

Module Descriptions

LEADERSHIP & TEAM DEVELOPMENT This module 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. The differences between leadership and management will be explained.

COMMUNICATION Building on the students' experience in the first module, 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 in the workplace.

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 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.

IS FINANCE This module explores the fiduciary impacts of information systems operational activities. The focus is on the

financing of enterprise architecture in support of the business units where students learn frameworks and strategies for constructing budgetary requirements, adherence to financial purchase and auditing requirements, determining life cycles for enterprise architecture components, and collaborating with business units to determine technology requirements that focus on sustainability and transparency. Students will also discover methods to finance operational readiness through a balance of funding for staffing and vendor management, managed service contracts, and responsible decommissioning of assets that have exhausted their life cycle. These topics are addressed within the organization with focus on advocating for investment in technologies that minimize risk, maximize return on investment, and empower business users to remain technologically agile.

IT SECURITY & RISK MANAGEMENT This module provides an introduction to the fundamental principles and topics of Information Technology Security and Risk Management at the organizational level. Students will learn critical security principles that enable them to plan, develop, and perform security tasks. This module will introduce the student to understanding, managing, and controlling organizational risks associated with the implementation and use of IT solutions including protection of data and IT infrastructure from various security threats. The course will address hardware, software, processes, communications, applications, and policies and procedures with respect to organizational IT Security and Risk Management.

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, 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 SYSTEMS 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.

FUNDAMENTALS OF PROGRAMMING I This is an introductory course on program design and programming: variables, data types, program structure, conditional logic, iteration, and event-driven programming. Modular program design including introduction to procedures, functions, and modular development will be covered, as well as the project environment, compilation process, and debugging techniques. Students will learn the basic concepts of program design, programming, problem solving, and programming logic. Program development will incorporate various stages of the program development life cycle: designing a solution, implementing a solution in a programming language, and testing the completed application. Students will utilize UML structures to aid in program design and will develop several small programming projects using a modern programming language.

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 requirements, modeling them using conceptual data modeling techniques, converting the conceptual data models into relational data models and 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.

FUNDAMENTALS OF PROGRAMMING II This module will build upon the Fundamentals of Programming I module. The primary focus will be on the design and development of data-driven n-tier client/server applications. Various types of application paradigms will be examined, including traditional web and mobile-based solutions. The course will emphasize architectural and design concepts with opportunities for code review and hands-on coding.

QUALITY ASSURANCE, DEPLOYMENT, & DISPOSITION Advanced topics will be investigated to reinforce the management of IT projects. Specific focus will be on the executing, testing, and deploying stages of the project life cycle. Topics paramount to the course include change management, continuous improvement, maintenance, quality assurance, risk, and communications. Students will monitor a project via a project plan throughout its various project life cycles.

DATA ANALYTICS & BUSINESS INTELLIGENCE Building on the transactional database understanding, the course provides an introduction to data and information management technologies that provide decision support capabilities under the broad business intelligence umbrella. Students will study how data drives business and strategic planning.

INFORMATION SYSTEMS STRATEGY This module explores the issues and approaches in managing organizational information systems at the strategic level. It explores the acquisition, development and implementation of plans and policies to achieve efficient and effective information systems. The focus is on developing an intellectual framework that will allow leaders of organizations to critically assess existing IS components as well as plan for new technologies and systems that support organizational strategy. The ideas developed and cultivated in this module are intended to provide an enduring perspective that can help leaders make sense of an increasingly globalized and technology intensive business environment.

MULTIDISCIPLINARY PROJECT: CAPSTONE Utilizing their knowledge from the previous modules, students will create an information systems solution to an existing organizational issue compounded by non-existent systems, poor systems or a lack of information. The organization may be profit or nonprofit, and the students will develop a business case that supports their solution. The format of the course will consist of independent study that includes the selection and execution of a project by the student teams.