Program Matrix

Bachelor of Engineering Information Technology in Networking and System Security

The Bachelor of Engineering Information Technology in Networking and Systems Security (BEIT-NSS) program is designed to provide students with knowledge and skills to apply business principles and management practices with specialization in networking and systems security. Students pursuing this specialization will learn about information technology, information security, and information systems.

Program Competencies and Learning Objectives

Upon successful completion of this program, students will be able to:

- Demonstrate the use of effective oral and written communication and professional presentations
- Apply appropriate qualitative and quantitative knowledge, skills, and tools associated with engineering technology activities including practical internet skills in organizational settings
- Demonstrate the ability to function effectively as a member or leader on a technical team, and show sensitivity to professional and ethical responsibilities.
- Apply the knowledge and skills necessary to exercise and improve managerial decision making
- Identify theories, models, and appropriate concepts for analyzing and solving information technology problems in domestic and global contexts

Curricular Requirements (120 Credits)

The Bachelor of Engineering Information Technology in Networking and Systems Security degree requires completion of 120-semester credits of coursework, which includes 30 credits of General Education courses, 72 credits of Business Administration courses, 3 credits of General Elective courses, and 15 credits of Networking and Systems Security Specialization courses.

1. **General Education Courses: 30 Credits/10 Courses**
   - ACE 100 – Accelerate, Connect, Equip
   - GEN 101 – English Composition I
   - GEN 102 – United States History
   - GEN 103 – United States Government
   - GEN 104 – Mathematics
   - GEN 105 – Algebra
   - GEN 106 – Calculus
   - GEN 201 – English Composition II
   - GEN 212 – Introduction to Philosophy
   - IST 221 – Fundamentals of Computing

2. **Business Administration Courses: 72 Credits/24 Courses**
   - ACC 222 – Financial Accounting
   - ACC 421 – Managerial Accounting
   - BUS 201 – Business and Society
   - BUS 214 – Business Statistics
   - BUS 215 – Business Communication

- BUS 314 – Business Law
- BUS 425 – Business Ethics
- ECO 215 – Survey of Economics
- ECO 220 – Macroeconomics
- FIN 224 – Principles of Financial Management
- IST 225 – Computer System Architecture
- IST 227 – Information Technology in Business
- IST 228 – Data Communications and Distributed Networks
- IST 234 – Fundamentals of Database Management
- IST 235 – Legal Issues in Information Technology
- IST 346 – Computer Security Fundamentals
- IST 423 – Information System Analysis Design and Implementation
- IST 430 – Information Systems Management and Practice
- IST 447 – Software Engineering
- MGT 228 – Introduction to the Process of Management
- MGT 251 – Organizational Behavior
- MGT 440 – Operations Management
- MGT 460 – Leadership in Organizations
- MKT 226 – Principles of Marketing

3. **General Elective Courses: 3 Credits/1 Course**
   - General Elective

4. **Networking and Systems Security Specialization Courses: 15 Credits/5 Courses**
   - IST 426 – Advanced Systems Administration
   - IST 445 – Network Infrastructure and Services
   - IST 450 – Directory Services and Infrastructure
   - IST 452 – Messaging Infrastructure Management
   - IST 458 – Routing and Switching

General Elective Courses

Select 1 course from the list below:
- BUS 225 – Introduction to Business Ethics
- ECO 418 – Microeconomics
- GEN 213 – World Religions
- GEN 223 – Political Science
- MGT 262 – Introduction to Small Business Management
- MGT 350 – Organizational Behavior
- MGT 445 – Strategic Management
- MGT 448 – Human Resource Management
- MGT 462 – Small Business Entrepreneurs
- MKT 450 – Global Marketing
- MKT 452 – Advertising
- MKT 456 – Consumer Behavior