CAREER PATHWAYS

System Administration Pathway

Program Prerequisites

Basic knowledge of Information Technology

Program Goal

A Systems Administrator is an individual responsible for the upkeep, configuration and reliable operation of computer systems. Students who are enrolled in the Systems Administration Program will gain a multitude of applicable computer skills. Networking, systems maintenance, programming language, and information systems security are all part of the coursework. By the end of the course, participants will be able to design, maintain and secure specific operating systems, such as UNIX/Linux, Server Administration for Microsoft Windows, securing networks and operating systems, networking for systems administrators, systems formulas and data modeling, Shell scripting, Java, PEARL, and C++ languages, program operating systems, and systems maintenance techniques.

Educational Objectives

The objective of this Pathway is to empower students to become Systems Administrators by combining the skills of both network and security professionals. Over the course of the program, the students will develop the following skills:

- Design, plan, implement and fine tune IT Infrastructure and systems.
- Determine the type of technology required to meet the needs and objective of the applications.
- Implement essential networking skills such as installing, configuring and troubleshooting the devices.
- Demonstrate the ability to diagnose and solve operating system problems.
- Manage IT resources to monitor, optimize and secure network software and hardware.
- Develop the ability to transfer knowledge to users by providing maintenance plans, technical details and training.
- Enforce and maintain security policies for the computer system and network.

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Learning Outcomes

Upon completion of the program, the graduate will be able to:

- Conduct routine audits and verify usage of ITIL & ITSM processes.
- Manage servers and networking equipment by installing, maintaining and upgrading Linux and Microsoft Windows machines.
- Ensure high availability and acceptable levels of performance of mission critical host computer resources as per the COOP plan.
- Assist developers by writing Python programs to automate tasks for systems-related requests.
- Perform operating system updates, patches, and configuration changes for system administration.
- Maintain backups to comply with disaster recovery protocols and perform periodic testing.
- Analyze system logs using Splunk for data comprehension, parsing and manipulation to identify potential security issues.

Professional Objectives

- Network Administrator
- Server Administrator
- DevOps Engineer
- Systems Support Engineer
- Systems Administrator I, II or III

- Windows / Linux Systems Administrator
- Senior Technology & Systems Administrator / Consultant
- Network Operations / Systems Administrator
- Network Security Administrator

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Core Courses

- CompTIA Security+ | 72 hours
- Cisco Certified Network Associate (CCNA) | 72 hours
- **Total System Administration Pathway Clock Hours | 144 hours**

State Council of
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