

# IST - INFORMATION SYSTEMS TECHNOLOGY

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## **IST 190 LINUX Essentials (3-0-3)**

*Offered Fall and Summer Semesters*

Prerequisites: CPT 257 and IST 220

This course will provide students with the fundamental knowledge and concepts of the LINUX operating system, including command-line functions, file systems, user and group administration, process management, text editors and network applications.

## **IST 191 LINUX Administration (3-0-3)**

*Offered Fall and Spring Semesters*

Prerequisite: IST 190

This course will provide students with the skills necessary to administer a LINUX system, including hardware/software configuration, user and group administration, LINUX network configuration and file system management.

## **IST 198 Cloud Computing I (3-0-3)**

*Offered Fall and Spring Semesters*

Prerequisites: IST 110 or CYB 110 and CPT 257, IST 220

Co-requisite: IST 190 or IST 257

This course is a study of cloud computing as a framework for providing network access to shared computing resources including storage, network, server and virtualization infrastructures.

## **IST 201 Cisco Introduction to Networks (3-0-3)**

*Offered Summer Semester*

Prerequisite: IST 220

This course covers the architecture, structure, functions and components of the Internet and other computer networks. Students achieve a basic understanding of how networks operate and how to build simple local area networks (LAN), perform basic configurations for routers and switches, and implement Internet Protocol (IP).

## **IST 202 Cisco Switching, Routing, and Wireless Essentials (3-0-3)**

*Offered Fall Semester*

Prerequisites: IST 201

This course covers the architecture, components, and operations of routers and switches in small networks and introduces wireless local area networks (WLAN) and security concepts. Students learn how to configure and troubleshoot routers and switches for advanced functionality using security best practices and resolve common issues with protocols in both IPv4 and IPv6 networks.

## **IST 203 Cisco Enterprise Networking, Security, and Automation (3-0-3)**

*Offered Spring Semester*

Prerequisite: IST 202

This course describes the architecture, components, operations, and security to scale for large, complex networks, including wide area network (WAN) technologies. The course emphasizes network security concepts and introduces network virtualization and automation. Students learn how to configure, troubleshoot, and secure enterprise network devices and understand how application programming interfaces (API) and configuration management tools enable network automation.

## **IST 220 Data Communications (3-0-3)**

*Offered Fall, Spring, and Summer Semesters*

This course is a study of the fundamentals of data communications.

Basic signaling, networking and various transmission media are covered.

## **IST 226 Internet Programming (3-0-3)**

*Offered Fall, Spring, and Summer Semesters*

Prerequisite: AOT 162 or CPT 170 or CPT 257

This course covers designing internet pages and applications for personal/business use, writing the required program code in languages such as HTML, JavaScript and CSS, testing and debugging programs, uploading and maintaining internet pages and applications.

## **IST 239 JavaScript (3-0-3)**

*Offered Fall and Summer Semesters*

Prerequisites: CPT 168 or CPT 127 and IST 226

This course includes concepts and skills for developing dynamic functionality and interactivity for websites using JavaScript. Variables, operators, conditionals, functions, objects (image and form), properties, methods, cookies, frames, and arrays.

## **IST 257 LAN Network Server Technologies (3-0-3)**

*Offered Fall and Spring Semesters*

Prerequisites: CPT 257, IST 220

This course is a study of networking system technologies including network operating system architecture, the installation, configuration, monitoring and troubleshooting of network resources and network administration functions such as user-group maintenance, network security print services, remote access, fault tolerance, backup and recovery.

## **IST 258 LAN Directory Services (3-0-3)**

*Offered Fall and Spring Semesters*

Prerequisites: IST 257, IST 220

This course is a study of LAN objects, object properties and the organization of network objects into a structure that is extensible and scalable. The course includes a hierarchical view of network resources and allows administrators, developers and end-users to gain access to those resources.

## **IST 266 Internet and Firewall Security (3-0-3)**

*Offered Fall, Spring, and Summer Semesters*

Co-requisite: IST 110

This course is an introduction to firewalls and other network security components that can work together to create an in-depth defensive perimeter around a local area network (LAN).

## **IST 272 Relational Database (3-0-3)**

*Offered Fall, Spring, and Summer Semesters*

Prerequisites: CPT 113 or CPT 170

This course provides a comprehensive foundation in both SQL and relational database design and implementation. Dynamic and embedded SQL programming techniques are emphasized. Note: SQL Server is used.

## **IST 278 Database Programming (3-0-3)**

*Offered based on enrollment*

Prerequisites: IST 272

This course is a study of advanced database techniques. Topics will cover procedures, triggers, query optimization and user security.