

Departmental Syllabus

Prepared by the Department of **Business**

Date of Departmental Approval: October 5, 2015

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Effective: Fall 2016

1. **Course Number:** BIT 240
Course Title: IT: Security +

2. **Description:**

This course covers fundamental principles for securing a network and managing risks. Using a hands-on approach, students learn access control, identity management and cryptography, as well as a selection of appropriate mitigation and deterrent techniques to address network attacks and vulnerabilities. This course prepares students to take the CompTIA Security+ certification exam. Prior to starting this course, students are required to sign an agreement stating all knowledge learned in this course will not be used for illegal or malicious purposes.

3. **Student Learning Outcomes** (instructional objectives, intellectual skills):

Upon successful completion of this course, students are able to do the following.

- Use wired and wireless network security administration principles including: implementing and troubleshooting common protocols and services, network design elements, and security configuration parameters.
- Explain and implement compliance and operational security for integrated systems and data with third parties using risk mitigation, basic forensics procedures, and incident response procedures.
- Demonstrate knowledge of threats and vulnerabilities and their mitigation through the use of appropriate tools and techniques, based on different types of attacks by comparing penetration testing versus vulnerability scanning.
- Select the appropriate solution for application, data, and host security by comparing and contrasting alternative methods to mitigate security risks.
- Install and configure the appropriate access control and identity management using the appropriate authentication, authorization or access control.
- Select and use the appropriate public key infrastructure (PKI), certificate management and associated components for cryptography.

4. **Credit(s):** 3 credits

5. **Satisfies General Education Requirement:** No

6. **Prerequisite(s):** BIT187 Network Essentials or Network+ Certification (Certifications must have been earned within the past 5 years)

7. **Semester(s) Offered:** Varies

8. **Suggested General Guidelines for Evaluation:** hands-on labs, assignments, exams, midterm and final.

9. **General Topical Outline** (Optional):