MASTER OF SCIENCE IN MANAGEMENT INFORMATION SYSTEMS CONCENTRATION IN INFORMATION ASSURANCE

The Master of Science in Management Information Systems concentration in information assurance is designed to develop skilled and principled information technology professionals who can add value to the systems problem solving process and advance the information technology practice. The program prepares students for careers in information security and other information technology fields. In particular, students are equipped to be security analysts, designers, auditors or managers, with an appropriate range of knowledge and skills to develop and manage a company's or institution's security architectures, standards, policies and programs.

The program also enables BRAC-affected personnel to acquire the knowledge and skills essential for developing organizational standards, managing current policies, and analyzing emerging issues in information threat management. It is designed primarily for online delivery, and provides unique learning experiences through virtual laboratories that mimic the work environment of IT security professionals.

The program requires **3 foundation courses, 6 core courses** and **3 elective courses chosen** from one of the three concentration tracks: *Database and Web Security*, *Information Assets Protection*, and *Network Security*.

Admission Requirements

Prospective candidates must submit evidence of completion of a bachelor's degree (in business, management, computer information systems, computer science, accounting, engineering or other related field) from an accredited institution, with a cumulative GPA of 2.5 or better. Candidates should also meet other general admission requirements established by the Graduate School. BRAC-affected candidates may be eligible for a waiver of the 12-month Maryland residency requirement. GRE or GMAT is not required for admission.

Degree Requirements: a minimum of 36 semester hours consisting of three (3) foundation, six (6) core and three (3) elective courses.

Foundation Courses (9 Credits)

The foundation courses are:

- INSS 615: Principles & Practices of Information Systems Development
- INSS 640: Information Systems Analysis & Design
- INSS 650: Database Management & Decision Systems

Those who have completed these courses within the last 5 years prior to registration can transfer the credits. Those who have IT experience can test out of these courses and substitute them with other approved courses needed to satisfy the 36-credit program requirement.

Core Courses (18 Credits)

INSS 735– Information Systems Security
INSS 783 – Internet and Network Security
INSS 781– Computer Forensics
INSS 789 –Applied Cryptography
INSS 790 –Applied Research Project in Information Assurance
INSS 887 – Emerging Issues in Information Security Management

Concentration Courses

Database and Web Security Concentration (9 credits)

INSS 750 – Database and Distributed Systems Security
INSS 773 – Digital Business Security
INSS 786 – Information Privacy and Security

Information Assets Concentration (9 credits)

INSS 785 – Project and Change Management in Information Assurance
INSS 778 – Information Security Risk Management
INSS 779 – Advanced Information Assurance

Network Security Concentration (9 credits)

INSS 777 – Advanced Information and Network Security
INSS 770 – Auditing, Monitoring, and Intrusion Detection
INSS 787– Wireless Security

Some courses will have equivalent face-to-face and online versions, to maximize flexibility.

Virtual Laboratory

A virtual security laboratory, which is LAN accessible by any student who has Internet access and a valid account, is established for the program. Once authenticated into the lab, students can access any of the labs and complete their hands-on exercises and projects. Most courses have hands-on exercises and projects that correspond to problems in the workplace.

Curriculum Sequence

The following sequence represents a typical selection of courses. The recommended course sequence is as follows:

First and Second Semesters

INSS 615 – Principles and Practices of Information Systems Development
INSS 640 – Information Systems Analysis & Design
INSS 650 – Database Management and Decision Systems
INSS 735– Information Systems Security
INSS 783 – Internet and Network Security
Elective (1 course)

Third and Fourth Semesters

INSS 781– Computer Forensics
INSS 789 –Applied Cryptography
INSS 790 –Applied Research Project in Information Assurance
INSS 887 – Emerging Issues in Information Security Management
Electives (2 courses)
Comprehensive Examination

Program of Study

Each student is required to complete a Program of Study form in consultation with his/her advisor, during the first semester of enrollment. The program of study designates the student's track selection and is required for advancement to candidacy. Students are strongly encouraged to discuss with their assigned advisor or the Program Coordinator for advisement concerning the program.

Advancement to Candidacy

Upon completion of the foundation courses and 12 credit hours of core coursework (INSS 735, INSS 781, INSS 783, and INSS 789), the student could apply for advancement to candidacy. The minimum GPA for advancement to candidacy is 3.25.

Comprehensive Examination

To qualify to take the Comprehensive Examination, a student must have completed at *least 24 credit hours* of coursework taken at Bowie State University and must have been advanced to candidacy. Students enrolled in coursework that would result in the completion of the minimum 24 credit hour requirement may, with the permission of the Program Coordinator, be allowed to take the comprehensive examination during the same semester. Students are strongly encouraged to take the comprehensive examination after the completion of the core courses covered by the examination and *at least one semester prior to the date they expect to graduate*. The MIS faculty offers comprehensive examination orientation and review sessions prior to the examination.

Applied Research Project (INSS 790)

The project involves original or advanced research effort in Information Assurance. Prior approval by a faculty sponsor who supervises the student's work is required.

Further information can be obtained by contacting the department.

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Information Assurance