University of Fairfax
Secure Your Future

CURRICULUM OVERVIEW

MASTER OF SCIENCE IN ENTERPRISE MANAGEMENT[1]

Specializations:

- **Information Security Analysis (ISA)**

Description:

This degree program prepares students to be strategic and tactical contributors in the development, implementation and evaluation of enterprise level programs. Specializations allow students to pursue a program of study which relates to their professional interests and goals.

Specializations:

Information Security Analysis (ISA)

Students examine the roles of security policies, standards, controls, and procedures in the implementation of the strategic security plan of an enterprise.

Program Objectives

- To gain knowledge in a specialized field of study based upon theory, concepts and skills relevant to managers.
- To apply critical thinking and problem-solving skills in the analysis of issues relevant to managers.
- To utilize secondary research competencies in the analysis of issues relevant to managers.
- To develop the necessary skills and perspectives to address a specialized area of enterprise management.

Learning Outcomes

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

- Compile, analyze, and assess the applicability of best practices in addressing enterprise management issues.
- Evaluate the impact of business constraints and processes on the implementation of enterprise programs.
- Integrate principles and techniques of risk analysis, project planning and change management in the development of enterprise strategies.
- Demonstrate secondary research skills in the investigation and selection of best practice solutions to address enterprise challenges.
- Demonstrate mastery of theory, concepts and skills in addressing specialized aspects of enterprise management issues.

Credit Requirements

The MSEM degree program consists of 36 semester credits beyond a baccalaureate degree, including 24 credits of core courses and 12 credits of specialization-specific courses.

SEQ #	COURSES, OBJECTIVES AND DELIVERABLES

[1] *Programs of study and course descriptions are subject to change without notice. Unless otherwise indicated all courses are three semester credits.*

1	***EM7020 Organizational Awareness***
	In this course, students critically analyze organizational awareness issues and evaluate best practices in implementing programs within the enterprise. (3 credits) **DELIVERABLES: Best Practice Analyses** **COURSE OBJECTIVES:** • To compare and contrast the mechanisms and procedures used by management to influence behavior, use, and content of an enterprise system. • To evaluate the impact of high level procedures, structures and standards used in defining, designing, and implementing enterprise systems and technology. • To analyze structures, transmission methods, transport formats and security measures that enable confidentiality, integrity and availability in business communications. • To assess best practices used in establishing controls, within business applications, that support the strategy of the enterprise.
2	***EM7030 Legal and Ethical Practices***
	In this course, students critically analyze ethical decision-making and evaluate the best practices employed in operations planning and management. (3 credits) **DELIVERABLES: Best Practice Analyses** **COURSE OBJECTIVES:** • To assess associated business risks of various frameworks, policies, and structures of enterprise information assets. • To evaluate physical, procedural, and environmental risks associated with a business information technology infrastructure. • To recommend procedures and best practices required to preserve business in the face of major disruptions to normal operations. • To propose best practices for the protection and control of information technology resources. • To evaluate ethical investigative measures and techniques used to identify and retain evidence of incidents within the constraints of regulations.
3	***EM7040 Organizational Change***
	In this course, students analyze the principles of change management as they apply to the requirements and regulations of an enterprise. Students evaluate the factors which affect corporate decision-making when implementing programs and the ability of the manager to translate corporate needs into information security projects. (3 credits) **DELIVERABLE: Change Management Plan** **COURSE OBJECTIVES:** • To analyze the factors influencing the need for change and the imperatives for managing change initiatives in the workplace. • To evaluate the need for a specific change initiative at the group and organizational level. • To evaluate how the proposed change aligns with corporate leadership goals and culture. • To develop a change strategy and identify potential resistance factors to be managed. • To apply appropriate models to implement a sustainable change initiative.

4	***EM8250 Web-Based Research Methods***
	In this course, students acquire information retrieval skills and research competencies to identify and evaluate industry-relevant sources of information for the purposes of analysis and research in the enterprise. Students compare and contrast the utility of publicly-available and subscription-based information sources for the purposes of meeting academic and professional requirements. (3 credits) **DELIVERABLES: Source Analysis; Comparative Analysis of Sources** **COURSE OBJECTIVES:** • To differentiate and classify secondary research sources based on their salient characteristics. • To critically examine the validity and credibility of industry relevant information sources used in an enterprise. • To evaluate and synthesize information sources relating to a topic relevant to an enterprise. • To critically analyze the applicability and relevance of specific information sources for the purposes of meeting academic and professional requirements.
5	***EM6000 Effective Writing***
	In this course, students utilize secondary research to analyze a current best practice or process. Students write and present a white paper providing a rationale for research to evaluate the effectiveness of that practice or process. (3 credits) **DELIVERABLE: A research position paper.** **COURSE OBJECTIVES:** • To demonstrate effective written and oral communication skills. • To demonstrate knowledge of the secondary research process. • To develop a rationale for applied research in an enterprise using literature review. • To demonstrate knowledge of APA requirements for format, source identification and citations in research writing.
6	***EM8010 Business Risk Analysis***
	This course provides students with an overview of risk management principles. Methods to identify, quantify, and qualify internal and external risks to the organization are examined. Students apply these principles and methods to the current business and risk environment. (3 credits) **DELIVERABLES: Case Study Analyses; Business Risk Assessment Report** **COURSE OBJECTIVES:** • To evaluate the role of business and technical risk analysis within the context of an enterprise. • To identify and analyze prevalent threats and vulnerabilities facing businesses today. • To identify and analyze business and technical threats to an organization. • To analyze and evaluate methods used to address business threats and vulnerabilities. • To identify and evaluate the controls necessary to address business and technical threats.
7	***EM8100 Project Management***
	In this course, students utilize PMI's Project Management Body of Knowledge (PMBOK) as a framework to apply project management concepts in the enterprise. Each student develops a project plan for a program assessment which incorporates the technical and behavioral characteristics of high performance teams. (3 credits) **DELIVERABLES: Project Charter; Work Breakdown Schedule (WBS); Project Plan** **COURSE OBJECTIVES:** • To evaluate the role of project management in improving the success of enterprise projects. • To demonstrate and apply knowledge of key project management terms and techniques. • To gain experience in the use of project management methodologies and techniques. • To develop skills in creating project management documentation.

8	***EM9200 Strategic Analysis***
	In this integrative course, students assess the risk associated with an identified management problem. Students then develop a risk mitigation strategy which integrates principles and techniques of risk analysis, project planning, and change management. (3 credits) **DELIVERABLE: Strategic Risk Mitigation Plan** **COURSE OBJECTIVES:** • To assess the level of risk in an organization with respect to an identified management problem. • To formulate a strategy to mitigate the identified risk while limiting liability exposure. • To evaluate the defined strategy to ensure that it either reduces, mitigates, or transfers risk, or results in an acceptable residual risk. • To develop a project plan for implementing the chosen strategy that addresses resources, schedules, and organizational change management requirements.
9	***Specialization Course***
10	***Specialization Course***
11	***Specialization Course***
12	***Specialization Course***

SPECIALIZATION: INFORMATION SECURITY ANALYSIS

9	***IA8120 Information Assurance Policy Planning and Analysis***
	In this course, students develop information assurance policies and deployment plans as part of the comprehensive strategic plan and operational objectives of the enterprise. (3 credits) **DELIVERABLES: Enterprise Security Critique; Security Governance Report** **COURSE OBJECTIVES:** • To analyze how legislation mandates the need for policy. • To identify policy requirements within a given environment. • To develop a policy statement that meets the identified needs. • To formulate an implementation strategy for the policy.
10	***IA8020 Security Policies, Standards and Procedures***
	In this course, students examine the role of security policies, standards and procedures in addressing business and technical risks and develop a security governance report to evaluate compliance across the enterprise. (3 credits) **DELIVERABLES: Enterprise Security Critique; Security Governance Report** **COURSE OBJECTIVES:** • To examine the role of security policies, standards and procedures in supporting information security and assurance across the enterprise. • To examine the management of security policy review and implementation projects. • To demonstrate how to effectively address business and technical risks to the enterprise through appropriate policies, standards and procedures. • To develop a security governance report to evaluate compliance across the enterprise.
11	***IA8030 Design, Development and Evaluation of Security Controls***
	In this course, students transform high-level policies and procedures into quantifiable and measurable controls and mechanisms that enforce data and process integrity, availability and confidentiality. (3 credits) **DELIVERABLES: General IT Controls Review; Application Controls Review** **COURSE OBJECTIVES:** • To analyze and evaluate the interrelationship between risk management objectives and the application of effective business and IT controls. • To identify, define and evaluate key business and IT processes, requirements and performance metrics used by management to monitor and control risk. • To identify, analyze and evaluate organizational, administrative, network, and application-specific controls and risk mitigation strategies to meet business and technical objectives. • To demonstrate knowledge of the management of business and IT controls assessment projects. • To transform high-level business and technical objectives into quantifiable and measurable controls and mechanisms which enforce data and process integrity, availability and confidentiality.
12	***IA8190 Forensic Evaluation and Incident Response Management***
	In this course, students explore the essentials of electronic discovery and analyze issues related to cyber evidence. Using this evidence, students identify and analyze the nature of security incidents, the source of potential threats and the methods used in incident management and mitigation. Students also analyze the technical and business issues which affect the actions of the enterprise in responding to a security incident. (3 credits) **DELIVERABLE: Forensic Evaluations; Incident Response Plan** **COURSE OBJECTIVES:** • To identify and analyze the nature of computer security incidents and the source of potential threats. • To demonstrate knowledge of a methodology for end-to-end incident management and mitigation. • To analyze and evaluate the technical issues associated with incident management and in the identification of criminal actions using network trace back and computer forensics. • To identify, analyze and evaluate the business and non-technical drivers associated with incident management such as legal issues as well as to demonstrate knowledge of the application of the rules of evidence to electronic security incidents.