Information Technology A.A.S.

Network Security Emphasis

Program Description

The Information Technology-Network Security degree emphasis prepares students for a variety of career opportunities in managing/implementing security in Microsoft Windows networks. The program provides a general education background in computers and networking with emphasis on Microsoft. The course of study prepares a student to take Microsoft certification exams leading to the Microsoft Certified Systems Administrator: Security certification. Advanced standing is available for those students who have already achieved Microsoft certifications and wish to broaden their educational experience and employment opportunities by earning a degree. This curriculum provides an excellent foundation for those seeking employment in networking or advanced training for those already working in the communications and networking field. The student who completes the Information Technology-Network Security Emphasis A.A.S has the opportunity to become Microsoft Certified and hold an associate in applied science degree in the field of networking.

Employment Information

Computer Network Security is one of the fastest growing areas in technology today. Banking, Accounting, government, and corporations are just a few of the employment areas open to graduates in this field.

Degree Awarded

Associates in Applied Science

					Date	Institution
Technical Occupational Specialty				**33 Credit Hours**		
	ITD	1503	A+ Hardware	3		
	ITD	1513	A+ Operating Systems	3		
	ITD	2053	Telecommunications Fundamentals	3		
	ITD	2213	Windows Networking I	3		
	ITD	2313	Windows Networking II	3		
	ITD	2333	Windows Networking III	3		
	ITD	2433	Linux	3		
	ITD	2523	LAN Fundamentals	3		
	ITD	2623	Advanced LAN Fundamentals	3		
	ITD	2723	Microsoft Network Security	3		
	ITD	2823	Microsoft Internet Security and Acceleration Server	3		
Support and Related Courses				**10 Credit Hours**		
	BUS	1011	Business Ethics	1		
	CIS	2703	System Analysis and Design	3		
	CIS	2513	Principles of Information Systems Security	3		
	CIS	2803	Computer Science Project Capstone	3		
General Education Requirements				**18 Credit Hours**		
	ENGL	1113	English Composition I	3		
	HIST	1483	U.S. History to 1865	3		
	or					
	HIST	1493	U.S. History Since 1865	3		
	MATH	1413	General College Math	3		
	PHYS	1204	General Physical Science *(or department approved laboratory science)*	3		
	POLS	1113	American Government	3		
	SPCH	2723	Interpersonal Communications	3		
Total to Graduate				**61 Credit Hours**		

For More Information Contact:

Division Advisor

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Student Name: _____

CWID: _____

Counselor: _____

Catalog 2009-2010

BUS 1011 BUSINESS ETHICS
A study of contemporary and classical views relating to moral judgments and conduct within the business environments.

***CIS 2513 PRINCIPLES OF INFORMATION SYSTEMS SECURITY**
This course provides the student with a broad review of the field of information systems security, background on many related elements and enough detail to facilitate an understanding of the field. It covers terminology of information systems security, the history of the field and an overview on how to manage an information systems security program. Prerequisites: CIS 1113 or CIS 1103.

***CIS 2703 SYSTEMS ANALYSIS AND DESIGN**
Introduction to a methodology for the analysis, design, documentation, implementation and evaluation of computer systems. Included will be topics in techniques for data gathering, file organization and accessing methods. Prerequisites: CIS 1103 or CIS 1113 and three hours of computer applications or programming.

***CIS 2803 COMPUTER SCIENCE PROJECT CAPSTONE**
As the capstone course of the Computer Science Program, the student will demonstrate the collected knowledge, skills and techniques acquired in the program courses by working through scenarios. Students will demonstrate problem solving, critical thinking, research techniques and technical writing. Computer ethics and group dynamics will be emphasized to help round out the student's education.

***ITD 1503 A+ HARDWARE**
Students will be introduced to hardware concepts through hands-on experience with the fundamentals of current microcomputer technologies including installation, configuration, upgrades, diagnosis and troubleshooting, system optimization and repair. Additional topics will include preventive maintenance as well as safety.

***ITD 1513 A+ OPERATING SYSTEMS**
A support-oriented course providing students with information and hands on classroom experience in dealing with operating system issues inherent to PC (personal computer) hardware and software installation, upgrade, configuration, maintenance and troubleshooting in a user-based computing environment. Course topics will include the boot process, configuring and customizing the computer, managing hardware, displaying a user interface, interpreting commands and requests, providing services to software applications, allocating and managing memory, managing files, optimizing system performance and providing troubleshooting tools. Prerequisite: ITD 1503.

***ITD 2053 TELECOMMUNICATIONS FUNDAMENTALS**
Examines and analyzes strategies for telecommunications, including network systems and forms of electronic communications. Overview of resources and utilization of systems transmitting information between a computing system and remotely located sending and receiving devices. Demonstrations, discussion and hands-on exercises with an emphasis on telecommunications and applications. Prerequisite: CIS 1103 or CIS 1113.

***ITD 2213 WINDOWS NETWORKING I**
Course is designed to give the student basic knowledge of Microsoft Windows networking and its uses. Students will be given projects using the operating software features and will learn how other software programs link to the operating systems. Topics may include using network neighborhood, objects linking and embedding, and managing hardware. Prerequisite: CIS 1103 or CIS 1113 and ITD 2523.

***ITD 2313 WINDOWS NETWORKING II**
This course provides students with the knowledge and skills necessary to learn how to set up and support the Microsoft Windows operating system in a single domain environment. Prerequisites: ITD 2213. Fall only.

***ITD 2333 WINDOWS NETWORKING III**
This course provides students with the knowledge and skills necessary to learn how to administer an enterprise network infrastructure. Prerequisite: ITD 2313. Spring only.

***ITD 2433 LINUX**
This course is a study of the Linux operating system and applications for system, file and disk management. It includes an introduction to systems administration and development of programs for the Linux operating system. Fall only.

***ITD 2523 LAN FUNDAMENTALS**
Course is designed to provide the students with basic knowledge of computer networks. Students will learn the types and methodology of networks. Exercises will involve hands-on use of computer networks. Prerequisite: CIS 1003 or CIS 1113 or CIS 1103.

***ITD 2623 ADVANCED LAN FUNDAMENTALS**
Course reviews data, text, graphics and voice communications technology and their application. Included is vocabulary, configuration of local networks, modems, rates and standards. An overview of protocols is given. Prerequisite: ITD 2523. Fall only.

***ITD 2723 MICROSOFT NETWORK SECURITY**
This course teaches the skills and knowledge necessary to implement administer the various security mechanisms provided with the Microsoft Windows Server 2003 operating system through lectures, discussions, scenarios, demonstrations, and classroom labs. This course, designed for students entering the information technology (IT) profession, teaches the fundamentals of implementing and administering security on Windows Server 2003 networks. It assists individuals in preparing for the Microsoft 20-299 exam: Implementing and Administering Security in a Microsoft Windows Server 2003 Network. Prerequisites: ITD 2213, ITD 2313, ITD2333, CIS 2513. Fall only.

***ITD 2823 MICROSOFT INTERNET SECURITY AND ACCELERATION SERVER**
This course provides students with the knowledge and skills to deploy and manage Microsoft® Internet Security and Acceleration (ISA) Server as part of a larger security infrastructure which includes network and perimeter security measures, Internet firewalls, application layer filters, and screened networks. Students will also learn to implement caching servers and additional mechanisms to protect public-facing Web servers. The course introduces security concepts unique to ISA Server and provides best practices for their implementation. This course assists students in preparing for the Microsoft exam 70-350: Implementing Microsoft Internet Security and Acceleration Server 2004. Instructional methods include lectures, discussions, scenarios, demonstrations, chapter review questions, textbook exercises, and classroom labs. Spring only.