Module Descriptions

LEADERSHIP & TEAM DEVELOPMENT

Offers an introduction to and an overview of the concepts of leadership and team development. This module will provide a framework and rationale for the team/cohort learning model in an organizational context. Emphasis is placed on the application of concepts to real managerial problems and issues. This module will use a combination of conceptual and practical approaches, lectures, discussions, case studies and group exercises.

COMMUNICATION

This module blends research, theory and practice in the art of effective team communication, presentation and facilitation skills, team dynamics and written skills to create a dynamic contribution to the overall effectiveness of any organization. Each student comes to this course with expertise and experience; this module will reinforce individual strengths, identify areas of growth and set goals for development in the cohort as well as the workplace.

PROFESSIONAL BUSINESS WRITING

This course focuses on effective writing techniques for professionals. Assignments include a business proposal, an employment letter, a memo, a performance evaluation and interoffice correspondence. Since writing is a cumulative skill, an emphasis is placed on the revision process through online postings and in-class peer feedback. Students learn to communicate professionally and succinctly using a variety of business formats.

FOUNDATIONS OF INFORMATION SYSTEMS

This module is designed to introduce students to contemporary information systems and demonstrate how these systems are used throughout global organizations. The focus of this module will be on the key components of information systems: people, processes and technologies, and how these components can be integrated and managed to create competitive advantage. This module also provides an introduction to systems and development concepts, technologies and their acquisition and various types of application software and architectures currently in use. In addition, the ethical and social implications of these components will be considered.

IT INFRASTRUCTURE

This module provides an introduction to IT infrastructure. It covers topics related to both computer and systems architecture and communication networks, with an overall focus on the services and capabilities that IT infrastructure solutions enable in an organizational context. It gives students the knowledge and skills that they need for communicating effectively with professionals whose special focus is on hardware and systems software technology and for designing organizational processes and software solutions that require an in-depth understanding of the IT infrastructure capabilities and limitations. It also prepares students for organizational roles that require interaction with external vendors of IT infrastructure components and solutions. The course focuses strongly on internet-based solutions, computer and network security, business continuity and the role of infrastructure in regulatory compliance.

ENTERPRISE ARCHITECTURE

This module explores the design, selection, implementation and management of enterprise IT solutions. The focus is on applications and infrastructures and their fit with the business. Students learn frameworks and strategies for infrastructure management, system administration, data/information architecture, content management, distributed computing, middleware, legacy-system integration, system consolidation, software selection, total cost of ownership calculation, IT investment analysis and emerging technologies. These topics are addressed both within and beyond the organization, with attention paid to managing risk and security within audit and compliance standards. Students also hone their ability to communicate technology architecture strategies concisely to a general business audience.

IS PROJECT MANAGEMENT

This module is an applied study of modern techniques and approaches to the management of IT projects: project planning, outsourcing versus in-house development, team formation and building and phases of project development, including roll-out, support and retiring of projects. The role of the project manager and project management functions will be discussed in detail: business case development, cost justification, return on investment, management of IT projects through a geographically dispersed workforce and the unique challenges to systems development. This module will give students exposure to the Project Management Institute (PMI) Knowledge Areas and lay a foundation for students to consider taking the Project Management Professional (PMP) exam.

INFORMATION SYSTEM ANALYSIS & DESIGN

This module is an applied study of information systems analysis. The course covers a systematic methodology for analyzing a business problem or opportunity, determining what role, if any, computer-based technologies can play in addressing the business need, articulating business requirements for the technology solution, specifying alternative approaches to acquiring the technology capabilities needed to address the business requirements and specifying the requirements for the information systems solution. Topics covered will include traditional and contemporary systems

development lifecycles, including waterfall, object-oriented and rapid methodologies. The role of the business analyst in scope definition, requirements analysis and functional requirements documentation creation will be discussed. Students will learn about completing a system design using CASE tools.

DATA & INFORMATION MANAGEMENT
This module provides the students with an introduction to the core concepts in data and information management. It is centered around the core skills of identifying organizational information require-ments, modeling them using conceptual data modeling techniques, converting the conceptual data models into relational data models, verifying its structural characteristics with normalization techniques and implementing and utilizing a relational database using an industrial-strength database management system. The course will also include coverage of basic database administration tasks and key concepts of data quality and data security. In addition to developing database applications, the course helps students understand how large-scale packaged systems are highly dependent on the use of DBMSs.

INTRODUCTION TO CYBERSECURITY
This course provides students with a foundational understanding of cybersecurity, covering key concepts and terminology, networking security, data classification, risk assessment and the role of cybersecurity in protecting information system assets within organizations. Broader issues related to the relationship between IT and business stakeholders, ethical and legal principles and non-technical protection measures will be covered. Both theory and application will be stressed by applying knowledge gained to realistic case studies. The course prepares the student with a foundation for more detailed study in later modules of the program.

SCRIPTING FUNDAMENTALS FOR CYBERSECURITY
This course is designed to introduce students in the cybersecurity concentration to the fundamentals of computer scripting. Through a series of modules, students will learn the importance and power of scripting in cybersecurity, develop logical thinking and problem-solving skills, understand algorithm development, work with basic data types and control structures, utilize regular expressions for textual analysis, implement input/output operations, explore simple cryptographic algorithms and learn to identify and correct vulnerabilities in computer code. Programming languages covered in the course will be at the discretion of the instructor, focusing on languages relevant to cybersecurity tasks.

THREATS, VULNERABILITIES AND SOCIAL ENGINEERING
This course provides an in-depth exploration of the various threats and vulnerabilities present in modern information systems and networks, with a specific focus on social engineering techniques.

Students will develop an understanding of the techniques used by attackers to exploit vulnerabilities and manipulate human behavior to gain unauthorized access to sensitive information. The course will cover both technical and human aspects of cybersecurity, enabling students to develop effective strategies for threat mitigation and protection of organizational assets.

TECHNICAL COUNTERMEASURE AND RISK ASSESSMENT
This course focuses on the practical aspects of implementing technical countermeasures to mitigate cybersecurity risks. Students will gain a comprehensive understanding of various countermeasures and risk-assessment methodologies used to identify, assess, and mitigate vulnerabilities in information systems. The course will cover both theoretical concepts and hands-on exercises to enable students to develop practical skills in risk assessment and countermeasure implementation.

ETHICAL AND LEGAL CONSIDERATIONS IN CYBERSECURITY
This course explores the ethical and legal dimensions of cyber-security within the context of business administration. Students will examine the ethical implications of cybersecurity decisions, understand legal frameworks and regulations and develop an awareness of privacy, intellectual-property and compliance issues. The course will cover topics such as ethical hacking, privacy laws, incident response ethics and ethical leadership to equip students with the knowledge and skills needed to navigate the complex ethical and legal landscape of cybersecurity.

APPLIED CYBERSECURITY AND CRISIS MANAGEMENT
This course focuses on the practical application of cybersecurity principles and crisis management strategies within the context of business administration. Students will develop the knowledge and skills to effectively respond to cybersecurity incidents, manage crises and mitigate organizational risks. The course will cover topics such as incident response planning, business continuity, disaster recovery, communication strategies and ethical considerations to prepare students for real-world cybersecurity challenges.

MULTIDISCIPLINARY PROJECT (CAPSTONE)
Utilizing their knowledge from the previous modules, students will create a case study from a selected organization. This case must uncover one main problem for the organization and provide viable and supported solutions to help create a better situation for the organization. The main part of this capstone is that each team presents a rich-enough case that the reader will, with a fair amount of certainty, be provided with enough information to allow them the opportunity to solve the case using methods and techniques gained from business knowledge and experience.