Advancing San Diego

In partnership with

Verified Program Application Guide

Computing—2024

The following application can be completed in parts. The first two sections are required, then you can use the table of contents to skip ahead or go back to sections. The table of contents is available throughout to application by clicking the three lines in the top left corner of the screen. You can use this application guide to review all the questions included in the application.

After the two required sections, the remaining sections are optional, but more complete sections make for a stronger application. Your responses will be saved, and you can return to review or edit responses **by using your unique link**. Once you submit the application (at the very end) you will no longer be able to edit your responses. You will see another warning before you click submit.

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General Information

1. Institution or university name
2. Point of contact
3. Total institution enrollments for the 2023-2024 year
4. Total institution completions for the 2022-2023 year
5. Program name
6. Program point of contact
7. Certificates or degrees offered within the program (select all that apply):
   - Internal Certificate
   - External Certificate (prepares students for a certificate offered outside your institution like CompTia)
   - Associate of Arts
   - Associate of Science
   - Associate degree for transfer (ADT)
   - Bachelor of Arts
   - Bachelor of Science
   - Other
8. Which role(s) does this program prepare students for? (select all that apply)
   - Entry-level IT Support (Help Desk Technician, Desktop Support Technician, Network Diagnostic Support Specialist, Network Support Technician, Network Technician, End-User Support Specialist, IT Support Specialist)
   - Entry-level Network and Systems Administrators (Network Analyst, Network Coordinator, Wide Area Network Administrator)
   - Entry-level Software Developer (Computer Applications Engineer, Computer Systems Engineer, Mobile Applications Developer, Software Applications Architect, Software Engineer, Systems Software Developer)
   - Information Security Analyst (Computer Security Specialist, IT Risk Specialist, Network Security Analyst) **NOTE: employers have expressed that these are not typically entry-level roles. We recommend pairing this designation with the IT Support or Network and Systems Administrator roles to maximize the benefits of the designation.
9. Programmatic enrollments in 2023-2024
10. Programmatic completions in 2022-2023
11. Average completion time for the program
12. Gender representation (must add up to 100%)
13. Race and ethnicity representation (must add up to 100%)
14. Local vs non-local (must add up to 100%)

Diversity Equity & Inclusion

For the following questions, we are only looking for a list. Applicants that are invited to present to employers will have the opportunity to elaborate further on these efforts.

Advancing San Diego's mission is to improve access to high-wage, high-demand occupations for all San Diegans. Efforts around diversity, equity, and inclusion as well as efforts to reach and serve San Diegans are looked upon favorably for verification status. These questions are not required to complete the application, but the more questions that are answered the stronger the application will be considered.

1. List any other institutional or programmatic opportunities that make the learning environment accessible to a wider variety of populations. Examples might include full-time workers, parents, people with physical disabilities, people with learning challenges, unhoused people, and more.

2. List any institutional or programmatic efforts to recruit local residents for enrollment and workforce training. This can include relationships with K-12 institutions, other post-secondary institutions, the military, and more. Again, we are only looking for a list.

Hard Skills

The following sections will ask about the program's ability to teach the technical skills needed for entry-level IT and computing talent. None of these questions are required, however the more information that is provided the stronger the application will be. Applicants are encouraged to pay careful attention to the skills relevant to the roles selected at the beginning. Relevant roles are listed below each skill definition. For example, if you indicated that your program prepares students for a role in entry-level IT support, responses to skills related to IT support roles will be evaluated more closely.

1. List any courses or modules within the program that include <skill> as a learning outcome.
2. Are any of the courses or modules listed above required for program completion?
3. Upload the syllabus for one required course that includes <skill> as a learning outcome.

ROLE	SKILL
IT Support, Systems and Network Administrators	**Basic systems and technologies:** Knowledge of operating systems (e.g. Unix/Linux, IOS, Android, Windows), systems administration concepts, file extensions (e.g. .dll, .bat, .zip), and basic IT system operation, maintenance, and security to keep equipment functioning properly.
IT Support, Systems and Network Administrators	**Computer Networking:** Configure, manage, and maintain network devices; design, implement, evaluate, and improve functional and resilient networks; troubleshoot network problems.

Cybersecurity, Systems and Network Administrators	**Cybersecurity basics:** knowledge of laws, regulations, policies, and ethics of cybersecurity and privacy. Knowledge of cyber-attacks, threats, and vulnerabilities, and specific operational impacts of cybersecurity lapses.
Software Developers	**Debugging:** The process of detecting and removing existing and potential errors (also called 'bugs') in a software code that can cause it to behave unexpectedly or crash.
Software Developers	**Version Control:** Ability to leverage software that helps teams track changes in the source code. One common example is GIT.
IT Support	**Governance and risk:** An understanding of methods for assessing and mitigating risk, and compliance to regulations, such as PII, PHI, and PCI data security standards, SOX, GDPR, FISMA, NIST, and CCPA.
Systems and Network Administrators, IT Support	**Hardware and equipment:** Identify, use, and connect hardware components and devices; configure and support PC, mobile, and IoT device hardware; troubleshoot device issues.
IT Support, Systems and Network Administrators, Cybersecurity	**IT Security:** Knowledge of security principles and methods (e.g. firewalls, demilitarized zones, encryption), and implementation (administering identify, access management, PKI, basic cryptography, wireless, and end-to-end security)
Systems and Network Administrators	**Network administration:** Knowledge of network infrastructure principles, including network equipment (routers, switches, servers, etc.), network connections (Local and Wide Area Networks), network communication (e.g. LAN, WAN, MAN, WLAN, WWAN), and how traffic flows across the network (e.g. TCP, IP, ISI, ITIL)
Cybersecurity, Systems and Network Administrators	**Network security:** Ability to identify and protect against security vulnerabilities for devices and their network connections. Knowledge of network security concepts including topology, protocols, components, and principles.
Software Developers	**Scalability:** Ability to increase or decrease a system's ability in performance and cost in response to changes in application and system processing demands.
Software Developers, Systems and Network Administrators	**Scripting:** The ability to program language that executes tasks within a special run-time environment by an interpreter instead of a compiler.
IT Support, Systems and Network Administrators	**Systems testing:** Knowledge of systems testing and evaluation methods, including test procedures, principles, and methodologies.

4. Check the box for each true statement regarding IT and Cybersecurity related certificates. For example, if the statement "*The program applying for verification prepares students to take the A+ certification exam.*" is true, check the top left box:

Certificate:	prepares students to take the exam.	provides practice exams for students.	pays for the student to take the exam.
A+			
Network +			
ITIL 4 Foundation			

ITIL MP			
Security +			
CCNA			
CISA			
SSCP			

5. Which project management style(s) do students primarily learn/use?
6. Which operating system(s) do students primarily learn/use?
7. Which coding language(s) do students primarily learn/use?

Employability Skills

The following sections will ask about the program's ability to teach the employability skills (also known as 21st century skills or soft skills) needed for entry-level IT and computing talent. None of these questions are required, however the more information that is provided the stronger the application will be. These skills have been selected by employers for their importance in all IT and computing roles. Applicants are encouraged to respond to all questions.

1. **Collaboration:** Works effectively together to accomplish goals. Demonstrates respect for cultural and individual values. Listens to and considers ideas from others. Please provide a brief overview of how students' **collaboration** skills are refined throughout this program.
2. **Dependability:** Building trust with others by keeping your word. Managing your time by planning and controlling how your work time is spent to achieve goals. Please provide a brief overview of how students' **dependability** is refined throughout this program.
3. **Problem Solving:** Applies critical thinking skills to solve problems by generating, evaluating, and implementing effective solutions. Please provide a brief overview of how students' **problem-solving** skills are refined throughout this program.
4. **Verbal Communication:** Exchange of ideas, information, and message through spoken words in person or digitally to convey information effectively. Please provide a brief overview of how students' **verbal communication** skills are refined throughout this program.

Industry Engagement

1. Select all forms of industry engagement and work-based learning that are embedded in the program:
   - Internships
   - Apprenticeships
   - Co-ops
   - Industry inspired/provided case studies or projects
   - Industry presentations
   - Industry related field trips
   - Other
   - None
2. How can employers engage in this program to recruit students or provide work-based learning experiences?