphew | Full-Time: Linux | Completed, Red Hat System Administration I (RH124) class, Red Hat Learning, Virtual, Fall 2020  Completed, Red Hat System Administration II (RH134) class, Red Hat Learning, Virtual, Summer 2021  Attended, "Giving Students Feedback in the Online Learning Environment," Service Learning, Virtual, Spring 2022  Attended, "Instructor Conference," Red Hat North America Training Partner and Instructor Conference, Virtual, Fall 2021  Attended, "Teaching with the Raspberry Pi," Summer Working Connections, Frisco, TX, Summer 2022  Completed, "Becoming an Impactful and Influential Leader," LinkedIn Learning, Virtual, Spring 2021  Completed, "Python Quick Start," LinkedIn Learning, Virtual, Spring 2022  Attended, "Everything you want to know about cloud services," Red Hat Summit 2021 Connect, Frisco, TX, Spring 2022  Attended, "Containers 101 and OpenShift 101," Red Hat Seminar, Virtual, Fall 2021  Attended, "Ansible Automation Platform," Red Hat Seminar, Virtual, Fall 2021  Attended, Red Hat North America Training Partner & Instructor Conference, Fall 2022 | Linux  Online course development |
| Steven Kellemeyer | Full-Time: Cisco | Cisco ITQ  ITE, ITN | Cisco Instructor Qualification |
| Courtney Hamilton | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| Issa AbuEid | Click or tap here to enter text. | Click or tap here to enter text. | Cisco Instructor Qualification |
| James McGuigan | Click or tap here to enter text. | Click or tap here to enter text. | Cisco Insttuctor Qualification |
| Joseph Winslow | Click or tap here to enter text. | Click or tap here to enter text. | None Reported |
| Juan Reynaldo Medina Ramirez | Click or tap here to enter text. | Click or tap here to enter text. | 2021  OpenShift 4 Networking Overview  Red Hat Enterprise Linux Automation with Ansible  Red Hat OpenShift Administration III: Scaling Kubernetes Deployments in the Enterprise  Red Hat OpenShift Installation Lab  Red Hat OpenShift Administration II: Operating a Production Kubernetes Cluster  Introduction to Red Hat OpenShift Container Platform Operators  Red Hat OpenShift Container Platform 4 Installation  Security & Customer Data Privacy Training  Facilitation and Effective Meeting Techniques  Automation Adoption Journey Delivery    2022  Enhanced Time Management - Timecard Entry and Amendment  Multicluster Management with Red Hat OpenShift Platform Plus  Red Hat OpenShift Migration Lab  Selling the Container Adoption Journey  Ansible Application Platform on OpenShift  Red Hat OpenShift on Microsoft Azure |
| Kimberli Biggerstaff | Click or tap here to enter text. | Cisco ITQ  ITE, ITN, SWRE, ENSA | Cisco Instructor Qualification |
| Lawrence Davis | Click or tap here to enter text. | Click or tap here to enter text. | Cisco Instructor Qualification |
| Mark Phelps | Click or tap here to enter text. | Click or tap here to enter text. | None Reported |
| Paul Belk | Click or tap here to enter text. | Click or tap here to enter text. | None Reported |
| Robert Benavides | Click or tap here to enter text. | Click or tap here to enter text. | None Reported |
| Serena Butler | Click or tap here to enter text. | Cisco ITQ  ITE, ITN, SWRE, ENSA | 2017  Cisco Instructor Professional Development – online  Cisco Academy Orientation: NETACAD101  Cisco Global Instructor Resources  Hackathon Playbook Partner Summit  2018  Cisco Instructor Professional Development - online  Regional Cisco Academy Conference @Collin College – Organizer  USCA Partner Conference @ RTP, NCr  CyberOps Training  Network Programming Workshop Texas @ ESC 11, White Settlement, TX  2019  Cisco Instructor Professional Development –online  Global IPD: Network Academy Conferences  USCA Partner Conference @ Toronto Canada  2020  Cisco Instructor Professional Development - online  Talent Bridge Career Preparation  Python Instructor Training  Partner Conference 2020 – online  Americas Instructor Trainer Engagement  2021  Cisco Instructor Professional Development – online  DevNet Instructor Training  USCA Partner Conf  2022  Cisco Instructor Professional Development - online  Cisco Girls Power Tech Day @ Collin College—Organizer, Facilitator  Packet Tracer Class @ ESC 11, White Settlement, TX  Academy Instructor Meeting @ ESC 11, White Settlement, TX |
| Tzungta Yang | Click or tap here to enter text. |  | Click or tap here to enter text. |
| William Whitney | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| Xioden Chen | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| Kathryn Fant | Click or tap here to enter text. | Cisco ITQ  ITE, ITN, SWRE, ENSA | Cisco Instructor Qualification  2017  Working Connections: AWS Cloud Practitioner; AWS Cloud Practioner Certification.  2019  Working Connection: VMware vSphere Installation, Configuration, and Management; VMware Foundations Certification.  2018-2022  Completed all coursework and Qualifying Exams for Ed.D in Higher Education with Community College Cognate, Univ. of North Texas |
| Paul Wang | Click or tap here to enter text. | Cisco ITQ  ITE, ITN, SWRE, ENSA | Cisco Instructor Qualification |

\*\*For convenience, if providing a listing of professional development activities, this list may be included in this document as an appendix.

**9. Are facilities, equipment, and funding sufficient to support the program? If not, please explain.**

**[OPTIONAL—Only respond to prompt 9 if you are requesting improved resources for your program. If current facilities and budget are adequate, please proceed to prompt 10.]**

**Make a case with evidence that current deficiencies or potential deficiencies related to facilities, equipment, maintenance, replacement, plans, or budgets pose important barriers to the program or student success.** As part of your response, complete the resource tables, below, to supportyour narrative.

*Possible points to consider:*

* *The useful life of structure, technologies and equipment*
* *Special structural requirements*
* *Anticipated technology changes impacting equipment sooner than usual*

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**Facilities Resources Table\*\***

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| --- | --- | --- | --- | --- |
| Significant Pieces of Equipment | Description  (i.e. Special Characteristics) | Meets Needs (Y or N):  Current For Next 5 Years | | Analysis of Equipment Utilization |
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**Equipment/Technology Table ($5,000 or more) \*\***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Current Equipment Item or Budget Amount | Description | Meets Needs (Y or N):  Current For Next 5 Years | | For any “N”, justify needed equipment or budget change |
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**Financial Resources Table\*\***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Source of Funds (i.e. college budget, grant, etc.) | Meets Needs (Y or N):  Current For Next 5 Years | | For any “N”, explain why | For any “N”, identify expected source of additional funds if needed |
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Section III.Continuous Improvement Plan (CIP)

**10. How have past Continuous Improvement Plans contributed to success?**

Program Review at Collin College takes place for each unit or program every five years. During the last (fifth) year, the program evaluates the data collected during the CIP process.

**Please describe how you have used your Continuous Improvement Plan (CIP) to make the following improvements to your program over the past 4 years (your last program review can be found on the Program Review Portal):**

* 1. **Program Learning Outcomes/Program Competencies**
  2. **Overall improvements to your program**

|  |
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| In the past we have used CIP to improve specific skillsets in the computer networking field. We set specific goals targeting IP addressing, subnetting and practical exams. These are essential core skills in the computer networking field. |

**\*Please attach previous CIP Tables in the appendix**

**11. How will we evaluate our success?**

**NOTE: Please contact the institutional effectiveness office if you need assistance filling out the CIP tables.**

As part of the fifth year Program Review, the program should use the observations and data generated by this process along with data from other relevant assessment activities to develop the program’s CIP and an action plan for the next two years. At the conclusion of the first two years, data collected from the first year, plus any other relevant data that was collected in the interim, should be used to build on the accomplishments of those first two years by developing another two-year action plan for the CIP to help the program accomplish the expected outcomes established in its CIP or by implementing one of your other plans.

**Based on the information, analysis, and discussion that have been presented up to this point, summarize the strengths and weaknesses of this program. There should be no surprise issues here! This response should be based on information from prior sections of this document. Describe specific actions the faculty intends to take to capitalize on the strengths, mitigate the weaknesses, improve student success and program learning outcomes.** **Provide the rationale for the expected outcomes chosen for the CIP(s).**

|  |
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| **Strengths:**   1. Most of the coursework throughout the Computer Networking program is aligned to industry certifications, such as the CCNA, that have been identified as in demand in the local job market. Students who follow through with getting the professional certifications are highly marketable. 2. The lab environment encourages teamwork of diverse populations as well as critical thinking and communication skills. A high level of caring about the success of classmates and sharing career capital is encouraged. Students often report of learning about the career opportunities from classmates.   **Weaknesses:**   1. In the past five years, we have not had sufficient communication among faculty and with adjunct faculty. We have recently discovered adjunct faculty who are not teaching critical content. This is being remedied with regular meeting led by a new Discipline Lead, and a new perspective of team effort. 2. The success level of students in one of the most heavily populated foundational courses, ITNW 1358, Network+ has dropped in conjunction with the increased enrollment in online classes post-COVID. We need to offer hybrid classes that would both allow for more flexibility for student schedules and provide the person-to-person connection needed to keep students progressing. |

**12. Complete the Continuous Improvement Plan (CIP) tables that follow.**

Within the context of the information gleaned in this review process and any other relevant data, identify program priorities for the next two years, **including at least one program learning outcome (or program competency)**, and focus on these priorities to formulate your CIP. You may also add short-term administrative, technological, assessment, resource or professional development outcomes as needed.

|  |
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| In the next two we would like the success rate of ITNW-1358 to improve to 80% or greater. We plan to do this by offering a hybrid version of this course, and improving instructor interaction with students in online offerings.  Another goal is to increase the number of students who achieve Cisco Certified Network Administrator (CCNA). We would like to see 20 Students get certified annually.  We also need to improve consistency within our courses. We need to ensure all faculty (full-time and adjuncts) are meeting course expectations and learning outcomes. This is especially challenging for adjunct faculty as they are not required to attend meetings. We plan to achieve this by creating written guidelines and best practices for each course in the program. |

**Table 1. CIP Outcomes, Measures & Targets Table (focus on at least one for the next two years)**

|  |  |  |
| --- | --- | --- |
| **A. Expected Outcomes**  Results expected in this unit  (e.g. Authorization requests will be completed more quickly; Increase client satisfaction with our services) | **B. Measures**  Instrument(s)/process(es) used to measure results  (e.g. sign-in sheets, surveys, focus groups, etc.) | **C. Targets**  Level of success expected  (e.g. 80% approval rating, 10 day faster request turn-around time, etc.) |
| CCNA Certification Achievement | Track number of students who achieve certification via outreach, and certification reimbursement requests from Flex Tech program. | Target goal is to see 20 students get certified annually. |
| Improve success rate in ITNW-1358 | Track student success data from IRO. | Target success rate of %80 |
| Improve consistency within courses. | Use Canvas to create a series of guidelines and expectations for all courses in the Computer Networking program. Ensure all adjunct faculty has reviewed the material by tracking completion in Canvas | 100% of adjunct faculty should review expectations and guidelines for the courses they teach. |
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**Continuous Improvement Plan**

**Outcomes might not change from year to year. For example, if you have not met previous targets, you may wish to retain the same outcomes. *You must have at least one program learning outcome.* You may also add short-term administrative, technological, assessment, resource or professional development goals, as needed. Choose 1 to 2 outcomes from Table 1 above to focus on over the next two years.**

**A. Outcome(s)** -Results expected in this program (from column A on Table 1 above--e.g. Students will learn how to compare/contrast Conflict and Structural Functional theories; increase student retention in Nursing Program).

**B. Measure(s)** –Instrument(s)s/process(es) used to measure results (e.g. results of essay assignment, test item questions 6 & 7 from final exam, end of term retention rates, etc.).

**C. Target(s)** -Degree of success expected (e.g. 80% success rate, 25 graduates per year, increase retention by 2% etc.).

**D. Action Plan** -Implementation of the action plan will begin during the next academic year. Based on analysis, identify actions to be taken to accomplish outcome. What will you do?  
**E. Results Summary** - Summarize the information and data collected in year 1.  
**F. Findings** - Explain how the information and data has impacted the expected outcome and program success.   
**G. Implementation of Findings** – Describe how you have used or will use your findings and analysis of the data to make program improvements.

**Table 2. CIP Outcomes 1 & 2**

|  |  |
| --- | --- |
| 1. **Outcome #1 CCNA Certification Achievement** | |
| 1. **Measure (Outcome #1)**   Track successful CCNA exam completers | 1. **Target (Outcome #1)**   **20 students annually** |
| 1. **Action Plan (Outcome #1)**   **Continue to help students achieve certification through additional Canvas Course dedicated to CCNA Exam Preparation. Use student success stories to inspire.** | |
| 1. **Results Summary (Outcome #1) TO BE FILLED OUT IN YEAR 2** | |
| 1. **Findings (Outcome #1) TO BE FILLED OUT IN YEAR 2** | |
| 1. **Implementation of Findings (Outcome #1) TO BE FILLED OUT IN YEAR 2** | |

**Table 2. CIP Outcomes 1 & 2 (continued)**

|  |  |
| --- | --- |
| 1. **Outcome #2 Increase ITNW-1358 success.** | |
| 1. **Measure (Outcome #2)**   Student success data from IRO | 1. **Target (Outcome #2)**   **%80 Successful completion** |
| 1. **Action Plan (Outcome #2)**   Click or tap here to enter text. | |
| 1. **Results Summary (Outcome #2) TO BE FILLED OUT IN YEAR 2** | |
| 1. **Findings (Outcome #2) TO BE FILLED OUT IN YEAR 2** | |
| 1. **Implementation of Findings (Outcome #2) TO BE FILLED OUT IN YEAR 2** | |

**What happens next? The Program Review Report Pathway**

1. **Following approval by the Steering Committee,**

* Program Review Reports will be evaluated by the Leadership Team;
* After Leadership Team review, the reports will be posted on the Intranet prior to fall semester;
* At any point prior to Intranet posting, reports may be sent back for additional development by the unit.

1. **Unit responses to the Program Review Steering Committee recommendations received before July 31st will be posted with the Program Review Report.**
2. **Leadership Team members will work with program supervisors to incorporate Program Review findings into planning and activity changes during the next five years.**

**Please make sure to go back and complete your Executive Summary at the start of the Review.**