

## PROGRAM MATRIX

### BACHELOR OF ENGINEERING INFORMATION TECHNOLOGY

#### SPECIALIZATION: NETWORKING AND SYSTEM SECURITY

The Bachelor of Engineering Information Technology with a specialization in Networking and Systems Security is designed to provide students with knowledge and skills to apply business principles and management practices with a 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 with a specialization in Networking and Systems Security requires completion of 120 semester credits of coursework, which includes 33 credits of General Education courses, 69 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: 33 Credits/11 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 205 - Earth Science
- GEN 212 – Introduction to Philosophy
- IST 221 – Fundamentals of Computing

##### 2. Business Administration Courses: 69 Credits/23 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 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 215 – Survey of Economics
- ECO 418 – Microeconomics
- GEN 213 – World Religions
- GEN 223 – Political Science
- 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