IRMC

NATIONAL DEFENSE UNIVERSITY

- *Building Communities*
- *Crossing Boundaries*
- *Transforming Organizations*

1988   2008

Twenty Years of Shaping the Future

IRMC

Information Resources Management College

2008 - 2009
CATALOG

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Catalog is current as of 20 June, 2008.
Updates are made on the IRMC website at
www.ndu.edu/irmc.

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Mission, Vision, and Goals

MISSION

Prepare military and civilian leaders to direct the information component of national power by leveraging information and information technology for strategic advantage.

VISION

The recognized world leader in information resources management educational services.

GOALS

- Foster critical thinking and leadership through high-quality graduate-level executive education, development, and scholarship in defense, Joint Professional Military Education, and interagency information resources management to support national security and government effectiveness.

- Continually upgrade curriculum to reflect the changing environment, technological advancements, and evolving stakeholder and customer needs.

- Use state-of-the-art educational and information technology in both the curriculum and the facilitation of learning.

- Nurture and expand strategic partnerships and interactions with the Department of Defense and other government agencies, private sector, academia, and international organizations to enhance learning opportunities for global unity of effort that anticipates and addresses complex security challenges.

- Continually invest in faculty and staff intellectual capital to promote excellence and leadership in IRM education, scholarship, student learning, outreach, and Joint Professional Military Education.

- Leverage information technologies to strengthen college administration and to increase educational services for students and foster lifelong learning in global defense and interagency government communities.

MESSAGE FROM THE DIRECTOR

Our last 20 years of educating information leaders at the IRM College has been one of success and tremendous growth! When we were created in 1988, the college offered one program for DOD students only, and now we offer ten graduate certificate programs for DOD, federal agencies, private sector, and international students. The IRM College is the place to be for 21st Century leaders!

In conjunction with our 20th anniversary celebration, the IRM College hosted Cybersecurity and Privacy symposia, and sponsored a Virtual Worlds Expo for nearly 2,000 attendees in April. On September 19, 2008, the College will host a symposium, "Government 2.0 and Beyond: Harnessing Collective Intelligence." This event will be in conjunction with our annual Academic Partner Open House. The College will continue to host educational symposia in 2009 highlighting the hottest topics. Visit our website often (www.ndu.edu/irmc) for more details and registration information on upcoming events.

Our latest achievements include expansion of the Government Strategic Leader (GSL) Certificate program into our very first Master's Degree. The GSL Master of Science Degree will bring together inter-agency students with a desire to become agile and adaptable information leaders to meet the national security challenges of the future. In addition, the College is sponsoring the Chief Financial Officer (CFO) Academy and will begin offering a CFO Leadership Certificate in the fall of 2008.

To further support experiential learning, the IRM College recently expanded its Information Assurance laboratories to provide hands-on tools and techniques for students to observe the vulnerabilities and protections of various operating systems. Our Innovations and Simulations labs provide high-speed independent internet access, an independent network and server complex, multiple stations to exhibit data on high definition screens, multiple projectors, high-end gaming computers, VoIP video conferencing, and a Crisis Simulation Center capable of multiple live data streams. The lab serves as the College hub for all gaming and simulations.

The College's influence continues overseas as we provide educational capacity-building programs in countries such as Bulgaria, Romania, United Kingdom, Poland, Singapore, and Sweden. Also, we cross over the government/private sector boundary to partner with such technology powerhouses and forward-thinking organizations as Google, IBM, CISCO, NASA, Motorola, Northrop-Grumman, Sprint/Nextel, Forterra, and BrainKeeper.

Students at the IRM College do not stop learning when they leave our doors. They can join the Association of the IRM College to participate in professional, social, and networking opportunities. Please take a few moments to browse our catalog, and contact any faculty or staff member with questions. We hope to see you soon!

Robert D. Childs
Senior Director, IRM College

The IRM College Educational Experience

"The professors and staff at the IRM College are very encouraging and I really appreciated their knowledge and expertise."

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"I feel honored to take part in the programs at the IRM College. I cannot wait for my next class to start."

❧❧

"This is the best educational experience I have encountered in my 20 plus years in government service."

❧❧

"I expect great things from the IRM College: top-notch faculty, relevant and meaningful courses , and a collaborative and student-centered environment."

❧❧

"The courses and certificates at the IRM College have a direct impact on my day-to-day work and will enable me to be more competitive."

❧❧

"I feel honored to be here among my peers, sharing original ideas."

A GLOBAL COMMUNITY OF INFORMATION LEADERS

The IRM College offers a wide spectrum of educational activities, services, and programs to prepare information leaders to play critical roles in national security in the Information Age. In every course, program, and workshop, students with diverse perspectives contribute to a rich and dynamic learning environment. They are motivated to learn and share knowledge, experience, and best practices. Our students are encouraged to become better leaders and decision-makers and to master the tools of lifelong learning. Students, graduates, employers, leaders, and practitioners create a global learning community in a rich environment in which innovation and creativity flourish.

Strategic Leader Development for You and Your Organization

The College offers a dynamic range of courses and programs in important information and information resources management topics and issues to develop strategic leaders for the Information Age. Through these educational experiences, information leaders can explore and master the concepts, knowledge, tools, and competencies to transform their organizations. In addition to graduate-level courses, the IRM College offers all courses for professional development and welcomes students to enroll without seeking a certificate or academic credit. A third option for strategic leader development is "education in context." These educational opportunities include workshops, presentations, forums, and events to develop the government workforce to meet the needs of agencies to accomplish their missions, and to develop leaders who can leverage the information component for national security. The College submitted a proposal to the Department of Education to offer a Government Strategic Leader (GSL) Master of Science Degree. The GSL Master's Degree will have a core of management and leadership courses focused on the unique challenges and opportunities of defense and government, and a specialization that aligns with various certificates.

Learning That Is Current, Relevant, and Future-Focused

Our faculty offer innovative curricula focused on relevant questions, challenges, and opportunities facing today's defense and government leaders. While challenging students to develop their competencies in communication, critical thinking, collaboration, and leading change, the faculty guide students through interactive instruction, including case studies, problem-based learning, field studies, and simulations. These activities are supplemented by a variety of guest speakers, leaders and experts in their fields who contribute unique perspectives and experiences to the learning environment.

Access to Learning Wherever You Are

To respond to the needs of its learning community, the IRM College offers students opportunities and tools for face-to-face interaction, e-learning, online library resources, and course management software. Classrooms on campus at Fort Lesley J. McNair in Washington, D.C., are equipped with laptop computers for student use during eResident classes. Blackboard (Bb) supports the virtual classroom environment for all students and faculty. Online library resources are available via web access from office and home. The College regularly pilots new technologies to enhance the teaching and learning process and provides students and their organizations with flexible learning options to accommodate their location, work schedule, and learning preferences.

 The College offers courses in the following formats:

• **Intensive courses** offered either in residence at Fort McNair or by distributed learning for students around the globe.
  • The **eResident** format uses a blended approach to engage learners in various learning activities:
    » Pre-course materials in Blackboard (Bb): Students may access course materials up to 13 days prior to the start date of the course through our online learning platform, Blackboard.
    » In-residence portion: Students attend a one-week in-residence portion (see published Schedule of Classes for dates).
    » Graded assessment portion: Students enrolled for certificate/graduate credit must complete an end-of-course assessment. This assessment normally consists of a paper or project. (The student may engage with the faculty and/or other students virtually for up to three weeks after the in-residence instructional period.)

Dr. Marwan Jamal conducts a seminar in the IRM College Innovations and Simulations Laboratory.

  • The **Distributed Learning (DL)** format engages students virtually in 10 to 12 weeks of instruction in Bb, use of online library resources, and assignments with faculty and other students.
    » Graded assessment portion: Students enrolled for certificate/graduate credit must complete an end-of-course assessment. This assessment normally consists of a paper or project. (The student may engage with the faculty and/or other students virtually for up to three weeks after the instructional period.)

• **The Advanced Management Program (AMP)**, a 14-week resident program conducted at Fort McNair in Washington, D.C.

• **Elective courses** offered for AMP, National War College, Industrial College of the Armed Forces, and School for National Security Executive Education students in residence at Fort McNair.

• **Seminars, symposia, forums, workshops,** and other educational activities that faculty conduct to meet particular learning needs of organizations, and to address particular issues and topics.

• **Emerging Leader Workshops** address the needs of future leaders and those who want to move to the next level of their careers. Geared toward GS-9s to GS-11s or equivalents, the workshops provide foundational education in the issues, challenges, and competencies of information leaders. The three-day Emerging Leader Workshop will be offered twice a year using an active learning model. Watch the IRM College website (www.ndu.edu/irmc) for information about dates.

The College at a Glance
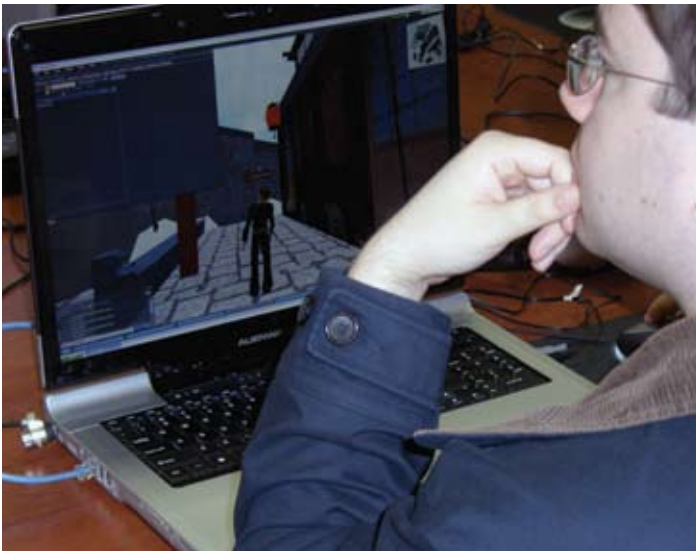
The Senior Director of the IRM College provides strategic direction and vision for all faculty, staff, and students, while the Dean of Faculty and Academic Programs oversees faculty, curriculum, and instruction. The Dean of Students and Administration oversees operational support for the College. The following three academic departments and one Academy conduct the College's educational programs:

• **The Information Strategies Department** focuses on policy and planning processes, leadership and management competencies, and perspectives for information resources management that form the foundation of the College's Chief Information Officer (CIO) Certificate Program. Consistent with the Clinger-Cohen Act (CCA) of 1996, the department delivers CCA core courses and works closely with other departments to prepare graduates for leadership positions in the offices of CIOs across DOD and the Federal Government. The Department also conducts the Organizational Transformation Certificate Program designed to prepare individuals to leverage information and information technology to transform government.

• **The Information Operations and Assurance Department** focuses on information operations, assurance, and security in the planning and execution of national and military strategy. The Information Assurance (IA) Certificate Program consists of a series of certificates that emphasize security issues and fundamental approaches to the protection of the nation's information infrastructure. The College offers five certificates in IA: National Training Standard for Information Systems Security Professionals (NSTISSI No. 4011), National Information Assurance Training Standard for Senior Managers (CNSSI No. 4012), National Information Assurance Training Standard for System Security Certifiers (NSTISSI 4015), National Information Assurance Training Standard for Risk Analysts (CNSSI 4016), and the Chief Information Security Officer (CISO) Certificate.

• **The Systems Management Department** delivers courses and programs focused on successful application of project and program leadership skills, policies, best practices, and tools to acquire and manage an enterprise's information systems, software, and services. Its courses examine IT project and program management, acquisition, enterprise architecture strategies, business case development, and data management strategies. The Systems Management Department conducts the Enterprise Architecture and IT Project Management Certificates.

Chief Financial Officer (CFO) Academy

The IRM College launched the Chief Financial Officer Academy in the summer of 2008. The CFO Academy offers graduate-level educational courses and services for middle to senior-level personnel in the government financial management community to prepare them to create and lead 21st Century government organizations. The CFO Academy sponsors the new CFO Leadership Certificate. Details about the CFO Leadership Certificate are available on the College website at http://www.ndu.edu/irmc.

National Center of Academic Excellence in Information Assurance Education

The IRM College is a National Center of Academic Excellence (CAE) in Information Assurance Education as certified by the National Security Agency and the Department of Homeland Security. The College was originally certified in the year 2000 and subsequently re-certified twice. The College established the Center for Information Assurance Education to conduct education and research focused on concepts and best practices related to information assurance for national security. By playing a leadership role in information

assurance strategies, the Center facilitates understanding of the status and practices of information assurance, and conducts and disseminates research on information security, information operations, homeland security, and critical infrastructure protection.

Joint Professional Military Education (JPME)

The IRM College provides instruction as a component of the Joint Professional Military Education (JPME) taught by the Industrial College of the Armed Forces (ICAF) and the National War College (NWC). The Information Operations Concentration Program, open to select students of ICAF and NWC, consists of three required electives focused on the use of information in the planning and execution of national strategy, military strategy, and joint operations. Additionally, other students from ICAF and NWC may attend up to four elective courses at the IRM College during their academic year. Select electives may also be credited toward completion of the certificate programs offered by the College.

"I very much appreciate what the IRM College is offering and I've signed up for classes throughout the remainder of the year!"

❧❧

"The exercises and paper were real-world and relevant. They made me think strategically. The courses at the IRM College will SIGNIFICANTLY aid my Agency upon my return."

❧❧

"The things I learned at the IRM College gave me a valuable new perspective on both professional and personal dimensions."

❧❧

"Each time I take a class at the College I'm surprised how much I learn – how much I didn't know."

❧❧

"I take a great deal of pride attending each and every course at the IRM College and the National Defense University. The professors are first rate and committed to the student's learning."

Information Resources Management College, June 4, 2008.

Professional Development Opportunities

IRM College offers all courses for either graduate/certificate credit (academic credit) or professional development (non-credit).

The College welcomes students who wish to enroll in individual courses to learn and to connect with others without seeking a certificate or academic credit. In such cases, we will record a grade of Professional Development (PD) in the student's academic record and post it on the official NDU transcript. (Refer to the section on Grading for more information.) Students enrolled in certificate programs may take courses for a PD grade; however, for courses to count toward a certificate, the Master's Degree, or as a prerequisite, students must take them for credit. Students who elect to take coursework for graduate/certificate credit will receive three semester hours of academic credit for each course.

Students electing courses for professional development will:
- discuss their intent to take a course for professional development with each Offering Leader, and
- complete attendance and participation requirements for the course as outlined in their assessment plan.

Professional Development Enrollment

Students undecided on which certificate program best suits their needs may enroll in the College as Professional Development students. Professional Development students may take courses for either graduate/certificate credit (academic credit) or professional development (non-credit). Students may transfer an unlimited number of courses taken while in a Professional Development student status toward a certificate requirement at any time, as long as the course was taken for academic credit (not a PD grade). This will allow undecided students to sample courses before applying to a certificate program.

If you are not already in a certificate program, you may enroll in the IRM College as a Professional Development student through the IRM College website (http://www.ndu.edu/irmc).

WHY YOU MIGHT CHOOSE A PROFESSIONAL DEVELOPMENT OPTION:

➤ You are looking for courses designed to enhance your ability to perform your job more efficiently and effectively.

➤ You completed a certificate with the IRM College and/or have an advanced degree and are now focused on specific tasks or duties that require additional knowledge or perspective.

➤ You are an information leader who wants to refresh your knowledge by taking new courses.

➤ You are new to the IRM College and interested in trying out the courses before you commit to a certificate program.

➤ Your career field requires you to take continuing education courses to satisfy or maintain certifications. Talk with your personnel office to ensure you are enrolling in the correct courses.

GOVERNMENT STRATEGIC LEADER MASTER OF SCIENCE

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Government Strategic Leader (GSL) Master of Science Degree

(Pending Approval*)

The Government Strategic Leader (GSL) Master of Science Degree Program addresses the educational needs of defense and government leaders who seek to lead complex and diverse 21st Century organizations. Today, even the most seasoned government leaders are facing extraordinary challenges in managing resources, using communication technologies, understanding social networks, and competing globally. Information Age leaders must know how to respond to rapidly evolving priorities and how to leverage a multi-generational workforce. They must be agile and adaptable to meet the national security challenges of the future. National security is increasingly recognized as an inter-agency responsibility and not just the purview of the Department of Defense.

The curriculum of the GSL Master of Science Degree offers a combination of management and leadership intensive courses in a collaborative and interactive environment. Participants from across defense and federal, state, and local government organizations create a learning community where partnerships, information sharing, and network synergies serve as force multipliers.

APPLICATIONS ARE BEING ACCEPTED NOW!

*The IRM College is inviting applications for the new Master's Degree as one of the first steps in the approval process through the U.S. Department of Education and U.S. Congress. Many of the courses in the curriculum are already available and more will be offered in the year ahead. We anticipate the degree being approved by the Department of Education in academic year 2008-2009. ***Once the approval process is complete, students will receive graduate credit for the appropriate courses taken from the point of their matriculation.***

GOALS OF THE DEGREE PROGRAM

Successful graduates of the Master of Science Degree will be able to:

- Evaluate the role, challenges, and opportunities of their organizations within the context of homeland, national, and global security.

- Apply critical and innovative thinking to achieve results-oriented organizational goals.

- Collaborate across boundaries to leverage talent, resources, and opportunities to achieve mission outcomes.

- Create resilient, adaptable, agile, and productive government organizations focused on national security in the Information Age.

- Commit to lifelong development of self and others as reflective learners.

- Lead Information Age defense and government organizations.

- Employ information and information technology for strategic advantage.

DEGREE REQUIREMENTS

The GSL Master of Science Degree requires successful completion of 36 to 39 graduate credits, depending on the specialty selected. There is no thesis requirement. The Program consists of twelve (12) or thirteen (13) courses comprised of four components: Foundation (two required courses), Management (three selected courses), and Leadership (three selected courses). The final component is a Specialty in one of five areas chosen from the existing certificates offered by the IRM College.

Foundation
Global Strategic Landscape
Organizational Culture for Strategic Leaders

Management
Enterprise Strategic Planning
Strategies for Process Improvement
Measuring Organizational Performance
Federal Budgeting & Financial Management
Terrorism and Crime in Cyberspace
Continuity of Operations
Strategic Information Technology Acquisition

Leadership
Leadership in the Information Age
Multi-Agency Information-Enabled Collaboration
Leading the 21st Century Workforce
Enterprise Architecture for Leaders
Decision Making for Government Leaders
Strategic Communication for Government Leaders

Courses in the Government Strategic Leader Certificate (see section on GSL Certificate) form the core of the Master's program. They align with a required leadership portfolio. Courses may be taken for the Certificate alone or as the core for the Master's Degree program. Specialties in the Master's Degree correspond to the College's certificate programs (Chief Information Officer, Organizational Transformation, Enterprise Architecture, Information Operations and Information Technology Project Management).

Program Completion Time Limit: All coursework applied toward a M.S. degree must be completed within the previous seven years. Students must successfully complete at least one course every 18 months to maintain active status in the program.

Applying Coursework Earned Prior to Program Admission: If a student has completed IRM College coursework in a certificate program, he/she may apply eligible courses to the Master of Science Degree. Eligible courses are those that directly apply to the Master of Science Degree requirements. Courses taken for a grade of Audit (AU) or Professional Development (PD) are not eligible. All coursework applied toward a M.S. degree must be completed within the previous seven years.

Portfolio Requirement: Master of Science Degree students are required to complete an electronic portfolio (e-portfolio) during the course of their program. As part of the Degree Program, guided by a faculty member, students will collect and assemble electronic evidence of their academic work and their reflections on their leadership development. The e-portfolio may include papers, presentations, projects, pictures, hyperlinks, and blog entries. The e-portfolio is a learning record of achievement and is used to facilitate students' reflection on their own learning. This is a non-credit activity.

Government Strategic Leader Master of Science with CIO Specialty (12 Courses = 36 credits)

Foundation Courses (2 courses)		
req	GSL	Global Strategic Landscape
req	OCL	Organizational Culture for Strategic Leaders
Management Courses (3 courses)		
req	MOP	Measuring Results of Organizational Performance
	COO	Continuity of Operations
	ESP	Enterprise Strategic Planning
	PRI	Strategies for Process Improvement
	TCC	Terrorism and Crime in Cyberspace
Leadership Courses (3 courses)		
	ARC	Enterprise Architecture for Leaders
	LDC	Leadership for the Information Age
	SCL	Strategic Communication for Government Leaders
CIO Specialty Courses (2 courses)		
req	AII	Information Assurance and Critical Infrastructure Protection
req	CWC	The Changing World of the CIO
Other Course (2 courses)		
		Any course from the College catalog

Government Strategic Leader
Master of Science with OT Specialty
(12 Courses = 36 credits)

Foundation Courses (2 courses)

req	GSL	Global Strategic Landscape
req	OCL	Organizational Culture for Strategic Leaders

Management Courses (3 courses)

	BFM	Federal Budgeting and Financial Management for Strategic Leaders
	COO	Continuity of Operations
	ESP	Enterprise Strategic Planning
	MOP	Measuring Results of Organizational Performance
	TCC	Terrorism and Crime in Cyberspace

Leadership Courses (3 courses)

req	MAC	Multi-Agency Information-Enabled Collaboration
	DMG	Decision Making for Government Leaders
	SCL	Strategic Communication for Government Leaders

OT Specialty Courses (2 courses)

req	LSI	Leading Strategies for Disruptive Innovation
req	TAS	Transformation as Strategic Alignment

Other Course (2 courses)

	Any course from the OT Certificate Program

Government Strategic Leader
Master of Science with ITPM Specialty
(13 Courses = 39 credits)

Foundation Courses (2 courses)

req	GSL	Global Strategic Landscape
req	OCL	Organizational Culture for Strategic Leaders

Management Courses (3 courses)

	BFM	Federal Budgeting and Financial Management for Strategic Leaders
	COO	Continuity of Operations
	ESP	Enterprise Strategic Planning
req	ITA	Strategic IT Acquisition
	MOP	Measuring Results of Organizational Performance
	PRI	Strategies for Process Improvement
	TCC	Terrorism and Crime in Cyberspace

Leadership Courses (3 courses)

	ARC	Enterprise Architecture for Leaders
	DMG	Decision Making for Government Leaders
	LDC	Leadership for the Information Age
	MAC	Multi-Agency Information-Enabled Collaboration
	SCL	Strategic Communication for Government Leaders

ITPM Specialty Courses (5 courses)

req	BBC	Building an IT Business Case
req	CST	Critical Information Systems Technology
req	IPL	Information Technology Program Leadership
req	ITP	Information Technology Project Management
req	SAL	Software Acquisition Leadership

Government Strategic Leader
Master of Science with EA Specialty
(12 Courses = 36 credits)

Foundation Courses (2 courses)

req	GSL	Global Strategic Landscape
req	OCL	Organizational Culture for Strategic Leaders

Management Courses (3 courses)

req	ESP	Enterprise Strategic Planning
req	PRI	Strategies for Process Improvement
	BFM	Federal Budgeting and Financial Management for Strategic Leaders
	MOP	Measuring Results of Organizational Performance
	TCC	Terrorism and Crime in Cyberspace

Leadership Courses (3 courses)

req	ARC	Enterprise Architecture for Leaders
	DMG	Decision Making for Government Leaders
	LDC	Leadership for the Information Age
	MAC	Multi-Agency Information-Enabled Collaboration
	SCL	Strategic Communication for Government Leaders

EA Specialty Courses (4 courses)

req	DMS	Data Management Strategies and Technologies: A Managerial Perspective
req	PMA	Planning and Managing Enterprise Architecture Programs
req	GIG or FAC	Global Information Grid Architecture and Advanced Concepts or Federal Enterprise Architecture and Advanced Concepts
req	EAP	Enterprise Architecture Practicum

Government Strategic Leader
Master of Science with IO Specialty
(13 Courses = 39 credits)

Foundation Courses (2 courses)

req	GSL	Global Strategic Landscape
req	OCL	Organizational Culture for Strategic Leaders

Management Courses (3 courses)

req	COO	Continuity of Operations
req	TCC	Terrorism and Crime in Cyberspace
	BFM	Federal Budgeting and Financial Management for Strategic Leaders
	ESP	Enterprise Strategic Planning
	ESS	Enterprise Information Security and Risk Management
	MOP	Measuring Results of Organizational Performance
	PRI	Strategies for Process Improvement

Leadership Courses (3 courses)

req	MAC	Multi-Agency Information-Enabled Collaboration
req	SCL	Strategic Communication for Government Leaders
	ARC	Enterprise Architecture for Leaders
	DMG	Decision Making for Government Leaders
	LDC	Leadership for the Information Age

IO Specialty Courses (5 courses)

req	SEC	Cyber Security for Information Leaders
req	IOS	Information Operations and National Security in the Information Age
req	IWS	Information, Warfare, and Military Strategy
req	AII or SIO	Information Assurance and Critical Infrastructure Protection or Strategic Infrastructure Operations
req	JIOPC	Joint Information Operations Planning Course (offered by Joint Forces Staff College)

CERTIFICATE PROGRAMS

Advanced Management Program (AMP)

Chief Financial Officer (CFO) Leadership Certificate

Chief Information Officer (CIO) Certificate

Enterprise Architecture (EA) Certificate

Government Strategic Leadership (GSL) Certificate

Information Assurance (IA) Program

Information Technology Project Management (IT-PM) Certificate

Organizational Transformation (OT) Certificate

Advanced Management Program (AMP)

The Advanced Management Program (AMP) is a 14-week resident graduate program designed for middle to senior managers who exercise leadership and carry responsibility for promoting and attaining national security, agency, and inter-agency goals through the use of information and/or information technology. The AMP is a highly interactive student-centered educational experience in which collaboration, communication, and critical thinking skills are modeled. The AMP prepares successful graduates to:

- Lead within and across organizational boundaries by leveraging information and information technology for strategic advantage;

- Balance continuity and change in the development, implementation, and evaluation of information resources management strategies and policies while meeting legislative and executive mandates;

- Link critical decisions regarding people, processes, and technologies to performance, results, and information assurance requirements;

- Commit to ongoing leadership development of self and others; and

- Synthesize theory and best practices from government, private sector, and not-for-profits to achieve the organization's mission.

The AMP has three elements that define its unique educational experience.

- First, the AMP curriculum's core and elective graduate-level courses provide a foundation in a broad range of information resources management disciplines. Graduates earn a Chief Information Officer (CIO) Certificate and can make progress toward completion of other certificates offered by the IRM College. Information Assurance Scholarship Program students are required to complete all four courses of the IA 4011 Certificate.

- Second, the program's strategic leader development curriculum provides an integrated set of learning activities that build leadership capacity and the ability to develop other strategic leaders. This curriculum focuses on enhancing leadership competencies in the areas of communication,

Former Comptroller General of the United States, David M. Walker, speaks at the IRM College Graduation in April 2008.

critical thinking, collaboration, leading change, and leading people. Key components of the curriculum include individual awareness and team problem-solving activities, conversations with exemplary organizational leaders, and study of and visits to a diverse set of public and private sector organizations, including an intensive week-long field study outside of Washington, D.C.

- Third, AMP students form a learning community that exposes them to multiple perspectives on a wide range of issues; this motivates them to share knowledge and best practices, strive to become better leaders and decision makers, and master the tools of lifelong learning. Interaction with fellow students, faculty, guest speakers, and other executives provides AMP participants with a network of peers throughout the public and private sectors.

The AMP core courses are:

- **Policy Foundations of Information Resource Management (IRM)**: Presents an overview of IRM, including its concepts, policies, and their application. Lessons focus on understanding the IRM environment and the dynamic relationships among political, economic, social, fiscal, and technological forces that are changing government.

- **Information Management Planning:** Presents an approach to planning that integrates agency strategic planning, performance planning, and capital planning and investment. This course

examines a comprehensive, mission-driven planning framework that combines explicit and implicit planning requirements of current legislation and regulations.

- **Measuring Results of Organizational Performance:** Provides strategies and techniques for assessing an organization's performance results as part of strategic planning or budgeting processes. Leverages lessons learned from inter-agency experience concerning approaches and resources required to establish and validate performance measurement instrumentation, collect and organize performance data, and analyze and report results. Emphasizes mission outcomes in terms of the customer and focuses on information management and technological issues surrounding performance measurement.

- **Strategies for Process Improvement:** Focuses on strategies, methods, and resources for improving, managing, and controlling processes within and across federal agencies. A senior-level perspective is provided on the tools, techniques, and technologies that enable such strategies. The course emphasizes leadership challenges associated with initiation, collaboration, design, implementation, performance management, and portfolio management of process-centric improvements.

- **Information Technology Acquisition:** Examines the management issues that arise from policies, best practices, and alignment of an acquisition with organizational goals and objectives, programmatic strategies and planning, and selection of performance metrics. This course explores several approaches for determining a suite of performance measures that will provide insights into acquisition of information technology.

- **Information Assurance and Critical Infrastructure Protection:** Provides a comprehensive overview of information assurance and critical information infrastructure protection, including information assets and protection of the information component of critical national infrastructures essential to national security. The focus is at the public policy and strategic management level, providing a foundation for analyzing the information security component of information systems and critical infrastructures. Laws, national strategies and public policies, and strengths and weaknesses of various approaches are examined for assuring the confidentiality, integrity, and availability of critical information assets.

In addition to their core courses, AMP students select two elective courses. These courses enable students to broaden their knowledge or to delve deeper into the areas that are covered in the core program. For example, students can pursue studies in the areas of capital planning, network security, or information operations. The curriculum map illustrates the various elements of the AMP.

AMP OFFERINGS

Academic Year 2009

AMP 37: September 8 - December 12, 2008
AMP 38: January 7 - April 17, 2009; applications due October 1, 2008; early applications, September 2, 2008

Academic Year 2010 (tentative dates)

AMP 39: September 14 - December 18, 2009; applications due June 1, 2009; early applications, May 1, 2009
AMP 40: January 6 - April 16, 2010; applications due October 1, 2009; early applications, September 1, 2009

Figure 1.

AMP APPLICATION INSTRUCTIONS

Eligibility Requirements: The eligibility requirements for AMP are different from other IRM College programs. There are no waivers to these requirements. Requirements are as follows:

Federal civilian government employees must be at least *GS/GM-13 or equivalent,* and military officers must hold at least the *grade of O-5.* Non-federal students, to include state and local government and private sector employees, must be of an equivalent grade. Private sector employees must be sponsored by a government agency.

Education: All students must possess a bachelor's degree from a regionally accredited institution.

Application Instructions:

Federal Government: Applications should be submitted through agency channels and received at the IRM College prior to the published deadline. Each application must contain a résumé, a letter of nomination from the supervisor, and a completed AMP application form (http://www.ndu.edu/irmc/AMP_Application_Form.pdf). Omission of required information may result in rejection of the application. Incomplete applications will be held by the IRM College for 60 days and then destroyed.

- **Résumé:** The résumé should include a work history that describes the candidate's position titles, organizations, responsibilities, and accomplishments, and any rewards or recognitions received. If there are gaps in the résumé, a short paragraph is needed to explain them.

- **Nomination Letter:** The letter of nomination should address the applicant's ability to complete a challenging graduate-level academic program in information resources management. In addition, the letter must indicate why the applicant is being nominated for the AMP and how this program will benefit the nominating organization. Letters must be on organizational or corporate letterhead and be addressed to the IRM College Registrar. The subject line must indicate the student's name and the program the student is applying for. For example: "Subj: AMP Letter of Nomination, LTC John Doe." The final signature on all correspondence must belong to the applicant's immediate supervisor.

Submit applications to the IRM College Registrar via fax (202-685-4860), e-mail to IRMCRegistrar@ndu.edu, or postal mail to:

> IRMC Registrar
> 300 5th Ave., Bldg. 62
> Fort McNair, D.C. 20319-5066

State and Local Government and Private Industry: Applications for AMP must include a résumé, a letter of nomination from a direct supervisor, and a completed copy of the AMP application form.

International Students: Non-U.S. citizens who are members of defense agencies of other countries must apply through their governments. Applications should be in the form of an education and training request for approval and processing through the appropriate Security Assistance Training Field Activity (SATFA) country program manager, who should forward the request to:

> Director
> Security Assistance Training Field Activity (SATFA)
> U.S. Army Training and Doctrine Command (TRADOC)
> ATTN: SATFA-RQ
> 173 Bernard Road, Bldg. 139
> Fort Monroe, VA 23651-1003
> DSN: 680-3255
> Commercial: (757) 788-3255
> Fax: (757) 788-4142
> http://www.satfa.monroe.army.mil/

International students must demonstrate comprehension through listening, reading, and general grammar structures via the Defense Language Institute's English Comprehension Level (ECL) Exam with a score of at least 85 prior to acceptance. Students will take the exam in their home country. Because of the seminar-based active-learning model used in this program, oral communication skills are critical. The IRM College reserves the right to administer the ELC exam after the student arrives per AR 12-15, the Joint Security Assistance Training (JSAT) regulation, Section 10, if English comprehension is in question. International students should also possess basic competencies in the use of personal computers.

The Advanced Management Program Director, Dr. Kathleen Schulin, can be contacted at schulink@ndu.edu.

Chief Financial Officer Leadership (CFO) Certificate

With the endorsement of the CFO Council and base funding from the DOD Comptroller, the IRM College launched a Chief Financial Officer Academy in the summer of 2008. The CFO Academy offers graduate-level courses and services for middle- to senior-level personnel in the government financial management community to prepare them to create and lead 21st Century government organizations.

The CFO Academy sponsors the new CFO Leadership Certificate. The Certificate curriculum is aligned with competencies articulated by the CFO Council. Applications for admission are welcomed via the IRM College website.

The curriculum of the CFO Leadership Certificate is dynamic and relevant to the evolving needs of the government financial management community. It focuses on current and future challenges and opportunities facing government, best practices and strategies of financial management, and the changing role of CFOs as organizational leaders in 21st Century government.

Courses in the CFO Leadership Certificate are conducted in the eResident format in classrooms at National Defense University at Fort McNair. The eResident courses engage students for five weeks: one week of pre-reading and assignments, five days of class in residence (8 AM to 5 PM Monday through Friday), and three weeks to complete graded academic assignments as assigned by the course leader. Some of the courses in the certificate program are also offered in an online (distributed learning) format that requires 10 to 12 weeks of asynchronous work and three weeks to complete graded academic assignments. Some of the new courses in the program will be offered for the first time during the 2008-2009 academic year. The College reviews curriculum regularly and adds new courses on a regular basis. The Certificate will also become a specialty in the new IRM College Government Strategic Leader Master's Degree.

Please continue to check the IRM College website for more on this new and exciting educational opportunity.

http//www.ndu.edu/irmc

Chief Information Officer (CIO) Certificate

The Chief Information Officer (CIO) Certificate Program, sponsored by the DOD CIO, is the recognized source of graduate education for Federal CIO leaders to develop themselves and their agency personnel for leveraging the information component of national power for strategic advantage. The program addresses requirements in the Clinger-Cohen Act (1996), the Government Performance Result Act (1993), the Paperwork Reduction Act (1995), the Federal Information Security Management Act (1996), and the President's Management Agenda (2001). At the end of their program, CIO graduates will be able to:

- Lead within and across organizational boundaries by leveraging information and information technology for strategic advantage;

- Balance continuity and change in the development, implementation, and evaluation of information resources management strategies and policies while meeting legislative and executive mandates;

- Link critical decisions regarding people, processes, and technologies to performance, results, and information assurance requirements;

- Commit to ongoing leadership development of self and others; and

- Synthesize theory and best practices from government, private sector, and not-for-profits to achieve the organization's mission.

CIO Program graduates earn a certificate signed by the DOD CIO and the Director of the IRM College that recognizes they have earned an education in the Federal CIO competencies. The CIO Certificate Program is organized around 12 subject areas directly related to CIO competencies identified by the Federal CIO Council (see Figure 2). Selected courses allow students to tailor their CIO program of study to meet their organization's needs and priorities (see Table 1). Additionally, the CIO Certificate is a specialty in the IRM College Government Strategic Leader Master of Science Degree.

Students may apply their certificates, equivalent to at least 15 graduate-level credit hours, toward selected master's or doctoral degree programs at several partner institutions of higher education (see appendix A).

CERTIFICATE REQUIREMENTS

Courses in each competency are designated as "core" because of their breadth and necessary links to the CIO competency or "specialty" because of their depth in a particular competency. Students work with their supervisors and academic advisors to tailor their program to fit their professional and/or organizational needs within the guidelines set by the CIO Council. Students earn the CIO Certificate by successfully completing eight (8) courses that satisfy the following:

- Six core courses in six different competency areas, three of which are required.

- Two other courses of their choice from the College catalog.

Figure 2.

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Table 1: CIO Certificate Requirements		
Required Core Courses (3 courses)		
Key Competency Area	**Course (Catalog Number)**	
Policy	CWC (6317)	Changing World of the CIO
Performance- and Results-Based Management	MOP (6316)	Measuring Results of Organizational Performance
Security and Information Assurance	AII (6203)	Information Assurance & Critical Infrastructure Protection
Additional Core Courses (3 courses from 3 different competency areas)		
Acquisition	ITA (6415)	Strategic Information Technology Acquisition
Architectures and Infrastructures	ARC (6409)	Enterprise Architectures for Leaders
	DMS (6414)	Data Management Strategies and Technologies: A Managerial Perspective
Capital Planning and Investment	BBC (6430)	Building an IT Business Case
	PFM (6315)	Capital Planning and Portfolio Management
eGovernment/ eBusiness	IAG (6525)	Information Age Government
Leadership	LDC (6301)	Leadership for the Information Age
Process Improvement	PRI (6333)	Strategies for Process Improvement
Project Management	ITP (6416)	Information Technology Project Management
Strategic Planning	IMP (6318)	Information Management Planning
	EPS (6320)	Enterprise Strategic Planning
	IWS (6202)	Information, Warfare, and Military Planning *(Secret Clearance Required)*
Technology Assessment	CST (6510)	Critical Information Systems Technology
Additional Specialty Courses (2 courses)		
Any course from the College Catalog		

The Honorable John G. Grimes, Assistant Secretary of Defense for Networks and Information Integration/CIO, speaks to a gathering of IRM College students and alumni.

Enterprise Architecture (EA) Certificate

The Enterprise Architecture (EA) Certificate builds competencies to enable agencies to meet their Clinger-Cohen Act responsibilities for "developing, maintaining, and facilitating the implementation of sound and integrated information technology architecture." The program provides graduate-level education organized around seven core EA competencies determined by the Federal CIO Council. EA Certificate students develop skills in both policy and technical aspects of developing, implementing, and maintaining an EA. They also are enabled to apply EA concepts and processes to support strategic planning and realize organizational and process transformation. The EA Certificate is a specialty in the IRM College Government Strategic Leader Master of Science Degree.

Students may apply their certificates, equivalent to at least 15 graduate-level credit hours, toward selected master's or doctoral degree programs at several partner institutions of higher education (see appendix A).

Certificate students learn EA development approaches to achieve mission improvement and business value rapidly, aid development of business cases, and implement strategies to achieve sustained interoperability.

Enterprise Architecture Certificate graduates understand and can implement a variety of approaches, methods, techniques, and work products to facilitate cross-boundary leadership, such as:

- Department of Defense's Architecture Framework (DODAF), Global Information Grid (GIG), and the Defense Information Enterprise Architecture

- Office of Management and Budget (OMB) and the CIO Council's Federal Enterprise Architecture (FEA) Reference Models, the Federal Enterprise Architecture Framework (FEAF)

- Industry-based EA frameworks (e.g., Zachman)

Award of the EA Certificate requires successful completion of four (4) core and three (3) specialty courses. The four core courses are *Information Management Planning* (IMP), *Strategies for Process Improvement* (PRI), *Enterprise Architecture for Leaders* (ARC), and *Data Management Strategies and Technologies* (DMS). Specialty courses required for award of the certificate are *Planning and Managing Enterprise Architecture Programs* (PMA), and either the DOD-oriented *Global Information Grid Architecture* (GIG) course or the civilian agency-oriented *Federal Enterprise Architecture* course (FAC). ARC must be successfully completed before enrolling in PMA, GIG, or FAC. The final course in the EA Certificate is the Enterprise Architecture Practicum (EAP). This course integrates knowledge and skills that students acquired in their prior courses through application in an organizational setting.

Core Courses			
Information Management Planning (IMP)	Strategies for Process Improvement (PRI)	Enterprise Architecture for Leaders (ARC)	Data Management Strategies and Technologies (DMS)
Specialty Courses			
Global Information Grid (GIG)	OR	Federal Enterprise Architecture (FAC)	Planning and Managing Enterprise Architecture Programs (PMA)
Practicum Course			
Enterprise Architecture Practicum (EAP)			

Figure 3.

Table 2: EA Certificate Requirements

Required Core Courses (4 courses)		
Course (Catalog #)	**Course Title**	**Prerequisite**
ARC (6409)	Enterprise Architecture for Leaders	None
DMS (6414)	Data Management Strategies and Technologies: A Managerial Perspective	None
IMP (6318)	Information Management Planning	None
PRI (6333)	Strategies for Process Improvement	None
Additional Specialty Courses (3 courses)* ***Choice of GIG or FAC**		
PMA (6432)	Planning and Managing Enterprise Architecture Programs	ARC (6409)
FAC (6409)	Federal Enterprise Architecture	ARC (6409)
GIG (6434)	Global Information Grid Architecture	ARC (6409)
EAP (6413)	Enterprise Architecture Practicum	ARC, IMP, PRI, DMS, PMA, GIG/FAC

Dr. Bob Childs, Senior Director of the IRM College, engages with Ambassador Walter Stadtler, President and CEO of the NDU Foundation at one of the Information Leader Symposia.

Government Strategic Leader (GSL) Certificate

Today, even the most seasoned government leaders are facing extraordinary challenges in managing resources, information and communication technologies, social networks, and globalization. As strategic leaders, they must respond to rapidly evolving national priorities and a dynamic environment. The IRM College's new Government Strategic Leader Certificate provides government managers and leaders with the essential tools and strategies required to lead dynamic, complex, and diverse 21st Century organizations. The curriculum engages participants in understanding their organization's unique role and those of other organizations, and how to collaborate to achieve organizational, inter-agency, and national mission and goals. Participants form a learning community to share knowledge, analyze and leverage strategic resources (human, technological, and financial), and create and articulate a vision for themselves and their organizations.

Graduates of the Government Strategic Leader Certificate will be able to:

- Evaluate the roles, challenges, and opportunities of their organizations within the context of homeland, national, and global security.

- Apply critical and innovative thinking to achieve results-oriented organizational goals.

- Collaborate across boundaries to leverage talent, resources, and opportunities to achieve mission outcomes.

- Create resilient, agile, and productive organizations to meet the needs and priorities of today's and tomorrow's government.

- Commit to lifelong development of self and others as reflective leaders.

Foundation
Global Strategic Landscape
Organizational Culture for Strategic Leaders

Management
Enterprise Strategic Planning
Strategies for Process Improvement
Measuring Organizational Performance
Federal Budgeting & Financial Management
Terrorism and Crime in Cyberspace
Continuity of Operations
Strategic Information Technology Acquisition

Leadership
Leadership in the Information Age
Multi-Agency Information-Enabled Collaboration
Leading the 21st Century Workforce
Enterprise Architecture for Leaders
Decision Making for Government Leaders
Strategic Communication for Government Leaders

Figure 4.

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CERTIFICATE REQUIREMENTS

To earn the Government Strategic Leader Certificate, students must complete eight (8) graduate-level courses that may be taken in any order. Two (2) foundation courses are required that focus on organizational clients and culture, and the dynamic landscape of government and security. Students select three (3) additional courses in management and three (3) in leadership to meet their professional and/or organizational needs. There are not currently any prerequisites required to take these courses.

Maj Gen Erwin Lessel, USAF, speaks at the Federal Consortium for Virtual Worlds Conference in Spring 2008.

Table 3: GSL Certificate Requirements

Required Core Courses (2 courses)	
Course (Catalog #)	**Course Title**
GSL (6213)	Global Strategic Leadership
OCL (6321)	Organizational Culture for Strategic Leaders
Management Courses (3 courses)	
BFM (6417)	Federal Budgeting & Financial Management for Strategic Leaders
COO (6504)	Continuity of Operations
ESP (6320)	Enterprise Strategic Planning
ITA (6415)	Strategic IT Acquisition
MOP (6316)	Measuring Results of Organizational Performance
PRI (6333)	Strategies for Process Improvement
TCC (6215)	Terrorism and Crime in Cyberspace
Coming in 2010	Leading the 21st Century Workforce
Leadership Courses (3 courses)	
ARC (6409)	Enterprise Architecture for Leaders
DMG (6323)	Decision Making for Government Leaders
LDC (6301)	Leadership for the Information Age
MAC (6512)	Multi-Agency Information-Enabled Collaboration
SCL (6322)	Strategic Communications for Government Leaders

Information Assurance (IA) Program

The Information Assurance (IA) Program consists of several certificates that prepare graduates to:

- Exercise strategic leadership in the development and use of information security strategies, plans, policies, enabling technologies, and procedures;

- Develop and lead programs to provide information security controls, security awareness training, risk analysis, certification and accreditation, security incident management, continuity of operations, and disaster recovery;

- Link people, processes, information, and technology to critical IA decisions; and

- Develop and lead, in accordance with laws and regulations, an enterprise IA program that promotes and attains national security, agency, and inter-agency goals.

The Committee on National Security Systems (CNSS) has certified the curriculum offered by the Information Resources Management (IRM) College as compliant with the following national IA education and training standards:

- NSTISSI 4011 for Information Systems Security Professionals.

- CNSSI 4012 for Senior Systems Managers includes the Chief Information Officer (CIO), Designated Approving Authority (DAA), and Chief Technology Officer (CTO).

- NSTISSI 4015 for System Certifiers.

- CNSSI 4016 for Risk Analysts.

Although the IA certificates do not count as a certification under DOD 8570.1-M, they do help prepare graduates for DOD 8570.1-M certification. In addition to DOD 8570.1-M commercial certification requirements, DOD personnel who perform IA functions on national security systems are required to meet CNSS training requirements. The certificates satisfy that CNSS requirement.

The Chief Information Security Officer (CISO) Certificate is a source of graduate-level information security education for Senior Agency Information Security Officers (SAISO), their staffs, and information assurance managers. This certificate provides education to respond to the requirements set forth in the Federal Information Security Management Act (FISMA).

Students may apply their certificates, equivalent to at least nine graduate-level credit hours, toward selected Master's or doctoral degree programs at several partner institutions of higher education. (see appendix A)

Figure 5.

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CERTIFICATE REQUIREMENTS

Students should begin the certificate by first taking the AII and GEN courses, followed by SEC and ESS. Successful completion of three (3) of these four (4) courses may be applied toward requirements for the CIO Certificate. Students in the Advanced Management Program also have the opportunity to qualify for the 4011 certificate.

Table 4: Information Assurance NSTISSI No. 4011 Certificate Requirements**

Required Courses (4 courses)	
Course (Catalog #)	Course Title
AII (62303)	Information Assurance and Critical Infrastructure Protection
GEN (6205)	Global Enterprise Networking and Telecommunications
SEC (6201)	Cyber Security for Information Leaders
ESS (6206)	Enterprise Information Security and Risk Management

Table 5: Information Assurance CNSSI 4012, 4016, and Information Assurance NSTISSI 4015 Certificate Requirements**

Required Courses (5 courses)	
Course (Catalog #)	Course Title
AII (62303)	Information Assurance and Critical Infrastructure Protection
ATO (6209)	Approval to Operate: Information System Certification & Accreditation
ESS (6206)	Enterprise Information Security and Risk Management
GEN (6205)	Global Enterprise Networking and Telecommunications
SEC (6201)	Cyber Security for Information Leaders

**There are no prerequisites for the required courses for Information Assurance NSTISSI No. 4011 certificate; Information Assurance CNSSI 4012, 4016, and Information Assurance NSTISSI 4015 certificates.

Table 6: CISO Certificate Requirements

Required Courses (7 courses)		
Course (Catalog #)	Course Title	Prerequisites
AII (62303)	Information Assurance and Critical Infrastructure Protection	None
ATO (6209)	Approval to Operate: Information System Certification & Accreditation	None
CBL (6204)	Cyberlaw	None
COO (6504)	Continuity of Operations	None
ESS (6206)	Enterprise Information Security and Risk Management	None
GEN (6205)	Global Enterprise Networking and Telecommunications	None
SEC (6201)	Cyber Security for Information Leaders	None
Additional Courses (1 course)		
CIP (6212)	Protection of Critical Infrastructure and Key Assets	None
HLS (6507)	Homeland Security Information Management	None
HST (6503)	Homeland Security Tools & Techniques	None
IOS (6207)	Information Operations and National Security in the Information Age	Secret Clearance
IWS (3202)	Information, Warfare, and Military Strategy	Secret Clearance
SAA (6211)	Strategic Management of Software Assurance	None
SIO (6214)	Strategic Infrastructure Operations	Top Secret/SCI Clearance
SPA (6508)	Privacy Rights and Challenges in the Information Age	None
SCS (6210)	Managing Security of Control Systems	None
TCC (6215)	Terrorism and Crime in Cyberspace	None

Information Technology Project Management (ITPM) Certificate

The Information Technology Project Management (ITPM) Certificate program is designed to assist agencies in complying with Office of Management and Budget direction. The OMB requires that project managers qualified in accordance with CIO Council guidance manage all major information technology projects. The ITPM Certificate requires successful completion of a graduate-level curriculum to satisfy competencies established by the Office of Personnel Management (OPM) *Interpretive Guidance for Project Management Positions* and the *CIO Council Clinger-Cohen Core Competencies.* The certificate complements general project management training and the ANSI-recognized *Guide to the Project Management Body of Knowledge.* It also provides formal educational credit, one of the qualifications required for award of the PMI Project Management Professional (PMP) Certificate.[1]

The ITPM Certificate develops project management competencies in three dimensions: project leadership skills, IT program/project management concepts and methods, and IT issues and developments. These competencies provide the knowledge, skills, and abilities identified by the CIO Council and OPM for IT project managers. In an integrated set of courses, students learn IT project management policies, regulations, theories, and concepts; how to apply best practices using actual IT program examples and case studies; and how to select and apply state-of-the-art IT project management tools. The ITPM Certificate is a specialty in the Government Strategic Leader Master of Science Degree.

CERTIFICATE REQUIREMENTS

Award of the Information Technology Project Management Certificate requires successful completion of four (4) core courses and two (2) specialty courses. The core courses are *Strategic Information Technology Acquisition (ITA), Critical Information Systems Technologies (CST), Building an IT Business Case (BBC),* and *Information Technology Project Management (ITP).* Two specialty courses are required: *Software Acquisition Leadership (SAL)* and *Information Technology Program Leadership (IPL).* There are currently no prerequisites for the courses listed in Table 7.

Table 7: ITPM Certificate Requirements	
Required Core Courses (4 courses)	
Course (Catalog #)	**Course Title**
BBC (6430)	Building an IT Business Case
CST (6510)	Critical Information Systems Technology
ITA (6415)	Strategic Information Technology Acquisition
ITP (6416)	Information Technology Project Management
Additional Specialty Courses (2 courses)	
IPL (6411)	Information Technology Program Leadership
SAL (6410)	Software Acquisition Leadership

Core Courses			
Strategic IT Acquisition (ITA)	Critical Information Systems Technologies (CST)	Building an IT Business Case (BBC)	Information Technology Project Management (ITP)
Specialty Courses			
Information Technology Program Leadership (IPL)		Software Acquisition Leadership (SAL)	

Figure 6.

[1]Project Management Professional (PMP) certification is offered by the Project Management Institute. Certification requires completion of a formal competency examination. Examination candidates must present evidence of having specified levels of general education and project experience and having successfully completed at least 35 contact hours of project management education. Details are available at the PMI website at http://www.pmi.org.

Organizational Transformation (OT) Certificate

The explosive growth of technology innovations, economic globalization, and democratization of information has created a world of high complexity, interdependence, and uncertainty. Disruptive and unpredictable changes affect all aspects of organizations, often all at once. Successful and significant organizations embrace the opportunity to transform, either by responding to or shaping the new environment to accomplish mission goals, stretch the organization's visions, and sustain strategic advantage.

The Organizational Transformation (OT) Certificate is designed to develop leaders who can shape the environment and their organizations through transformation. Government organizations at all levels, federal, state, and local, are challenged to transform. The OT Certificate offers government decision makers and staff the opportunity to develop their acuity about the nature, forces, and dependencies and interdependencies of turbulent and unpredictable environments, and about the levers and tools for organizational transformation.

The course of study allows students the opportunity to expand their creative and critical thinking on strategies, governance, organizational designs, processes, networks, and tools. It will enable them to leverage information and information technologies to achieve their mission while creating and sustaining strategic competitive advantage. The OT Certificate is a specialty in the Government Strategic Leader Master of Science Degree.

CERTIFICATE REQUIREMENTS

Award of the OT Certificate requires successful completion of eight (8) courses. The three (3) required courses are *Transformation as Strategic Alignment (TAS), Multi-Agency Information-Enabled Collaboration (MAC),* and *Leading Strategies for Disruptive Innovations (LSI).* Students select five (5) additional courses from the OT specialty courses. The specialty courses, building on the foundation courses, delve into particular aspects of defense and national security, homeland security, and national preparedness.
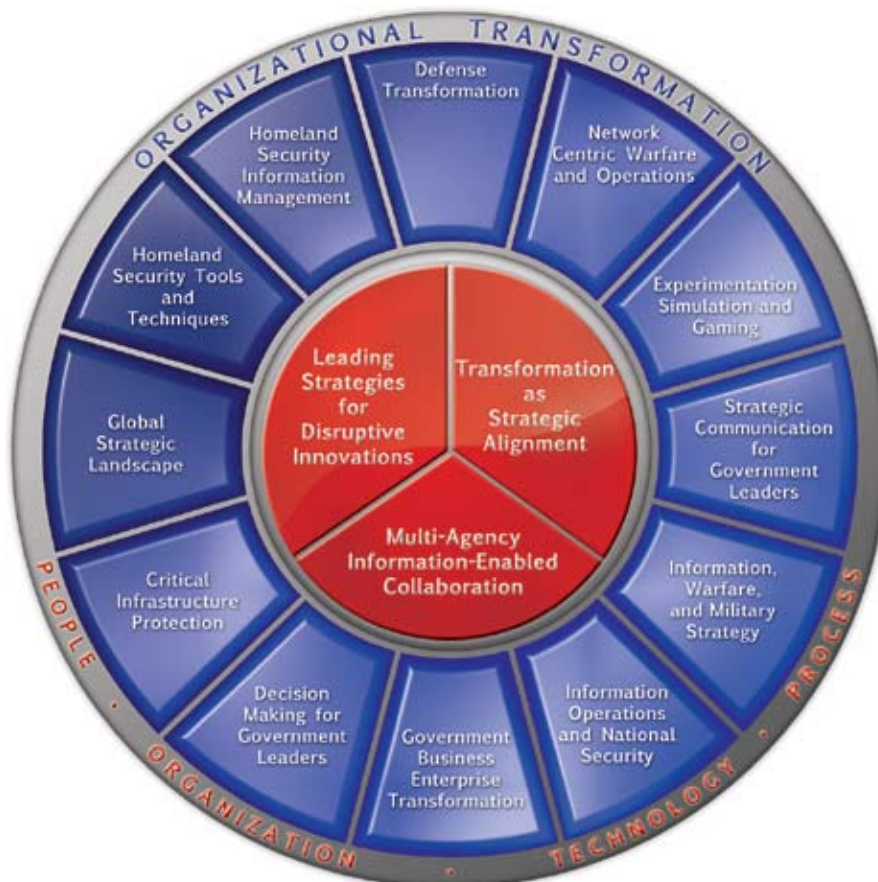

Figure 7.

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Table 8: OT Certificate Requirements		
Required Core Courses (3 courses)		
Course (Catalog #)	**Course Title**	**Prerequisites**
LSI (6511)	Leading Strategies for Disruptive Innovation	None
MAC (6512)	Multi-Agency Information-Enabled Collaboration	None
TAS (6528)	Transformation as Strategic Alignment	None
Additional Specialty Courses (5 courses)		
CIP (6212)	Protection of Critical Infrastructure and Key Assets	None
DMG (6323)	Decision Making for Government Leaders	None
DTF (6509)	Defense Transformation	None
ESG (6502)	Experimentation, Simulation, and Gaming	None
GBE (6501)	Government Business Enterprise Transformation	None
GLS (6213)	Global Strategic Landscape	None
HLS (6507)	Homeland Security Information Management	None
HST (6503)	Homeland Security Tools & Techniques	None
IOS (6207)	National Security in the Information Age	Secret Clearance
NCW (6513)	Network Centric Warfare and Operations	None
SCL (6322)	Strategic Communication for Government Leaders	None

OT

*Ms. Joyce France, DOD CIO Management Services Director
attends one of the Information Leader Symposia in Spring 2008.*

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STUDENT SERVICES AND POLICIES

CHAPTER 3

Student Services and Policies

ADMISSIONS POLICY

IRM College courses are available to Federal civilian government employees, military officers, and non-Federal Government employees (such as State and local government employees, and private sector employees sponsored by a government agency).

To register for a course, a prospective student must first be admitted to one or more IRM College programs. The IRM College is solely responsible for determining its admission criteria and for determining which applicants are admitted.

The "IRM College Application for Admission" is available online through the IRM College home page at http://www.ndu.edu/irmc. Questions concerning admission should be addressed to the Registrar's Office either by phone (202-685-6300; DSN 325-6300) or by e-mail (IRMCRegistrar@ndu.edu).

> Program completion time limit:
>
> - Certificate programs: All coursework applied toward a certificate must be completed within four years.
>
> - Master of Science (M.S.) Degree program: All coursework applied toward a M.S. Degree must be completed within seven years from acceptance into the M.S. program.
>
> Students must successfully complete at least one course every 18 months to maintain active status in the program.

BASIC ELIGIBILITY CRITERIA

Pay Grade or Rank: Federal civilian government employees must be at least GS/GM-12 or equivalent, and military officers must hold at least the grade of O-4 (GS/GM-13, O-5 for Advanced Management Program). Non-Federal employees, to include State and local government and private sector employees, must be of an equivalent grade. Note: Private sector employees must be sponsored by a government agency.

Education: All students must possess a Bachelor's Degree from a regionally accredited institution.

M.S. Degree program: The minimum grade point average (g.p.a.) is 3.0 on a 4.0 scale (a "B" grade average) for all previous undergraduate and graduate work. In cases where the undergraduate g.p.a. is below a 3.0, the g.p.a. for the last two years will be used to determine eligibility.

Change in Eligibility: The College will periodically review eligibility of active students. If a student's eligibility changes (employer, pay grade, rank, etc.), he or she must notify the College. In cases where course credit is earned after eligibility ceases, course credit may be revoked and/or the student may be held liable for tuition owed.

3

International Students: International students (non-U.S. citizens) must apply through the appropriate Security Assistance Training Field Activity (SATFA) country program manager.

APPLICATION AND SELECTION OVERVIEW

All students must apply and be admitted to the IRM College to register for classes for credit or professional development. Students may apply for and be admitted to more than one IRM College academic program at a time.

Application and Selection Overview			
	Masters of Science (M.S.)	Certificate Programs* (non-AMP)	Advanced Management Program
APPLICATION DOCUMENTS			
Application	Yes	Yes	Yes
Current Professional Resume	Yes	No	Yes
Employer Verification and Sponsorship Form	Yes, for NEW applicants or current/returning students with changes only	Yes, for NEW applicants or current/returning students with changes only	No
Recommendation Letter	Yes (two)	No	No
Nomination Letter	No	No	Yes
Transcript	Yes, official required	No	No
Statement of Purpose	Yes (200-500 words)	No	No
SELECTION			
Reviewed	Bi-weekly by committee	Weekly by committee	Once per seminar by committee
Notification	Sent to student by email and post after a decision is reached.		

   * Includes Professional Development

GENERAL APPLICATION INSTRUCTIONS

①   STEP ONE: Submit your application.

Master of Science Degree, certificate programs, and Professional Development: The application is available from the uNET Guest Page or, for prior/current students, through an existing uNET account (link to uNET through the IRM College homepage at http://www.ndu.edu/irmc).

Advanced Management Program (AMP): Applicants must apply using the paper AMP application downloaded from the IRM College website (http://www.ndu.edu/irmc/pcs_amp.htm).

Note to current/returning students applying via uNET: Applying through uNET requires a uNET Username and Password. If you forget or need the Username and Password, you must call the uNET help desk at 866-434-8883 (available 24 hours a day, 7 days a week).

②   STEP TWO: Submit required documents.

The following must be submitted to the Registrar's Office either by fax (202-685-4860; DSN 325-4860) or scanned attachment to IRMCRegistrar@ndu.edu. Applications will not be processed until all required materials are received; incomplete applications will be held for 60 days. All application materials become the property of the College and cannot be returned.

Master of Science
1. **Résumé**. The résumé should include a work history that describes the candidate's position title, organization, responsibilities, and accomplishments, and any awards or recognitions earned. If there are gaps in the résumé, a short paragraph is needed to explain them.

2. **Employer Verification and Sponsorship Form.** The Employer Verification and Sponsorship Form is used to verify employment and provide government contractor information, if applicable. A template can be found on the IRM College website at http://www.ndu.edu/irmc/admis_appover1.htm. The applicant may also attach additional comments in support of his/her application.

   A. Government Employees: The applicant's most immediate supervisor or Human Resources Officer holding a grade of GS/GM-12, O-4, or higher, must complete and submit the form, printed on organizational letterhead, directly to the IRM College (fax: 202-685-4860 or scanned attachment to IRMCRegistrar@ndu.edu).

   B. Private Sector (Industry/Contractor) Applicants Only: The applicant's sponsoring government agency's contract coordinator (or his/her most immediate supervisor) holding a grade of GS/GM-12, O-4, or higher must complete and submit the form, printed on organizational letterhead, directly to the IRM College (fax: 202-685-4860 or scanned attachment to IRMCRegistrar@ndu.edu).

3. **Recommendation Letters (2).** The recommendation letters should be written by someone able to judge the applicant's ability to complete a challenging graduate-level academic program. Recommendation letters must be sent directly from the nominator via fax or scanned attachment to IRMCRegistrar@ndu.edu. Recommendation letters emailed directly from the student will not be deemed official. Two recommendation letters are required for the M.S. Degree application.

4. **Official Transcript.** Applicants must submit ONE official transcript from the Bachelor's Degree granting institution and all graduate institutions where graduate work was earned or attempted (regardless of whether credit or degree was issued). The minimum grade point average is 3.0 on a 4.0 scale (a "B" average) for all previous undergraduate work (overall or in last 60 hours) and all graduate work.

An official transcript bears the official seal of the issuing institution. Please request that official transcripts be sent to the Registrar's Office at IRM College Registrar, 300 5th Avenue, Bldg 62, Fort McNair, Washington, D.C., 20319. Photocopies, while not considered official, may be submitted to expedite the processing of applications. Transcripts for academic work completed at the National Defense University need not be submitted.

5. **Statement of Purpose.** The statement of purpose is a 250 - 500 word essay that addresses the applicant's reason for undertaking the program, goals, and expected results from completing the academic program.

Advanced Management Program
1. **Résumé.** The résumé should include a work history that describes the candidate's position title, organization, responsibilities, and accomplishments, and any awards or recognitions earned. If there are gaps in the résumé, a short paragraph is needed to explain them.

2. **Nomination Letter.** The letter of nomination should address the applicant's ability to complete a challenging graduate-level academic program in information resources management. In addition, the letter must indicate why the applicant is being nominated for the AMP and how this program will benefit the nominating organization. Letters must be on organizational or corporate letterhead, and they must be sent directly from the nominator via fax or scanned attachment to IRMCRegistrar@ndu.edu. Nomination letters emailed directly from the student will not be deemed official.

Certificate Programs and Professional Development
1. **Employer Verification and Sponsorship Form.** The Employer Verification and Sponsorship Form is used to verify employment and provide government contractor information, if applicable. A template can be found on the IRM College website at http://www.ndu.edu/irmc/admis_appover1.htm. The applicant may also attach additional comments in support of his/her application.

   A. Government Employees: The applicant's most immediate supervisor or Human Resources Officer holding a grade of GS/GM-12, O-4, or higher, must complete and submit the form, printed on organizational letterhead, directly to the IRM College (fax: 202-685-4860 or scanned attachment to IRMCRegistrar@ndu.edu).

   B. Private Sector (Industry/Contractor) Applicants Only: The applicant's sponsoring government agency's contract coordinator (or his/her most immediate supervisor) holding a grade of GS/GM-12, O-4, or higher must complete and submit the form, printed on organizational letterhead, directly to the IRM College (fax: 202-685-4860 or scanned attachment to IRMCRegistrar@ndu.edu).

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(3) **STEP THREE: Receive program acceptance notification.**

Processing Time: Complete applications are reviewed within ten business days upon receipt of required documentation. Questions concerning status of pending applications should be addressed to the Registrar's Office by phone (202-685-6300; DSN 325-6300) or e-mail to IRMCRegistrar@ndu.edu.

Communications of IRM College Admission Decisions: Applicants to programs will receive both an e-mail notification and a formal letter to notify them of the IRM College Admissions decision regarding their application.

Communications will detail the applicant's program status, the official start and end dates of their program, and contact information for their faculty advisor. Advanced Management Program selectees are notified of acceptance normally at least seven weeks before the beginning of the seminar.

Students admitted to any IRM College academic program are assigned a faculty advisor. Advisors assist the student in planning a course of study and answer questions about program requirements.

ADMISSION STATUS

Regular Admission: Applicants who meet all eligibility criteria are awarded regular admission.

Probationary Admission: Applicants who fail to meet one or more of the requirements for regular admission may be admitted on probation, provided additional evidence of capacity to do satisfactory work is presented. Students entering on probation will remain on probation until the successful completion of two courses.

Provisional Admission: Provisional admission may be considered for applicants who appear to be admissible on the basis of the credentials submitted, but who are unable to supply all of the required official records prior to registration. Students admitted provisionally must submit complete and satisfactory records within 60 days of the acceptance date. If these credentials are not received by the date specified or if they prove to be unsatisfactory, the student will not be permitted to register for future courses. Provisional admission does not guarantee subsequent regular admission.

FEES

There are no fees for DOD employees for IRM College courses or academic programs. This includes all course offerings and the Advanced Management Program, but may not include special offerings such as executive or special seminars.

Note: Military members in the Reserves or National Guard must be in active duty status at the time the course is in session and present orders to receive the DOD tuition waiver. If not presented, the student will be liable for the full tuition owed.

FY09: The FY 2009 intensive course fee for non-DOD Federal, State, and local government employees is $1,100. The FY 2009 intensive course fee for private industry students is $1,995.

FY09: The Advanced Management Program (AMP) fee for non-DOD Federal, State, and local government employees is $10,500. The fee for private industry students is $16,500.

PAYMENT INSTRUCTIONS

Students should make all payments for intensive classes no later than the first day of class. If payment is not received, the account is considered delinquent and the student may not be admitted to the class or allowed to attend future classes until his or her account is cleared.

IRM College cannot accept cash payments. Valid forms of payment are credit card, check, electronic funds transfer, and Military Interdepartmental Purchase Request (MIPR). Detailed instructions for submitting payment are provided to the student by e-mail and on the student's invoice when the student is accepted into a class.

COURSE REGISTRATION

Students who are in the Advanced Management Program (AMP) will automatically be enrolled in the courses necessary for completion of the program. Students in the Master of Science Degree program, the certificate programs, or the Professional Development program must self-enroll in the desired courses using the following procedures.

Enrollment Procedures

The IRM College will assign the student an account, Username, and Password that he or she will use to self-enroll in classes from uNET (link from www.ndu.edu/irmc) once accepted into a program. If a student experiences any problems accessing accounts or enrolling in classes, he or she may contact the Registrar's Office by phone (202-685-6300; DSN 325-6300) or e-mail at IRMCRegistrar@ndu.edu.

Enrolling With the Class Number

The Class Number appears next to each class offering listed in the class schedule. It is a four-digit number and is the unique identifier for each class in that Academic Year.
1. Log into uNET (using your Username and Password)
2. Click on "Add/Drop a Class"
3. Select "Academic Year 200X/200X"
4. Select "Add Classes"
5. Enter Class Number
6. Click "Submit"
7. Click "View My Schedule"

Enrolling Without the Class Number

If you do not have the Class Number, or if you would like to search the system for open classes, do the following:

1. Log into uNET (using your Username and Password)
2. Click on "Add/Drop a Class"
3. Select "Academic Year 200X/200X"
4. Click on the magnifying glass next to the Class Number box
5. In the Subject box, enter "IRMC-INT"
6. In the Description box, enter the three-letter course description (e.g., ARC, GEN, SEC, etc.)
7. Optional: Notice that the "Open Classes Only" box is checked. That means that the search will return only open classes. If you want to see all classes (e.g., you may want to place yourself on the wait-list), click inside the box to remove the check.
8. Click on "Search"
9. Click on the check box next to the class you want to attend
10. Click "Submit"
11. Click "View My Schedule"

Confirmation of Enrollment

Students may confirm successful enrollment by viewing their course schedule in uNET. A course acceptance notice will automatically be sent to students who successfully enroll in a course through uNET. The IRM College may send additional reminders and attendance confirmation requests prior to the course start date.

Pre-course Materials and Assignments

Each course has Blackboard-accessible readings and other pre-course activities that allow students to prepare for the first day of their course. Pre-course materials will be posted to the IRM College's eLearning system (Blackboard) no earlier than 13 days before the start of class.

No Show Policy

We will assign students who do not disenroll (via uNET, the Registrar's Office, or the Offering Leader) by the start date an enrollment action of "No Show" (NS). Students will be prohibited from taking courses for six months if they receive two or more NS notices.

Dropping a Course in uNET

If your schedule prevents your participation in a scheduled course, we request you drop the course prior to the start date in uNET. [Students attending courses under a special agreement (MOA) should follow their agency's local procedures to coordinate changes or cancellations.]

1. Log into uNET (using your Username and Password)
2. Click on "Add/Drop a Class"
3. Select "Academic Year 200X/200X"
4. Select "Drop/Update Classes"
5. You will now see all classes you are enrolled in
6. Select "Drop" in the Action field next to the class or classes that you are dropping
7. Click "Submit"
8. Click "View My Schedule"

GRADUATION

Program certificates are prepared annually for the IRM College's graduation exercise. The College holds the annual commencement exercise in April, and those who complete programs throughout the year are eligible to attend. Ceremonial certificates are mailed to the home address of students who do not attend the ceremony. Students are responsible for maintaining mailing and shipping addresses in uNET to ensure delivery is not delayed.

The IRM College Graduation Exercise for Academic Year 2009 is tentatively scheduled for April 17, 2009 (check

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the IRM College website for exact date and time). The Registrar will contact all known and potential graduates at the students' preferred e-mail address as shown in uNET approximately eight weeks prior to graduation. This e-mail message will provide detailed timelines and procedures that students must follow to be included in graduation planning.

Students who are attempting to complete their programs within two months prior to graduation exercises in April are advised to work closely with their faculty advisor and course instructors to ensure they meet requirements in time for graduation. Students may use the program requirements of the catalog in force at the time of his or her initial acceptance, or the student may choose to fulfill the requirements of the current catalog.

Completion Procedures

Candidates for a Master of Science Degree should consult their academic advisors regarding graduation procedures. All other certificate candidates must follow the procedures below:

1. Be admitted in the academic program(s) they plan to complete.
2. Complete all course requirements.
3. Verify final grades are accurate (view unofficial transcript).
4. Notify academic advisor of completed program(s).

The academic advisor will verify program completion, and forward the student record to the appropriate office. The Registrar's Office will issue a program completion letter signed by the Senior Director. Successful completion of an IRM College certificate program may be verified with a program completion letter or an original National Defense University official transcript. The date noted in the program completion letter or program completion date shown on the official transcript is the official completion date.

Dates on certificates awarded at the College's graduation ceremony reflect the ceremony date and should not be used for reporting purposes.

Reprinting Certificates. Only one certificate will be produced per program per student. Students should safeguard their certificate(s) as they would other important documents.

In exceptional cases, the IRM College will reproduce certificates for a student; however, the College cannot guarantee signatures from the original signers. Students

with an exceptional case (e.g., lost in a fire) may contact the Registrar's Office via e-mail at IRMCRegistrar@ndu.edu for further guidance.

OTHER STUDENT SERVICES

Records Maintenance

The IRM College maintains hard copy and electronic records as required for all prospective, current, and past students. Current students are responsible for ensuring their current biographical and demographic information is correct in uNET to assist the IRM College in meeting Federal and Department of Defense directives and reporting requirements.

Transcripts

Two types of transcripts are available from the IRM College.

Unofficial Transcripts. Students with an account in uNET can print unofficial transcripts from their uNET account at any time.

Official Transcripts. Students may request official transcripts by sending a signed request that includes the student's full name, Social Security number, and phone number and address of the transcript recipient. Requests should be faxed to the Registrar's Office at 202-685-4860 or DSN 325-4860. Official transcripts are produced and mailed weekly. Official transcripts are printed on copy-safe National Defense University transcript stock, bear the University's raised seal, and are signed by the University Registrar. Reproductions are clearly marked as copies and are not considered official.

ACADEMIC ADVISING AND POLICIES

Faculty Advisors

Students admitted to any IRM College academic program are assigned a faculty advisor. Advisors assist students to plan a course of study and answer questions about program requirements.

Admission to Multiple Academic Programs

Students may apply for and be admitted to more than one IRM College academic program at a time.

Program Completion Time Limit

Certificate programs: All coursework applied toward a certificate must be completed within the four years before the termination of the program.

Master of Science (M.S.) Degree program: All coursework applied toward a M.S. Degree must be completed within the previous seven years.

Students must successfully complete at least one course every 18 months to maintain active status in the program.

Applying Coursework Earned Prior to Program Admission

Certificate Program Participants. If a participant has completed IRM College coursework under another program, he or she may apply eligible courses to another certificate program. Eligible courses are those that directly apply to a program's requirements. Courses taken for a grade of Audit (AU) or Professional Development (PD) are not eligible. All coursework applied toward a certificate must be completed within the previous four years.

Masters of Science Program Participants. If a participant has completed IRM College coursework under another program, he or she may apply eligible courses to the Master of Science Degree program. Eligible courses are those that directly apply to the Master of Science Degree requirements. Courses taken for a grade of Audit (AU) or Professional Development (PD) are not eligible. All coursework applied toward a M.S. degree must be completed within the previous seven years.

Mr. Dave Wennergren, Deputy DOD Chief Information Officer, presents the IRM College with certification to award four National Security Agency/ Department of Homeland Security education certificates.

Program Actions

Drop. The IRM College may drop students from a certificate program for a number of reasons that include, but are not limited to, failure to complete a class successfully within an 18-month period or earning multiple grades of "No Credit."

Withdrawal. Students who wish to end their participation in an IRM College certificate program may submit a written request to the Registrar. The request should state the student's name, e-mail address (if different than posted in uNET), program(s) from which the student wishes to withdraw, and a brief justification statement. Requests may be e-mailed to IRMCRegistrar@ndu.edu. Confirmation of withdrawal will be provided by e-mail.

Reinstatement. The IRM College may grant reinstatement to a certificate program on a case-by-case basis. Students who wish to request reinstatement must apply via uNET, or a paper application. Once eligibility is reviewed, it will be determined which previous courses, if any, may apply to the program of study.

Dismissed. Students may be dismissed from academic program(s) upon the decision of the Academic Review Board.

Requirements for Continued Enrollment

Students enrolled at the IRM College must maintain satisfactory progress. Students are expected to achieve a satisfactory grade (A, A-, B+, B) in all coursework attempted for graduate/certificate credit.

An accumulation of two grades of NC or W will result in suspension of the student's enrollment. A student whose enrollment has been suspended because of unsatisfactory grades is ineligible to register until properly reinstated by approval of the Dean.

A student reinstated will be placed on probationary status and expected to complete all future coursework with satisfactory performance. Should the student receive a grade of NC or W after being reinstated in the program, his or her enrollment in the college will be terminated.

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GRADING

The IRM College's grading system follows:

- **A** Work of exceptional quality at the executive/graduate level.

- **A-** Work of very high quality at the executive/graduate level.

- **B+** Work of high quality at the executive/graduate level.

- **B** Work of acceptable quality at the executive/graduate level.

- **No Credit (NC):** When an "NC" grade is assigned, the student will not receive academic credit for the class. This grade is used when:
  » Attendance/participation requirements are not met.
  » Academic requirements are not submitted on time (original due date with no written request for an tension, or extension granted but requirements not submitted by new due date).
  » Students enrolled in Distributed Learning (DL) courses do not participate by the end of the third week and are dropped by the faculty Offering Leader.
  » Students withdraw after 25 percent of the course has been taught (e-resident or DL).
  » Students do not meet academic requirements on resubmission of an unacceptable academic requirement.

- **Incomplete (I):** This grade is assigned to a student who:
  » Is granted an extension to submit the academic requirements (usually a final paper and/or project). If a student needs an extension, he or she must request it in writing to the Offering Leader for the class prior to the assignment deadline. The written request must provide acceptable reasons for an extension and a proposed deadline for submission Approved extensions are typically for two to three weeks.

» Submits the academic requirement on time but receives a grade below a "B" and the student subsequently resubmits his or her work. The Offering Leader may grant the student two to three weeks to resubmit the academic requirement.

In either case, if a student receives an approved extension to submit academic requirements, the highest possible final grade the student can obtain is a B+. If a student submits a final assessment under an extension that does not meet academic requirements but the student satisfactorily met the attendance/participation requirements for the course, the Offering Leader may assign a PD.

Note: students wishing an additional extension past the original extension granted by the Offering Leader may submit a request with proper justification to IRMCExceptionRequest@ndu.edu

- **Withdraw (W):** When the student requests withdrawal from a course after the start date but within the first 25 percent of the course, the faculty member will assign a grade of "W." The request to withdraw must be submitted in writing to the Offering Leader. If the student requests withdrawal after 25 percent of the course is completed, the faculty member will assign a grade of "No Credit."

- **Professional Development (PD):** This grade is assigned to students who elect to take a course for professional development and successfully complete requirements. Students do not receive academic credit for professional development courses. Students must retake courses for credit if they want to apply them to a certificate program.

- **Audit (AU):** Beginning in AY 2006/2007, the Audit (AU) grade is no longer used. However, students who audited courses prior to AY 2006/2007 will have an AU grade posted to their official transcripts.

Other Annotations:

- **No Show (NS):** The student did not report for a scheduled class. An "NS" annotation does not become part of a student's official transcript, but a student receiving two grades of NS will be prohibited from enrolling for six months.

ACADEMIC INTEGRITY

The College expects all requirements submitted by each student to be original work, produced by the student for the first time while a student at the IRM College. The product should contain the student's own ideas and analysis except as documented by appropriate citations, and must be submitted for academic credit only once to satisfy course requirements. Work submitted cannot be a modification of a paper or presentation submitted for a previous course, and must contain the student's own ideas except as correctly and fully cited.

Plagiarism is the unauthorized use, intentional or unintentional, of intellectual work of another person without providing proper credit to the author. While most commonly associated with writing, all types of scholarly work, including computer code, speeches, slides, music, scientific data and analysis, and electronic publications are not to be plagiarized. Students are encouraged to submit their papers and assessments through the plagiarism detection software, "SafeAssignment," found in the Student Resources Portal in Blackboard prior to turning them in for grading.

Submission of false admission eligibility credentials or violations of the academic integrity policy are referred to the Academic Review Board. Sanctions range from expulsion, suspension, revocation of certificates, a grade of No Credit, rejection of the work submitted for credit, or a letter of admonishment. The authority for decisions and actions rests at the College.

Negative academic actions may be disclosed to the student's sponsoring service or organization, as well as to investigators for employment or security clearances.

COURSE EVALUATION

The end-of-course survey provides students the opportunity to provide feedback on the instruction, materials, and intended learning outcomes. Student feedback is a critical component of the IRM College's efforts to offer current, relevant, and high-quality courses and programs. At the end of each course offering students should submit their comments on various aspects of course design and delivery. Survey results are shared with the faculty and the College leadership and are used as a basis for future course revisions. The end-of-course survey results are aggregated and not attributable to any individual.

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ACADEMIC REVIEW BOARD

The IRM College Academic Review Board is responsible for reviewing cases of student performance that include violations of the College's academic integrity policy.

The student will be notified by e-mail and U.S. mail that he or she has been referred to the Academic Review Board. The communication will include a summary of the reason for the referral and invite the student to appear.

When a student's work is referred to the Academic Review Board, the student's record will be placed on "Academic Hold" status. All actions affecting the student's current coursework, including grading, will be suspended pending outcome of the Academic Review Board's inquiry.

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COURSE DIRECTORY

All courses may be taken for graduate/certificate credit or professional development.

DESCR.	COURSE TITLE	CATALOG NUMBER
AII	Information Assurance and Critical Infrastructure Protection	6203
ARC	Enterprise Architectures for Leaders	6412
ATO	Approval to Operate: Information System Certification and Accreditation	6209
BBC	Building an IT Business Case	6430
BFM	Federal Budgeting and Financial Management for Strategic Leadership	6417
CBL	Cyberlaw	6204
CIP	Protection of Critical Infrastructures and Key Assets	6212
COO	Continuity of Operations	6504
CST	Critical Information Systems Technologies	6510
CWC	The Changing World of the CIO	6317
DMG	Decision Making for Government Leaders	6323
DMS	Data Management Strategies and Technologies: A Managerial Perspective	6414
DTF	Defense Transformation and Innovation	6509
EAP	Enterprise Architecture Practicum	6413
ESG	Experimentation, Simulation, and Gaming: Testbed for Transformation	6502
ESP	Enterprise Strategic Planning	6320
ESS	Enterprise Information Security and Risk Management	6206
FAC	Federal Enterprise Architecture and Advanced Concepts	6409
GBE	Government Business Enterprise Transformation	6501
GEN	Global Enterprise Networking and Telecommunications	6205
GIG	Global Information Grid Architecture and Advanced Concepts	6434
GLS	Global Strategic Landscape	6213
HLS	Homeland Security Information Management	6507
HST	Homeland Security Information Management: Tools and Techniques	6503
IAG	Information Age Government	6505
IMP	Strategic Planning for IRM Executives	6318
IOS	Information Operations and National Security in the Information Age	6207
IPL	Information Technology Program Leadership	6411
ITA	Strategic Information Technology Acquisition	6415
ITP	Information Technology Project Management	6416
IWS	Information, Warfare, and Military Strategy	6202
LDC	Leadership for the Information Age	6301
LSI	Leading Strategies for Disruptive Innovation	6511
MAC	Multi-Agency Information-Enabled Collaboration	6512
MOP	Measuring Results of Organizational Performance	6316
NCW	Network Centric Warfare and Operations	6513
OCL	Organizational Culture for Strategic Leaders	6321
PFM	Capital Planning and Portfolio Management	6315
PMA	Planning and Managing Enterprise Architecture Programs	6432
PRI	Strategies for Process Improvement	6333
SAA	Strategic Management of Software Assurance	6211
SAL	Software Acquisition Leadership	6410
SCL	Strategic Communication for Government Leaders	6322
SCS	Managing Security of Control Systems	6210
SEC	Cyber Security for Information Leaders	6201
SIO	Strategic Infrastructure Operations	6214
SPA	Privacy Rights and Challenges in the Information Age	6508
TAS	Transformation as Strategic Alignment	6528
TCC	Terrorism and Crime in Cyberspace	6215

AII

INFORMATION ASSURANCE AND CRITICAL INFRASTRUCTURE PROTECTION
Catalog Number: 6203

COURSE DESCRIPTION
This course provides a comprehensive overview of information assurance and critical information infrastructure protection. Information assurance of information assets and protection of the information component of critical national infrastructures essential to national security are explored. The focus is at the public policy and strategic management level, providing a foundation for analyzing the information security component of information systems and critical infrastructures. Laws, national strategies and public policies, and strengths and weaknesses of various approaches are examined for assuring the confidentiality, integrity, and availability of critical information assets.

PREREQUISITES
None; however, students are strongly recommended to take this course as the first in the NSTISSI No. 4011 certificate.

LEARNING OUTCOMES
Students will be able to analyze laws, national strategies, and public policies; and assess the strengths and weaknesses of various approaches for assuring the confidentiality, integrity, and availability of those information assets created, stored, processed, and communicated by information systems and critical information infrastructures.

ARC

ENTERPRISE ARCHITECTURES FOR LEADERS
Catalog Number: 6412

COURSE DESCRIPTION
This course examines enterprise architecture (EA) as a strategic capability organizational leaders use for enterprise planning, decision-making, and key process execution. Students explore leadership competencies and management strategies needed to advance EA adoption, use, and institutionalization. Students also explore the integration of EA with strategic planning, governance, portfolio management, capital planning and investment control, and information assurance. Students examine EA descriptive frameworks and associated models that guide EA development activities and review EA evaluative frameworks used to assess organizational EA management capacities and performance outcomes enabled by the EA. Students further examine challenges to organizational EA adoption, implementation, use, and institutionalization and consider strategies to address them.

LEARNING OUTCOMES
Students will be able to describe the nexus between enterprise architecture (EA) and successful enterprise planning and operations, EA's role in facilitating other critical agency activities, e.g., capital planning and investment control (CPIC) and information assurance (IA), the application of EA models, and strategies to address the challenges of EA adoption, use, and institutionalization.

ATO

APPROVAL TO OPERATE: INFORMATION SYSTEM CERTIFICATION AND ACCREDITATION
Catalog Number: 6209

COURSE DESCRIPTION
This course examines the information security certification and accreditation principles leading to final Approval to Operate (ATO) an information system. The course examines roles, responsibilities, documentation, organizational structure, directives, and reporting requirements to support the Designated Accrediting Authority (DAA) in approving the security control functionality level of an information system and granting ATO at a specified level of trust. The course provides an overview of DOD and Federal department and agency certification and accreditation processes (e.g., Defense Information Assurance Certification and Accreditation Process; NIST Certification and Accreditation Process), information assurance acquisition management, and system security architecture considerations.

PREREQUISITES
None; however, students who have no information assurance background should take Information Assurance and Critical Infrastructure Protection (AII) before taking this course.

LEARNING OUTCOMES
Students will be able to document a certification and accreditation plan, present and justify the plan to senior management for approval, and develop a systems security authorization agreement for their organization.

BBC

BUILDING AN IT BUSINESS CASE
Catalog Number: 6430

COURSE DESCRIPTION
This course focuses upon program-level development and presentation of an effective IT acquisition business case. Well-developed business cases support agency IT capital planning and investment control and successful OMB IT investment review. Topics include best practices in economic and risk analysis, identifying and communicating the value of alternative IT investments, business process reengineering and benchmarking, and the IT Program Manager's responsibilities in agency IT portfolio management. The course examines both the OMB Circular A-11 Exhibit 300: Capital Asset Plan and Business Case Summary and the more detailed business case used in the agency investment review process. Students analyze sample IT business cases and develop a business case based on source materials.

LEARNING OUTCOMES
Students will be able to create a hypothetical IT business case, critique a business case using a business case evaluation method and other criteria, and recommend changes to improve the defense of the business case to agency and OMB officials.

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BFM

FEDERAL BUDGETING AND FINANCIAL MANAGEMENT FOR STRATEGIC LEADERSHIP
Catalog Number: 6417

COURSE DESCRIPTION
This course examines Federal budgeting, appropriations, and financial management. It is intended to provide a strategic understanding of the players, roles, structure, responsibilities, and rules of Federal budgeting, appropriations, and financial management. With this critical understanding, the senior manager or leaders gain ability to shape the fiscal environment to achieve agency strategic outcomes. The course focuses on topics such as the dynamic interaction between agency, executive, and congressional stakeholders in developing a budget and gaining an appropriation; the impact on government of current fiscal issues, including the competition between discretionary and nondiscretionary spending; and emerging Federal financial management reform initiatives. The course concludes with a discussion of budget execution, internal control, audit, and appropriations law issues.

LEARNING OUTCOMES
Students will be able to assess the Federal budgeting and appropriations process and the legal and policy constraints upon it and their affect on government organizations.

CBL

CYBERLAW
Catalog Number: 6204

COURSE DESCRIPTION
This course presents a comprehensive overview of ethical issues, legal resources and recourses, and public policy implications inherent in our evolving online society. Complex and dynamic state of the law as it applies to behavior in cyberspace is introduced, and the pitfalls and dangers of governing in an interconnected world are explored. Ethical, legal, and policy frameworks for information assurance personnel are covered. Various organizations and materials that can provide assistance to operate ethically and legally in cyberspace are examined. Topics include intellectual property protection; electronic contracting and payments; notice to and consent from e-message recipients regarding monitoring, non-repudiation, and computer crime; and the impact of ethical, moral, legal, and policy issues on privacy, fair information practices, equity, content control, and freedom of electronic speech using information systems.

PREREQUISITES
None; however, students who have no information assurance background should take Information Assurance and Critical Infrastructure Protection (AII) before taking this course.

LEARNING OUTCOMES
Students will be able to (1) assess potential legal issues that might flow from implementing and not implementing information security policies, practices, and procedures, and (2) create policies and operating procedures for an organization that are ethically and legally sound.

CIP

PROTECTION OF CRITICAL INFRASTRUCTURES AND KEY ASSETS
Catalog Number: 6212

COURSE DESCRIPTION
This course provides a foundation for analysis of strategies, policies, critical infrastructure plans, investments, and management challenges in protecting the national critical infrastructures and key assets. It examines various approaches for protecting critical infrastructures and a framework for prioritizing protection initiatives. Benefits of reducing risks, lessening vulnerabilities, deterring threats, and minimizing the consequences of terrorist attacks as well as man-made and natural disasters are explored. Other topics include an examination of the significant synergy required between the private and public sectors in homeland security and homeland defense, the importance of protecting the IT infrastructure as a foundation of all critical infrastructures, and implementation strategies for infusing policies and plans in government organizations.

PREREQUISITES
None; however, students may enhance their understanding by taking Homeland Security Information Management (HLS) followed by the Homeland Security Information Management: Tools & Techniques (HST).

LEARNING OUTCOMES
Students will be able to (1) analyze national strategies, public policies, and prospective homeland security critical infrastructure plans; (2) compare and contrast the strengths and weaknesses of various approaches established for the protection of critical infrastructures and key resources; and (3) create a strategy that incorporates homeland security and defense policies and plans for protection of a critical infrastructure and its corresponding key assets.

COO

CONTINUITY OF OPERATIONS
Catalog Number: 6504

COURSE DESCRIPTION
This course provides a broad description of the major elements involved in developing and implementing effective continuity of operations plans for government agencies. Using Federal regulations policies as a backdrop, the course examines the technological, human capital, legal, and acquisition factors involved in creating and maintaining a continuity of operations plan. Topics include determining key assets and systems, creating and implementing emergency plans, working with the responder community, developing metrics and exercises, and restoring effective operations.

LEARNING OUTCOMES
Students will be able to analyze problems stemming from the absence of a comprehensive, tested continuity of operations plan, and create a strategy to develop and implement such a plan.

4

CST

CRITICAL INFORMATION SYSTEMS TECHNOLOGIES
Catalog Number: 6510

COURSE DESCRIPTION
This course probes the rapid advances in all aspects of information systems technology from the perspective of both the functional and the information resources manager. The course provides an overview of both the current state of the art and the trends in information systems technology with particular attention to software development technologies, data management, computer systems hardware, human-computer interfaces, voice recognition, natural language understanding, collaborative technologies, telecommunications technologies, and electronic commerce technologies. It concludes with a group exercise designed to determine how a CIO can address the issues these technologies introduce within an organization.

LEARNING OUTCOMES
Students will be able to evaluate the usefulness of recent developments in hardware, software, and other information systems to meet organizational goals; develop metrics for measuring the usefulness of the technologies; and determine the best strategy for infusing these technologies into their organizations.

CWC

THE CHANGING WORLD OF THE CIO
Catalog Number: 6317

COURSE DESCRIPTION
This course explores the changing role of the Chief Information Officer in Federal agency and inter-agency information activities. Based upon current Federal statutes and policy directives, the course examines the CIO's explicit and implicit information, technology and business roles. Students focus on developing and implementing policy guidance while playing the role of a CIO. Students also learn how to leverage best practices to plan, acquire, manage, and use information resources in a dynamic global environment so as to improve agency mission performance and citizen service delivery.

LEARNING OUTCOMES
Students will be able to analyze the role of the CIO in agency and inter-agency information leadership activities and will be able to create an organizational information resources management program that is based upon current Federal policy guidance in a multi-agency information sharing environment.

DMG

**DECISION MAKING FOR
GOVERNMENT LEADERS**
Catalog Number: 6323

COURSE DESCRIPTION
This course examines the environment, opportunities, and challenges of leadership decision making in contemporary government agency and inter-agency settings. Students examine decision making from individual, managerial, and multi-party perspectives, using decision models, tools, and environments to explore decision options and consequences. Decision contexts and the consequences for Federal Government leaders and organizations are viewed using the multiple perspectives of governance, policy, technology, culture, and economics. Performance-based approaches challenge students to view decisions as values-based strategic actions influencing decision implementation, shaping primary and secondary consequences, and achieving desired outcomes.

LEARNING OUTCOMES
Students will be able to analyze leadership decision making and the decision environments in Federal Government agency and inter-agency settings; assess the challenges and opportunities for decision makers in Federal Government collaborative and information-sharing environments; and assess decision consequences and outcomes in terms of agency missions, political mandates, and statutory guidance.

DMS

**DATA MANAGEMENT STRATEGIES AND
TECHNOLOGIES: A MANAGERIAL PERSPECTIVE**
Catalog Number: 6414

COURSE DESCRIPTION
This course explores data management and its enabling technologies as key components for improving mission effectiveness through the development of open, enterprise-wide, and state-of-the-art data architectures. It examines management issues such as the implementation of the data component of the Enterprise Architecture specified by OMB. In addition, the course considers key data management strategies, including the DOD Net-Centric Data Strategy, and the Federal Enterprise Architecture (FEA) Data Reference Model and their enabling information technologies including data warehousing, electronic archiving, data mining, neural networks, and other knowledge discovery methodologies. Case studies allow students to explore data management issues and implementation. While geared for managers, the course provides sufficient insight into the underlying technologies to ensure that students can evaluate the capabilities and limitations of data management options and strategies.

PREREQUISITES
None; however, students in the Enterprise Architecture Certificate program are encouraged to complete the Information Management Planning (IMP) and Strategies for Process Improvement (PRI) courses before enrolling in DMS.

LEARNING OUTCOMES
Students will be able to assess an organization's current data architecture and implementation and to develop strategies to enhance them to improve agency mission effectiveness.

4

DTF

DEFENSE TRANSFORMATION AND INNOVATION
Catalog Number: 6509

COURSE DESCRIPTION

This course focuses on transformation and innovation initiatives relating to building the future military and organizational capabilities of Defense organizations. The course places current DOD transformation and innovation efforts within the context of Information Age drivers and recent and current Revolutions in Military Affairs. This is followed by examination of innovations relating to network centric warfare, inter-agency complex operations, capability-based planning, experimentation, and new business models for operating the DOD enterprise. The course examines how these innovations in leveraging the information power of networked teams, forces, organizations and coalitions are being used to deconstruct and reshape the DOD into an organization that can adapt swiftly to perform diverse defense, national and homeland security missions. Students evaluate the competencies, challenges and opportunities posed for transformation leaders as they seek to transform a complex mega-enterprise while simultaneously preparing and leading global war-fighting and post-conflict stabilization and reconstruction operations.

LEARNING OUTCOMES

Students will be able to formulate and shape the requirement for future transformation and innovation initiatives; develop strategies that prepare defense organizations to successfully engage in and achieve such changes; appraise critically the ends, ways and means of defense transformation and innovation; and from these assessments develop strategies for transformation and innovation that can be successfully proposed and endorsed.

EAP

ENTERPRISE ARCHITECTURE PRACTICUM
Catalog Number: 6413

COURSE DESCRIPTION

As the Enterprise Architecture (EA) Program capstone course, this course engages students in an integrated application of principles, policies, and practices of the EA Certificate Program. Students will identify enterprise architecture issues, conduct research, develop and assess solution strategies, and then present the executed strategies in the context of an intensive case study based upon the actual experience of a government agency.

PREREQUISITES

In addition to the following courses, students should have an approved project proposal before enrolling in EAP.
- *Information Management Planning (IMP)*
- *Strategies for Process Improvement (PRI)*
- *Enterprise Architecture for Leaders (ARC)*
- *Data Management Strategies and Technologies (DMS)*
- *Planning and Managing Enterprise Architecture Programs (PMA)*
- *Global Information Grid Architecture* and *Advanced Concepts (GIG)* or *Federal Enterprise Architecture and Advanced Concepts (FAC)*

LEARNING OUTCOMES

Students will be able to evaluate the state of an agency's EA development effort and propose, assess, and select strategies to develop and implement an EA successfully. They will be able to explain and justify their recommendations regarding EA development clearly and authoritatively through position papers and oral presentations.

ESG

EXPERIMENTATION, SIMULATION, AND GAMING: TESTBED FOR TRANSFORMATION
Catalog Number: 6502

COURSE DESCRIPTION
In this course, students will expand their competency for analyzing and evaluating the ever increasing surge of information in today's chaotic, complex, and dynamic environment. This organizational context demands that effective Information Age leaders think and make decisions in extraordinary ways. Students will learn how to use systems thinking and system dynamics to test hypotheses and clarify underlying assumptions in their decision making process. They will understand how to use experimentation, simulation, gaming, and virtual worlds as essential decision-making tools that enable system learning, adaptation to chaos and change, and agility to respond to the complex issues facing 21st century organizations.

LEARNING OUTCOMES
Students will be able to analyze strategic and complex issues facing 21st Century leaders and create innovative solutions using intelligent processes and technologies. Their organizations, in turn, will be better positioned to take effective action in the contemporary environment.

ESP

ENTERPRISE STRATEGIC PLANNING
Catalog Number: 6320

COURSE DESCRIPTION
In this course the students will conduct a strategic assessment by reviewing the various elements of The National Security Strategy of the United States of America (information, economic, diplomatic, and military power) and supporting strategies (e.g., National Strategy for Homeland Security, National Strategy for Combating Terrorism, National Defense Strategy, National Military Strategy, etc.) to understand the strategic direction of the Federal Government and its impact on their organization. They will review and critique the U.S. national security and inter-agency strategic planning process and explain the unique role that each agency plays in achieving inter-agency and national missions and goals. Students will explain various approaches to strategic planning in the face of uncertainty.

LEARNING OUTCOMES
Students will be able to assess an existing National Strategy, a government agency strategic plan, or a government agency component strategic plan, and recommend appropriate changes to improve the robustness of these existing plans against potential futures.

4

ESS

ENTERPRISE INFORMATION SECURITY AND RISK MANAGEMENT
Catalog Number: 6206

COURSE DESCRIPTION
This course examines the practical challenges of assessing and managing information security risks when developing an enterprise information security program. Based upon OMB, NIST, and DOD risk management guidance, the course addresses the key components of an organization's information security program including the identification, assessment, mitigation, and acceptance of risk. The course builds upon fundamental information assurance concepts and information security technology, integrating them into scalable, practical working solutions for defending the enterprise. Security program components, including configuration, incident, system life cycle, and acquisition are examined from a risk management perspective. Other topics include program and system security planning, risk assessment, policy, control/countermeasure selection, and continuous performance measurement and monitoring.

PREREQUISITES
None; however, students should take this course as the last course in the NSTISSI No. 4011 Certificate.

LEARNING OUTCOMES
Students will be able to recommend an information security program strategy and structure based upon their assessment and management of risks.

FAC

FEDERAL ENTERPRISE ARCHITECTURE AND ADVANCED CONCEPTS
Catalog Number: 6409

COURSE DESCRIPTION
This course focuses on challenges in agency implementation of the Office of Management and Budget's enterprise architecture direction and guidance and other advanced enterprise architecture (EA) concepts. The course critically explores the OMB Federal Enterprise Architecture Program Management Office's Segment Architecture approach, the Federal Transition Framework, and the five Federal Enterprise Architecture Reference Models and their supporting profiles. In addition, IPv6 and service-oriented architecture concepts and implementation strategies are examined. The DOD Global Information Grid and Network Centric Warfare and Operations Reference Model approaches to enabling cross-agency interaction and exchange of information are also explored. Finally, the course includes an examination of advanced EA concepts, including the Zachman framework, Federated Architecture, Business Case Development, and EA Leadership.

PREREQUISITES
Enterprise Architecture for Leaders (ARC)

LEARNING OUTCOMES
Students will be able to evaluate and select enterprise architecture development and implementation strategies consistent with FEAPMO direction and guidance that will contribute to the agency's mission; assess whether a proposed investment is consistent with an enterprise architecture and the OMB reference models; and effectively apply governance strategies to sustain the use and integration of an enterprise architecture with an agency's activities.

GBE

GOVERNMENT BUSINESS ENTERPRISE TRANSFORMATION
Catalog Number: 6501

COURSE DESCRIPTION
This course focuses on initiatives, strategies, and opportunities for transforming the Federal Government's business operations that provide capabilities, resources, and materiel to the government employee (such as global warfighters or disaster recovery staff). The course assesses the structural, political, technological, leadership, and human challenges of effecting transformational change in a complex mega-enterprise. This includes analyzing the challenges transformation initiatives bring when engaging in new ways of doing business, retiring legacy systems, processes, and strategies, while simultaneously delivering required services and results. The evolving vision and development of the Federal Enterprise Architecture as the information technology enabler of business enterprise transformation are evaluated. Students examine large organization transformations from the corporate sector to identify insightful lessons that can be developed as recommendations for government business enterprise transformation.

LEARNING OUTCOMES
Students will be able to identify the central dynamics and enablers of initiatives, opportunities, and strategies for transforming the Federal Government's business enterprise; to evaluate and compare transformation efforts across multiple agencies by identifying areas of strengths, weaknesses, and opportunities; and to recommend strategies for addressing them.

GEN

GLOBAL ENTERPRISE NETWORKING AND TELECOMMUNICATIONS
Catalog Number: 6205

COURSE DESCRIPTION
This course focuses on the effective management of network and telecommunications technologies in a government-sector global enterprise. The course examines current and emerging network and telecommunications technologies, including their costs, benefits, and security implications, placing emphasis on enabling military and civilian network-centric operations. Topics include network-centric concepts, spectrum management, data networks and associated Internet technologies, telephony, the role of public policy, and the significance of industry as a service provider and as an engine of innovation.

PREREQUISITES
None, but students should take this course as the first or second in the NSTISSI No. 4011 certificate.

LEARNING OUTCOMES
Students will be able to evaluate the managerial, policy, and security consequences of adopting telecommunications and network technologies and develop a detailed implementation plan to incorporate a technology into an enterprise.

4

GIG

GLOBAL INFORMATION GRID ARCHITECTURE AND ADVANCED CONCEPTS
Catalog Number: 6434

COURSE DESCRIPTION
This course examines issues in assessing consistency with DOD's Global Information Grid (GIG) architecture. The GIG architecture facilitates the Department of Defense's Network Centric Operations and Warfare (NCOW) strategy. Following an examination of net-centric concepts, the course considers the scope, development, and management of the GIG architecture; its relationship to the NCOW Reference Model; the structure, scope, and purpose of the NCOW Reference Model; and its utility in guiding the evolution of the GIG Architecture. The course concludes with a consideration of the actual and potential uses of the GIG architecture to include its application in the Joint Capabilities Integration and Development System (JCIDS) and development of capabilities requirements packages.

PREREQUISITES
Enterprise Architectures for Leaders (ARC)

LEARNING OUTCOMES
Students will be able to assess whether a DOD agency's enterprise architecture is consistent with the GIG Architecture and NCOW Reference Model and recommend or select development, implementation, sustainment, or governance and governance strategies consistent with DOD architectural policy and direction.

GLS

GLOBAL STRATEGIC LANDSCAPE
Catalog Number: 6213

COURSE DESCRIPTION
This course focuses on two broad themes of the evolving global strategic landscape; how global changes may impact future U.S. national security strategy, and the implications of these developments for creating Information Age government with national security responsibilities. The course examines the major trends that have transformed the world's economic, social, environmental, technological, political, and security landscape during the post-Cold War period, as well as possible future developments in these areas. The course also explores the implications of these trends for the national security environment, consequent options for national security strategy, and the transformation of Information Age government agencies.

LEARNING OUTCOMES
Students will be able to evaluate the impact of economic, social, environmental, political, technological, and international security trends on national security; integrate long-range trends into the development of national security strategy; and develop policy options that take into account these strategic and evolving security trends to transform government agencies into Information Age government organizations.

HLS

HOMELAND SECURITY INFORMATION MANAGEMENT
Catalog Number: 6507

COURSE DESCRIPTION
This course examines issues and emerging information management concepts related to the six critical homeland security mission areas: intelligence and warning, border and transportation security, domestic counterterrorism, critical infrastructure protection, catastrophic terrorism defense, and emergency preparedness and response. Students analyze information elements of key asset identification, threat and vulnerability analysis, risk assessment and management, and crisis and consequence management, and technologies for their ability to support planning, mitigation, response, recovery, and prediction. Students discuss functions, responsibilities, and policy; the interrelationship of defense, government-wide, and nongovernmental information systems; and the importance of strategic and contingency planning, systems integration, and sharing of information.

LEARNING OUTCOMES
Students will be able to assess areas within their respective organizations that are critical to the management of information for effective homeland security; provide recommendations for setting priorities and allocating homeland security resources; and develop a homeland security information integration and coordination strategy for their organization.

HST

HOMELAND SECURITY INFORMATION MANAGEMENT: TOOLS & TECHNIQUES
Catalog Number: 6503

COURSE DESCRIPTION
This course examines information management concepts and issues related to critical homeland security mission areas, including intelligence and warning, border and transportation security, domestic counterterrorism, critical infrastructure protection, catastrophic terrorism defense, and emergency preparedness and response. The course provides students with "hands-on" exposure to technologies and techniques that support the planning, mitigation, response, recovery, and prediction aspects of homeland security. It explores state-of-the-art and emerging concepts relating to intelligent agents, decision support, data/text mining, visualization, geographical information systems, and computer modeling and simulation.

PREREQUISITES
None; however, students should be very familiar with the *Homeland Security Information Management (HLS)* course mission areas and with many of the requirements for risk assessment, consequence management, and some of the technologies needed for better information sharing and international cooperation.

LEARNING OUTCOMES
Students will be able to evaluate prospective homeland security tools and techniques in terms of meeting organizational goals and requirements, and create an implementation strategy for infusing these technologies into their organizations.

4

IAG

INFORMATION AGE GOVERNMENT
Catalog Number 6505

COURSE DESCRIPTION
This policy course focuses on assessing the potential of "i-Government," its rationale, and its challenges. The course examines the actual and potential impact of modern information concepts on 21st Century governments. The course will integrate the core ideas of electronic government movement, recent advances in knowledge management, and new approaches to organizational design to identify ways to improve governmental effectiveness, agility, and responsiveness. Issues such as dealing with change and integrating performance and budgets across agencies are investigated.

LEARNING OUTCOMES
Students will be able to analyze approaches to leverage modern Information Age concepts to enable government to "work smarter"; to explain the foundational role of information in governance; to evaluate the ongoing transformation in governance processes; and to assess the leadership and managerial challenges posed by e-Government and i-Government policies, technologies, and issues in a democratic society.

IMP

STRATEGIC PLANNING for IRM EXECUTIVES
Catalog Number: 6318

COURSE DESCRIPTION
This course provides the knowledge and capabilities to create a mission-driven, strategy-focused Information Resources Management organization that is considered an essential mission partner by "line of business" leaders. It ensures that agency IRM executives are prepared to fully participate in the strategic management of their agencies and lead the strategic management process for the Information Resources Management organization and program. This course uses a comprehensive framework that is built on the explicit and implicit planning requirements of current legislation, regulations, and best practices. This framework integrates agency strategic planning, agency functional unit strategic planning, enterprise architecture planning, and capital planning so that these planning efforts will improve agency mission performance.

LEARNING OUTCOME
Students will be able to write an agency strategic plan and an agency functional unit strategic plan that comply with the requirements of current legislation, regulations, and best practices.

IOS

INFORMATION OPERATIONS AND NATIONAL SECURITY IN THE INFORMATION AGE
Catalog Number: 6207

COURSE DESCRIPTION
This course examines the essential paradigms and concepts of Information Operations (IO), Information Assurance (IA), and Strategic Communication (SC). It explores the technological revolution and the information component of national power, and examines that component in the National Security Strategy in light of the nature of the interconnected age; existing national policy; organizational transformation; and equities involved in IO, IA, and SC and information as a strategic environment. The course concludes by exploring the new paradigm of national security in the Information Age and the need for an information strategy to support the National Security Strategy.

PREREQUISITES
Secret clearance is required.

LEARNING OUTCOMES
Students will be able to analyze how the information component of power is used in national security strategies and operations; analyze the role played by IO/IA/SC in national security strategies and operations; synthesize new approaches for the employment of the information component of power in national security strategies and operations; and apply IO/IA/SC in the development and execution of national security strategies and operations.

IPL

INFORMATION TECHNOLOGY PROGRAM LEADERSHIP
Catalog Number: 6411

COURSE DESCRIPTION
This course examines the challenges of Federal program leadership in an Information Technology (IT) context. Students gain theoretical insight, supplemented by practical exercises, covering a variety of program/project leadership concepts and techniques. Particular areas of focus include customer service, stakeholder relations, decision-making methods, processes and pitfalls, interpersonal skills, organizational awareness and dynamics, and written and oral communication skills. The course also explores the role of oversight in the management and leadership of Federal IT acquisition programs.

LEARNING OUTCOMES
Students will be able to evaluate leadership challenges likely to arise in managing an IT project and identify and implement appropriate strategies to manage them successfully. They will also be able to communicate project plans and technical content effectively, either orally or in writing.

4

ITA

STRATEGIC INFORMATION TECHNOLOGY ACQUISITION
Catalog Number: 6415

COURSE DESCRIPTION
This course examines the role senior leaders play in the successful acquisition of information services and technologies to achieve organizational strategic objectives. It employs a life cycle management approach through exploration of statutory and regulatory policies, acquisition strategies, requirements management, analysis of alternatives, design and performance measurement issues, and implementation and sustainment considerations that directly impact IT acquisition. Acquisition best practices are considered, as well as numerous acquisition issues, including Share-in-Savings, Performance-Based Contracting, modular contracting, the broadened availability of commercial items, the use of more flexible selection procedures and procurement vehicles, and contract administration. The course includes guest speakers from government and industry with the latest in policy updates and how to maximize productivity in the contractor-government acquisition environment.

LEARNING OUTCOMES
Students will be able to analyze agency information technology strategies, methods, and plans, and recommend changes to increase the likelihood that acquisition will fully meet agency mission objectives.

ITP

INFORMATION TECHNOLOGY PROJECT MANAGEMENT
Catalog Number: 6416

COURSE DESCRIPTION
This course focuses on project and program management in an Information Technology (IT) context. Students explore industry-accepted project management processes, e.g., the Project Management Institute's (PMI) Project Management Body of Knowledge (PMBOK) framework, and apply project management concepts. Major topics include planning and management of project communications, scope, time, cost, quality, risk, human resources, procurement, and project integration. Factors that make IT projects unique and difficult to manage are explored, along with tools and techniques for managing them. This course challenges students to gain hands-on project management experience by performing complex project management tasks leading to the development of a project management strategy/plan.

PREREQUISITES
None; however, successful completion of *Strategic Information Technology Acquisition (ITA)* is recommended prior to taking this course.

LEARNING OUTCOMES
Students will be able to assess a project management strategy/plan and develop a plan for an IT project.

IWS

INFORMATION, WARFARE, AND MILITARY STRATEGY
Catalog Number: 6202

COURSE DESCRIPTION
This course examines key considerations for the planning and conduct of information operations at the theater and strategic levels. The course emphasizes inter-agency and international considerations in the planning and conduct of Information Operations (IO). The course also examines selected non-U.S. approaches to the strategies for and uses of the full spectrum of information operations by current and potential global competitors and adversaries. A lesson on strategic legal implications and considerations is also presented, and an in-class exercise examines the use/misuse of IO strategies against an adaptive adversary. The course concludes with a snapshot of current U.S. military IO strategies.

PREREQUISITES
Secret clearance is required.

LEARNING OUTCOMES
Students will be able to evaluate the specific capabilities and potential contributions of the designated IO organizations, capabilities, and planning tools; evaluate and integrate IO requirements and capabilities within the appropriate phases of the deliberate and crisis planning processes; ascertain the contributions and limitations of IO within a strategic/theater strategic context; compare and contrast selected non-U.S. approaches to and uses of IO; and design an appropriate military strategy for the employment of IO capabilities over a time horizon suited to the effects to be achieved.

LDC

LEADERSHIP FOR THE INFORMATION AGE
Catalog Number: 6301

COURSE DESCRIPTION
This course examines Information Age leadership and organizations. It describes the successful Information Age leader and organization as constantly learning and adapting to an increasingly complex, changing, and information-rich environment. Emphasis is placed on "out-of-the-box" thinking, individual and organizational innovation, and the processes and structures that enhance an organization's ability to learn, adapt, and compete in the Information Age. The course also explores the role of information and technology in the Information Age organization; the relationships among learning, change, and strategic planning; and the new abilities required for leading in the Information Age.

LEARNING OUTCOMES
Students will be able to demonstrate effective collaboration and teamwork across various problem-solving circumstances and create and design effective processes and structures that increase organizational flexibility and agility.

4

LSI

LEADING STRATEGIES FOR DISRUPTIVE INNOVATION
Catalog Number: 6511

COURSE DESCRIPTION
This course focuses on the strategies that leaders require to create, implement, and guide their organizations successfully through disruptive innovation _ both that of their own making and that which is driven by external and uncontrollable circumstances. The course examines the drivers of disruptive innovation to include emerging technologies, globalization, and demographic shifts. It explores models of innovation and change as well as evolving concepts of organizational innovation and strategy designed to cope with uncertainty and rapid rates of change. It also examines the barriers to and levers of disruptive innovation such as leadership, organizational culture, and bureaucratic politics, and their relationship to disruptive innovation.

LEARNING OUTCOMES
Students will be able to develop effective strategies for leading organizations through disruptive innovation; to analyze the strengths and weaknesses of various strategies; and to leverage leadership, organizational culture, and bureaucratic politics to achieve successful organizational transformation.

MAC

MULTI-AGENCY INFORMATION-ENABLED COLLABORATION
Catalog Number: 6512

COURSE DESCRIPTION
This course focuses on strategies, means, and information models needed for effective multi-agency collaboration in planning, decision-making and implementation of national security operations, including stabilization and reconstruction, and homeland security and national preparedness operations. It examines current and proposed initiatives for transforming and leading cross-boundary collaboration at the Federal, State and local levels, and includes multilateral collaboration situations with nongovernment (NGO) and international organizations and coalitions, media, private sector and coalition partners. The course examines how information-enabled networks, collaborative tool-sets, cross-boundary information-sharing, and work processes can be harnessed to enable effective multi-agency and multilateral national and homeland security activities. The course assesses the human, social and leadership issues of sustained and effective multi-agency collaborations. Impediments such as legal and budgetary authority restrictions, educational and cultural factors that inhibit cross-boundary mission effectiveness and transformation are assessed, as are strategies for addressing them.

LEARNING OUTCOMES
Students will be able to evaluate the principles and dynamics of effective collaboration across agency boundaries and the leader competencies, information technologies and organizational innovations that offer opportunities to enable effective multi-agency collaboration; appraise critically the ends, ways, and means for achieving effective multi-agency collaboration; and formulate and shape transformation initiatives to significantly advance effectiveness in complex operations requiring multi-agency collaboration.

MOP

**MEASURING RESULTS OF
ORGANIZATIONAL PERFORMANCE**
Catalog Number: 6316

COURSE DESCRIPTION
This course provides strategies and techniques for assessing organizational performance results as part of the strategic planning and budgeting process required to fulfill regulatory oversight requirements (e.g., GPRA, Clinger-Cohen Act, President's Management Agenda, PART). The course leverages lessons learned from both inter-agency and private sector experiences on the leadership, process, and resource issues surrounding the identifying, developing, and validating performance measurement instrumentation, collecting and organizing performance data, and analyzing and reporting organizational results. Using the Kaplan and Norton Balanced Scorecard methodology as a framework, organizational performance measures are developed that tie to the organizational mission, vision, goals, objectives, initiatives, budget, strategy, and outcomes. A priority emphasis is placed on organizational outcomes as those outcomes link mission accomplishment to the value added for customers and stakeholders.

PREREQUISITES
None; however, this course should be one of the first two courses taken in the CIO Certificate Program.

LEARNING OUTCOMES
Students will be able to develop and/or assess a comprehensive plan for conducting a performance assessment for their organization that directly supports the decision makers who lead their organization toward mission effectiveness.

NWC

**NETWORK CENTRIC WARFARE
AND OPERATIONS**
Catalog Number: 6513

COURSE DESCRIPTION
This course examines the tenets and technologies of network centric warfare and operations (NCW) as an evolving way of warfare and a central component of Department of Defense (DOD) innovation for future operations. The nature and dynamics of information-enabled networks are examined, as are other emergent technologies that are influencing how NCW evolves. The effects of networks and networking for conventional irregular combat operations, and post-conflict stabilization and reconstruction operations are evaluated using case studies and current operational results. The course assesses the social and cognitive processes and technological capabilities that are required to enable different aspects of NCW. The course evaluates the validity of the theory of NCW, and encourages students to assess the theory strengths and weaknesses. Attention is paid to ally and partner interpretations of NCW, and the NCW and counter-NCW capabilities and behaviors of adversaries. The course concludes by examining the strategic leader attributes, mind-sets, and competencies needed for effective NCW operations. This focus includes critical changes to command and control practices and approaches.

LEARNING OUTCOMES
Students will be able to evaluate the validity of the NCW principles, approaches, and technologies; critique how existing operations and command and control decision making are impacted by NCW principles; and apply the principles and technologies in ongoing transformation efforts to build military capabilities appropriate for future effective operations.

4

OCL

ORGANIZATIONAL CULTURE FOR STRATEGIC LEADERS
Catalog Number: 6321

COURSE DESCRIPTION
This course explores the strategic and persistent effects of culture on mission performance. Students examine the ways in which leaders can employ this powerful influence to nurture organizational excellence or to stimulate changes in organizational behavior. They investigate organizational sciences for traditional and Information Age perspectives on organizational behavior, on frameworks for assessing organizational cultures, and on strategies to initiate and institutionalize strategic mission-oriented change. Cross-boundary, inter-agency, cross-generational, and global influences, issues, and challenges are examined from a cultural perspective.

LEARNING OUTCOMES
Students will be able to assess the culture of an organization within its strategic context, understand culture's critical role in processes and decision making, and design strategic initiatives to either sustain or change the organizational culture to support organizational missions that effectively contribute to Information Age government.

PFM

CAPITAL PLANNING AND PORTFOLIO MANAGEMENT
Catalog Number: 6315

COURSE DESCRIPTION
This course focuses on state-of-the-art strategies for portfolio management, with an emphasis on assessing, planning, and managing information technology (IT) as a portfolio of investments. The three phases of the investment management process are considered: selection, control, and evaluation of proposals; on-going projects; and existing systems. The relationship of performance measures to mission performance measures is explored. The course examines the roles of the CIO, the CFO, and other managers in developing investment assessment criteria, considers how the criteria are used in planning and managing the portfolio, and explores the Office of Management and Budget's (OMB) portfolio perspective as found in Circular A-11, Part 7, Section 53, Information Technology and E-Government. Individual and team exercises are employed, including simulation of an IT investment portfolio review by the Investment Review Board.

LEARNING OUTCOMES
Students will be able to evaluate an investment portfolio and the corresponding capital planning and investment management process to ensure that they comply with current statutes and regulations, recommend changes to the process, and develop a strategy for balancing a portfolio of investment projects.

PMA

PLANNING AND MANAGING ENTERPRISE ARCHITECTURE PROGRAMS
Catalog Number: 6432

COURSE DESCRIPTION
Graduates of this course are prepared to lead the planning, development, and implementation of an enterprise architecture (EA) program to support organizational transformation. This course considers critical success factors for establishing an EA program, to include such factors as EA team competencies, communication mechanisms, leadership, and methodology and tool selection. Students explore various EA methodologies, with an emphasis on the Model-Driven Architecture (MDA) approach and related object-oriented modeling diagrams. The course explores various architectural frameworks, such as the DOD Architecture Framework (DODAF) and Federal Enterprise Architecture Framework (FEAF), challenging students to think critically about how to put theory into practice and the value of associated descriptive work products. Students gain hands-on experience in developing various static work products and the use of an EA repository-modeling tool. The course introduces leading-edge descriptive work products not associated with traditional architecture frameworks. Students are also exposed to analytics, both static and dynamic (simulation), to identify baseline and target opportunities in transforming the organization. This course builds upon fundamentals presented in the Enterprise Architectures for Leaders (ARC) course.

PREREQUISITES
Enterprise Architecture for Leaders (ARC)

LEARNING OUTCOMES
Students will be able to develop an effective plan for an enterprise architecture project; select and create architectural views and products to satisfy an enterprise architecture project's purpose and scope; and apply enterprise architecture products to analyze operational or business requirements and capabilities, identify optimal solutions, and determine transition strategies.

PRI

STRATEGIES FOR PROCESS IMPROVEMENT
Catalog Number: 6333

COURSE DESCRIPTION
This course examines strategies, management processes and resources for process improvement within and across Federal agencies. The course provides an executive-level examination of business process improvement strategies, including business process re-engineering, benchmarking, activity-based costing/management, process architecting, Lean Six Sigma, and other quality improvement programs. An overview of the tools, techniques, and technologies that enable process-centric performance improvements in how agencies achieve their missions is provided. Attention is focused on the enterprise-level leadership challenges of process management, including initiation, collaboration, design, implementation, and portfolio project management of process-centric improvements within and across agencies.

LEARNING OUTCOMES
Students will be able to recommend appropriate process change strategies, tools, and methods for carrying out process improvement. They will be able to provide advice on the implementation challenges of process improvement, including impacts upon organizational culture, structure and governance, and design, and propose initiatives and actions for addressing such challenges.

4

SAA

STRATEGIC MANAGEMENT OF SOFTWARE ASSURANCE
Catalog Number: 6211

COURSE DESCRIPTION
This course explores national security issues and leadership responsibilities involved in assuring the safety and security of the software component of the critical information infrastructure. It examines "building security in" to avoid software vulnerabilities that open mission-critical or national security systems to cyber attacks or terrorism. The course explores leveraging the acquisition process to implement safer and more secure software. Other topics include information assurance vis-à-vis software assurance; software assurance (SWA)-related law and public policy; national initiatives sponsored by DHS and DOD; risk management; acquisition issues: offshore development, software pedigree, and strategies for COTS development and integration services; education, training, and the SA body of knowledge; and assurance cases.

LEARNING OUTCOMES
Students will be able to analyze law, public policy, and national security initiatives, and to develop an enterprise software assurance leadership plan (involving people, processes, techniques, and technologies) to improve safety and security of software.

SAL

SOFTWARE ACQUISITION LEADERSHIP
Catalog Number: 6410

COURSE DESCRIPTION
This course provides comprehensive insight into the risks and issues associated with developing and implementing complex software systems. Students will examine the risks, problems, and issues that challenge large or complex software acquisition, integration, or development efforts, and evaluate strategies, methods, and tools to achieve successful program outcomes. Specific areas of focus include software development methods, tools and best practices, software-unique testing and architecture issues, and software assurance challenges and issues.

PREREQUISITES
None; however, students are encouraged to have successfully completed *Strategic Information Technology Acquisition (ITA)*.

LEARNING OUTCOMES
Students will be able to evaluate anticipated challenges and risks of software acquisition, integration, and development projects, and create appropriate and effective strategies to manage them

SCL

STRATEGIC COMMUNICATION FOR GOVERNMENT LEADERS
Catalog Number: 6322

COURSE DESCRIPTION
The course begins with communication theories and applications and ends with the role of strategic communication for government leaders. It explores the pivotal role of communication in achieving organizational and national strategies. The course investigates the psychological, cultural, political, and technological factors that mediate communications for national and international audiences so as to influence key decision makers, critical audiences, and general populations. Students analyze how government strategic leaders can be strengthened as producers and consumers of public information through social influence, persuasion and propaganda, public opinion and mass political behavior, crisis communications, media relations, communication law, policy and ethics, and the role of advanced telecommunication technologies.

LEARNING OUTCOMES
Students will be able to assess how strategic communication shapes public perceptions and beliefs at all levels, from domestic perceptions to international attitudes; and to develop and employ strategic communication processes and plans consonant with current communications theory that support their agency's mission and national security strategy.

SCS

MANAGING SECURITY OF CONTROL SYSTEMS
Catalog Number: 6210

COURSE DESCRIPTION
This course explores a wide range of people, processes, and technology issues in the management of critical infrastructure control systems (CS) security including Supervisory Control and Data Acquisition (SCADA) systems security. Systems for monitoring and controlling base-level and regional supply and flow of resources such as electricity, lighting, water, gas, and transportation are examined. Topics include CS components, threats, and vulnerability assessment and technical measures for improving security unique to CS, such as multifactor authentication, telephony firewalls and radio frequency encryption, and operational and physical security. The CS industry and initiatives in CS security standards are explored. This includes a focus on the interplay between regional commercial providers and base-level continuity of operations. The move toward integration of CS with traditional computer networks is covered.

LEARNING OUTCOMES
Students will be able to assess a control systems environment for people, processes, and technology vulnerabilities, and recommend an improved security strategy.

4

SEC

CYBER SECURITY FOR INFORMATION LEADERS
Catalog Number: 6201

COURSE DESCRIPTION
This course explores concepts and practices of defending the modern net-centric computer and communications environment. This course covers the 10 domains of the Certified Information System Security Professional (CISSP®) Common Body of Knowledge (CBK®). In addition, the course covers a wide range of technical issues and current topics including basics of network security; threats, vulnerabilities, and risks; network vulnerability assessment; firewalls and intrusion detection; transmission security and TEMPEST; operating system security; web security; encryption and key management; physical and personnel security; incident handling and forensics; authentication, access control, and biometrics; wireless security; virtual/3D Worlds; and emerging network security technologies such as radio frequency identification (RFID) and supervisory control and data acquisition (SCADA) security. The course also defines the role of all personnel in promoting security awareness.

PREREQUISITES
None; however, students should complete *Information Assurance and Critical Infrastructure Protection (AII)* and *Global Enterprise Networking and Telecommunications (GEN)* before taking this course.

LEARNING OUTCOMES
Students will be able to evaluate the cyber-security posture of an organization to determine adequate people, processes, and technology security.

SIO

STRATEGIC INFRASTRUCTURE OPERATIONS
Catalog Number: 6214

COURSE DESCRIPTION
The course explores the national security concept of "strategic fragility" as it applies to modern society's growing reliance on interconnected, complex, and potentially fragile critical infrastructures. The course covers the rise of fragile infrastructures, the role of the information infrastructure as a control mechanism, sources of vulnerability, examples of infrastructure attacks and their consequences, and potential means to mitigate risks and deter attacks by others on our strategic infrastructures. The course also examines current roles and missions of various U.S. Government entities and military commands in light of the potential threat from strategic infrastructure attacks.

PREREQUISITES
Top Secret/ SCI clearance is required.
This course will be limited to U.S. citizens.

LEARNING OUTCOMES
Students will be able to analyze the national security impact of society's dependence on interconnected critical infrastructures and to develop effective strategies to protect those fragile critical infrastructures.

SPA

PRIVACY RIGHTS AND CHALLENGES IN THE INFORMATION AGE
Catalog Number: 6508

COURSE DESCRIPTION
This course focuses on protecting private information while exploiting new technologies, implementing cross-agency information sharing, and improving the processes of government and service to the public. Managers learn to deal with the privacy concerns of citizens and stakeholders when implementing new systems and technology and transforming agency processes. Topics include an examination of the rights, needs, and perspective of the citizen, and the policy and legal frameworks of privacy. Mechanisms for evaluating and dealing with privacy issues are covered, including producing Privacy Impact Assessment (PIAs) for system initiatives and designating Chief Privacy Officers. The course culminates in an examination of leadership and management approaches that ensure appropriate information access and privacy protection.

LEARNING OUTCOMES
Students will be able to recommend appropriate protection strategies, tools, and methods for gathering, managing, and sharing private information, and to develop policies to manage privacy in government initiatives.

TAS

TRANSFORMATION AS STRATEGIC ALIGNMENT
Catalog Number: 6528

COURSE DESCRIPTION
This course explores the fundamental nature and dynamics of transformation, and the disequilibrium and ambiguity surrounding the search for and transformation of new mission spaces. It investigates those perilous but essential changes that allow an organization to create new organizational capabilities, exploit technologies, and take advantage of performance possibilities to achieve new levels of mission effectiveness or move into new mission spaces. This course examines the nature and interdependencies of the turbulent, globalized, and technologically catalyzed and infused environment in which traditional organizational interventions are increasingly inadequate. It analyzes the need for and type of new governance that can and will lead the transformation effort that results in the critical strategic alignment underpinning of agile, responsive, and relevant organizations and mission capabilities.

LEARNING OUTCOMES
Students will be able to analyze the global economic, social, and technological forces catalyzing transformation efforts; assess how this strategic landscape drives and shapes transformation opportunities and possibilities in their own and other government organizations; and create, evaluate, and recommend an appropriate governance structure that allows for an effective and sustained transformation.

4

TCC

TERRORISM AND CRIME IN CYBERSPACE
Catalog Number: 6215

COURSE DESCRIPTION:
This course explores the nature of conflict in the cyber realm by focusing on two major Internet-based threats to U.S. national security: cyber terrorism and cyber crime. The course examines who is undertaking these cyber activities, what techniques they use, and what countermeasures can be adopted to mitigate their impact. The course also provides a risk management framework to help information leaders leverage the benefits of Internet technologies while minimizing the risks that such technologies pose to their organizations.

LEARNING OUTCOMES
Students will be able to assess the risks posed by cyber terrorism and cyber crime to U.S. national security in general, and to their specific organizations in particular. They will also be able to evaluate the benefits and costs of different countermeasures that could be used to mitigate those risks.

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"The courses and certificates at the IRM College have a direct impact on my day-to-day work and will enable me to be more competitive."

∂⍵

*"I would like to THANK the IRM College for providing me the learning environment to continue my education.
EACH OF YOU ARE SUPERB!"*

∂⍵

"I loved the exposure to the experiences of the other students and the organizations they represented. Thanks for the opportunity and the experience."

ACADEMIC PARTNERSHIP PROGRAM

Academic Partnership Program

The IRM College forms academic partnerships with universities and colleges across the United States. Graduates from the IRM College's certificate programs can apply to a number of partner institutions toward completion of a Master's or Doctoral Degree. Academic partners accept 9, 12, or 15 graduate semester credits depending on which certificate program was completed at the IRM College. Academic partners provide full-time, part-time, or online educational opportunities.

As of catalog print date, the 38 current IRM College academic partners and applicable degree programs are listed below. Please refer to the IRM College website partnership matrix (http://www.ndu.edu/irmc/ntwk_list1.htm) for more details on the exact number of credits and POCs at each partner institution.

Questions about the partnership program should be directed to Patty Coopersmith, IRM College Academic Partnership Coordinator, at coopersmithp@ndu.edu, 202-685-2117. Specific questions about degree programs, admission requirements, or remaining courses should be directed to the academic partner institution representative.

Air Force Institute of Technology (OH): Master of Science Engineering Management, Master of Science in Information Resource Management, Master of Science in Computer Science, Master of Science in Electrical Engineering, Master of Science in Cyber Operations, Master of Science in Computer Engineering, Ph.D. Computer Engineering, Ph.D. Electrical Engineering, Ph.D. Computer Science.

Auburn (AL): Master of Software Engineering, Master of Science in Information Systems, Ph.D. Management.

Capitol College (MD): Master of Science in Information and Telecommunications Systems Management, Master of Science in Information Assurance, Master of Business Administration.

Central Michigan University (MI): Master of Science in Administration (with concentrations in Information Resource Management, Leadership, or General Administration).

Clemson University (SC): Master's in Human Resource Development.

Drexel University (PA): Master of Science in Information Technology Leadership (degree program currently on hold).

East Carolina University (NC): Master of Science in Technology Systems.

Eastern Michigan University (MI): Master of Liberal Studies (concentration in Information Assurance).

Florida Institute of Technology (FL): Master of Science in Information Technology.

George Mason University (VA): Master of Science New Professional Studies in Knowledge Management, Master of Science in Information Systems, Master of Science in Software Engineering, Master of Science in Information Security and Assurance, Master of Science in Telecommunications, Doctorate of Science in Information Technology, Doctorate of Science in Computer Science.

James Madison University (VA): Master of Business Administration (concentration in Information Security), Master of Science in Computer Science (concentration in Information Security).

Johns Hopkins University (MD): Master of Science in Security Informatics.

Mississippi State University (MS): Master of Science in Computer Science, Master of Science in Information Systems, Master of Business Administration in Project Management, Ph.D. Computer Science, Ph.D. Business Administration (concentration in Information Systems).

New Mexico Tech (NM): Ph.D. Computer Science.

Northeastern University (MA): Master of Science in Information Assurance, Master of Professional Studies in Informatics.

Norwich (VT): Master of Science in Information Assurance.

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Pace University (NY): Master of Science in Internet Technology, Master of Science in Computer Science, Master of Science in Information Systems.

Polytechnic University (NY): Master of Science in Computer Science.

Regis University (CO and DC): Master of Science in Information Assurance, Master of Science in Systems Engineering, Master of Science in Software Engineering, Master of Science in Database Technology, Master of Science in Information Technology Management.

Rochester Institute of Technology (NY): Master of Science in Networking and Systems Administration, Master of Science in Computer Security and Information Assurance.

San Diego State University (CA): Master of Science in Business Administration (Information Systems).

Syracuse University (NY and DC): Master of Science in Information Resource Management (concentration in Information Assurance or Enterprise Architecture).

Texas A&M (TX): Master of Science in Management and Information Systems, Master of Science in Computer Science, Master of Science in Computer Engineering, Master of Computer Science, Master of Engineering in Computer Engineering, Master of Science in Electrical Engineering, Master of Engineering in Electrical Engineering, Ph.D. Electrical Engineering, Ph.D. Computer Engineering, Ph.D. Computer Science.

Towson University (MD): Master of Science in Applied Information Technology.

University of Dallas (TX): Master of Business Administration (concentration in Information Assurance), Master of Management (concentration in Information Assurance), Master of Science in Information Assurance.

University of Detroit Mercy (MI): Master of Science in Information Assurance, Master of Science in Computer and Information Systems.

The University of Illinois at Urbana Champaign (IL): Master of Computer Science, Master of Science in Computer Science, Master of Science in Bioinformatics.

University of Maryland Baltimore County (MD): Master of Science in Computer Science, Master of Science in Computer Engineering.

University of Maryland University College (MD): Master of Science in Information Technology (concentrations in Informatics, Information Assurance, IT Project Management, Organizational Transformation), Master of Science in Technology Management (concentrations in Information Systems and Services, Organizational Transformation).

University of Nebraska at Omaha (NE): Master of Science in Management Information Systems (concentration in Information Assurance).

University of North Carolina at Charlotte (NC): Master of Science in Information Technology.

University of Pittsburgh (PA): Master of Science in Information Science, Master of Science in Telecommunications and Networking.

University of Texas at San Antonio (TX): Master of Science in Information Technology (concentration in Infrastructure Assurance).

University of Tulsa (OK): Master of Science in Computer Science (concentration in Information Assurance), Ph.D. in Computer Science (concentration in Information Assurance).

University of Washington (WA): Master's in Strategic Planning for Critical Infrastructures.

Virginia Tech (VA): Master of Information Systems.

Walsh College (MI): Master of Science in Information Assurance.

ADMINISTRATION
AND
FACULTY

APPENDIX B

Administration and Faculty

SENIOR LEADERSHIP

ROBERT D. CHILDS, Senior Director; B.S., Grove City College; M.A.T., Duke University; Ed.D, University of Denver; Air Command and Staff College; National War College, National Defense University; Fuqua Business School, Duke University.

ELIZABETH A. McDANIEL, Dean of Faculty and Academic Programs; B.A., University of Florida; M.A., Barry University; Ph.D., University of Miami.

RUSSELL E. QUIRICI, Dean of Students and Administration; B.S., United States Military Academy; M.A., The Pennsylvania State University; M.S., National War College, National Defense University.

BRENDA F. ROTH, Assistant Dean for Curriculum; B.A., University of Arizona; M.Ed., University of South Carolina; M.A., University of Colorado at Boulder; Ph.D., University of Virginia.

PAULETTE ROBINSON, Assistant Dean for Teaching and Learning; B.A., University of Hawaii; M.A., University of Hawaii; M.N.A., University of San Francisco; Ph.D., University of Maryland.

MARY S. McCULLY, Chair, Information Strategies Department; B.S., Marygrove College; M.S., Air Force Institute of Technology; M.A., University of Northern Colorado; M.Ed., Marymount University; Air War College; Industrial College of the Armed Forces, National Defense University; Ph.D., Arizona State University; Harvard Senior Executive Fellow.

MARY L. POLYDYS, Chair, Information Operations and Assurance Department; B.S., M.S.I.S., George Mason University.

CHARLES E. TOMPKINS III, Chair, Systems Management Department; B.A., University of Oklahoma; M.P.A., University of Oklahoma; U.S. Army Command and General Staff College; Defense Systems Management College; J.D., Oklahoma City University.

DONNA POWERS, Lieutenant Colonel, USAF, Director of Operations; B.S., University of Washington; M.A., Golden Gate University.

PATRICIA COOPERSMITH, Project Manager of Educational Initiatives; B.S., The Pennsylvania State University; M.B.A., Augusta State University.

FACULTY

JAY ALDEN, Information Strategies Department; B.S., Long Island University; M.S., Hofstra University; Ph.D., Hofstra University.

NATE ALLEN, LTC, USA, Information Strategies Department ; B.S., United States Military Academy ; M.A., University of Colorado ; M.B.A., University of Colorado ; Ph.D., George Washington University.

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B

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CATHRYN DOWNES, Information Strategies Department; B.A., University of Auckland, (New Zealand); M.A., Ph.D., Lancaster University (United Kingdom).

MARK R. DUKE, Information Operations and Assurance Department; B.A., Sam Houston State University; M.S., George Mason University; M.A., Webster University.

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ROBERT E. YOUNG, Information Operations and Assurance Department; B.S., M.S., University of Nebraska Medical Center; D.H.Sc., NOVA Southeastern University.

Dr. Irving Lachow accepts the Professor of the Year Award at the 2008 IRM College graduation ceremony.

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INFORMATION RESOURCES MANAGEMENT COLLEGE

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