

# The Forgotten Information Assurance Professional - Educating the Senior IT Manager

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## Overview

- Intro to IRMC and NDU
- Indications of the Need for Senior IT Manager Education
- Federal CyberService Scholarship Programs
- Federal Laws and Regulations
- IRMC Approach to Information Security
- Suggested Improvements to University Programs

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## National Defense University and IRMC



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## National Defense University

- Senior University for Joint Professional Military Education under the sponsorship of the Chairman of the Joint Chiefs of Staff. Accredited to offer Masters degrees by Middle States Association
- Component Colleges:
  - National War College
  - Industrial College of the Armed Forces
  - Information Resources Management College
  - Joint Forces Staff College
  - Specialty Centers and Institutes

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## Information Resources Management College

- A National Security Agency Center of Academic Excellence for Information Assurance Education
- Prepares leaders to direct the information component of national power by leveraging information and information technology for strategic advantage.
- Students are GS-12 to GS-15 and SES, and officers from Major (or Navy Lt Cmdr) to Colonel (or Navy Captain)

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## Information Resources Management College (cont'd)

- Founded in 1988
- Three departments: Information Acquisition, Information Strategies, and Information Operations and Technology
- Three Certificate Programs:
  - Advanced Management Program
  - Chief Information Officer Certificate
  - Information Assurance Certificate
- Masters programs with Syracuse, Maryland and East Carolina

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## Indications of the Need for Senior IT Manager Education

- GAO-01-1132T (9/12/01) on Critical Infrastructure Protection
  - Sept 96, reported serious weaknesses at 10 of the 15 largest Federal agencies
  - In 1998 and 2000, an examination of 24 of the largest Federal agencies found significant information security weaknesses at all of them
  - In 1997, GAO added information security as a high-risk issue

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## Indications of the Need for Senior IT Manager Education (cont'd)

- Weaknesses continue in six major areas:
  - Security Program Management
  - Access Controls
  - Software Development and Change Controls
  - Segregation of Duties
  - Operating System Controls
  - Service Continuity

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## Indications of the Need for Senior IT Manager Education (cont'd)

- GAO reported:
  - In August that Commerce's systems were at risk
  - In July that Interior's National Business Center, that processes \$12 billion annually, had serious weaknesses
  - In March, the DoD's Department-wide Information Assurance Program had not yet met its goals of integrating information assurance with mission readiness criteria, increased infosec awareness by department personnel, etc.

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## Indications of the Need for Senior IT Manager Education (cont'd)

- Last February, the National Institutes of Standards and Technology held a one-day educational event titled, "Pitching IT Security to Your Federal Manager." It offered to present an easy approach to selling and gaining support for IT security. The topics covered were requirements, customers, resources, timing and strategy. The target audience was government IT security managers and professionals

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## Indications of the Need for Senior IT Manager Education (cont'd)

- A deputy CIO of a major Federal government agency stated that IT security was the primary goal of the agency CIO. When asked to identify three IT security issues, none were named. It was also disclosed that a major organizational system did not require users to logon and logoff.
- A major government electronics firm senior IT executive said that hacker intrusion was not part of the corporate disaster recovery plan. In fact, he said that his primary concern was hurricanes and airplanes.

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## Indications of the Need for Senior IT Manager Education (cont'd)

- A May 2001 review of the 20 non-DoD Centers of Academic Excellence in Information Assurance Education with MBA or MS in Management programs showed:
  - None mentioned InfoSec in the MBA MIS core course description
  - 5 mentioned InfoSec in their MIS electives course description

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## CyberService Scholarship Programs

- National Science Foundation
  - Provides funding to colleges and universities to award scholarships in information assurance and computer security fields. Scholarship recipients will become part of the Federal Cyber Service of information technology specialists who ensure the protection of the U.S. Government's information infrastructure. Upon graduation after their two-year scholarships, the recipients will be required to work for a federal agency for two years as their Federal Cyber Service commitment.

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## CyberService Scholarship Programs

- Department of Defense Information Security Scholarship
  - Centers of Academic Excellence establish a scholarship program for students enrolled in their institutions to pursue undergraduate and graduate degrees, and graduate certificate programs in information assurance disciplines. Scholarships to pursue advanced degrees in information assurance disciplines will also be awarded to DoD civilian employees and military members. Recipients of scholarship aid, in exchange for financial assistance, are required by the statute to serve a period of obligated service in DoD as a civilian employee or a member of one of the armed forces.

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## Some Federal InfoSec Laws and Regulations

- Government Information Security Reform Act (government and contractor impact)
- The Clinger-Cohen Act
- OMB Circular A-130 Review
- Defense Information Technology Security Certification and Accreditation Process (DITSCAP)
- Designated Approving Authority - The official with the authority to formally assume responsibility for operating a system at an acceptable level of risk.

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## IRMC Approach to Information Security

- Started with NSTISSI 4011 standard for Information Systems Security Professionals
- Developed 4 courses aimed at senior-level management
  - Assuring the Information Infrastructure
  - Critical Information Systems Technologies
  - Managing Information Security in a Networked Environment
  - Enterprise Security Policies, Guidelines, and Standards

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## IRMC Approach to Information Security (cont'd)

- Developed residential and distance learning versions of courses
- Continuously refine courses based on student evaluations

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## Suggested Improvements to University Programs

- Understand the role and size of Federal, State, Local Government, and government contractor employment in the InfoSec universe
- Determine the InfoSec Management education requirements for senior management, senior IT management, mid-level IT management, and for hacker trackers.

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## Suggested Improvements to University Programs (cont'd)

- Insure that MBA core MIS courses include appropriate InfoSec Management education
- Develop graduate level certificate programs for InfoSec Management for mid-level and senior-level IT managers
- Include InfoSec Management in executive-level seminars

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Questions

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