MEMORANDUM OF UNDERSTANDING (MOU)

Between

University of Pittsburgh
School of Information Sciences
Pittsburgh, Pennsylvania

and

National Defense University
Information Resources Management College
Washington, D.C.

This Memorandum of Understanding (MOU) is made this 1st day of February 2009 by and between University of Pittsburgh (Pitt) and the National Defense University Information Resources Management College (NDU/IRMC).

1. PURPOSE: Both parties wish to enter into this understanding to provide extended academic opportunities to their respective students and faculty. It is understood that the purpose of the MOU between Pitt and NDU/IRMC include: strengthening the quality and breadth of academic programs at both institutions; promoting an educational environment where faculty and graduate students from both institutions can learn from one another through sharing of information and knowledge; leveraging the strengths and resources of programs at both institutions.

2. BACKGROUND: NDU/IRMC has been entering into MOUs with academic institutions for approximately 10 years, with the goal of transferring academic credits for NDU/IRMC graduates into selected programs at graduate schools across the U.S. When the U.S. Department of Defense (DoD) began the Information Assurance Scholarship Program (IASP) in 2001, the need for academic partnerships supporting Masters and Doctoral programs related to IA became necessary. NDU/IRMC continues to form academic partnerships, related to credit transfer, to support the DoD in the area of IA education.

This is a renewal of an existing MOU. Signing this MOU will allow students who graduate from NDU/IRMC to transfer graduate-level course credits into selected graduate programs within Pitt. NDU/IRMC will provide the manpower to help draft and review this MOU, including renewal when applicable.

3. OBJECTIVE AND SCOPE: This MOU applies to NDU/IRMC and to the above-stated department within Pitt. The expectations from this MOU include attracting more qualified students into Information Resources Management, or a related information-management field.

4. REFERENCES AND DEFINITIONS: Chapter 112, Title 10, United States Code, authorizes the DoD Information Assurance Scholarship Program (IASP). This scholarship program is only applicable to the MOU for schools that are recognized as National Centers of Academic Excellence (CAEs) in Information Assurance.

1
Education. Only CAE schools may partner for credit transfer for NDU/IRMC’s IA Certificate Program. Non-CAE schools may partner in other certificate areas. Since Pitt is a CAE, they may partner in the area of IA.

5. SPECIFIC RESPONSIBILITIES/AUTHORITY: IRMC and Pitt designate the person(s) set forth in Section 6 as their respective representatives to coordinate and manage the activities under this MOU. The representatives shall meet as needed to discuss the programs, changes to programs, and any other topics of interest to either party.

Each party in this MOU retains full authority over and reserves the right to make changes in their respective courses, programs, and credential requirements. Each party shall publicize this MOU and programs mentioned herein in academic materials as appropriate and shall brief students as appropriate. Neither party shall use the name or logo of the other party without the prior approval of the other party.

Within Pitt, the School of Information Science is interested in accepting DOD students into its graduate programs. SIS is willing to award:

- 9 graduate credit hours for students who complete the Information Assurance (IA) 4011 Certificate; or
- 15 graduate credit hours credit for students who complete the Chief Information Officer (CIO) Certificate; or
- 15 graduate credit hours for students who complete the Chief Information Security Officer (CISO) Certificate.

After NDU/IRMC graduates have completed the above-named certificate program at NDU/IRMC, and the remaining requirements at Pitt, the following degree(s) may be awarded from Pitt: Master of Science in Telecommunications and Networking (MSTN), or Master of Science in Information Systems and Technology (MSIST).

Each institution agrees that the NDU/IRMC student(s) enrolled at Pitt under this MOU will be subject to all Pitt rules and policies governing the degree award, including maintenance of satisfactory performance, and completion of the remaining credit hours inherent to the student’s specific degree program.

6. COORDINATION CONTACTS: The following persons will serve as points of contact at Pitt and NDU/IRMC, and will communicate mainly by email and phone:

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Associate Professor
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7. RESOURCES:
   a. **Funding:** No funding will change hands as part of this MOU.
   b. **Manpower:** NDU/IRMC will assign one individual, the POC listed above, to coordinate this MOU. Pitt may assign as many persons as needed.
   c. **Workload:** NDU/IRMC projects approximately 4-8 hours/year to staff this MOU.
   d. **Other Support:** An occasional event at NDU/IRMC may require the use of NDU conference rooms and projection equipment. Other support includes the NDU computer and regular office supplies used by the NDU/IRMC POC.

8. **EFFECTIVE DATE AND TERMINATION:** This MOU will be effective from the date of signing and will have a duration of **three years.** Upon expiration of the three years, the MOU will be subject to renewal. Additions and changes to this MOU may be made at any time with the written agreement of both Pitt and NDU/IRMC. Either party may withdraw from this understanding upon 60 days written notice to the other institution made to the institutional contact address, via U.S. Certified mail. Termination must be in writing and signed by the approving officials or their designated personnel.

9. **APPROVAL:** All parties identified below agree to the provisions and terms of this MOU.

**APPROVED:**

**National Defense University**

**Name:** Dr. Robert D. Childs  
**Title:** Senior Director, IRM College

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**University of Pittsburgh**

**Name:** Dr. James V. Maher  
**Title:** Provost

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Annex A: Overview of NDU/IRMC IA, CIO and AMP Certificate Programs

Annex B: Transfer of Courses and Course Requirements at SIS for NDU/IRMC IA, CIO and AMP Certificate Students

Annex C: Overview of Committee on National Security Systems (CNSS) standards
Annex A – Overview of NDU/IRMC IA, CIO and AMP Certificate Programs

NOTE: The following information reflects IRMC programs for the 2008-2009 academic year. IRMC reserves the right to change course names, abbreviations, or content to continue to meet the CIO, AMP, or IA requirements.

Information Assurance Certificate

The IA Certificate Program consists of a series of courses that emphasize security issues and approaches fundamental to the protection of the information infrastructure. The Committee on National Security Systems (CNSS) has certified the curriculum offered by the Information Resources Management (IRM) College as being compliant with CNSS No. 4011 Standard for Information Systems Security Professionals, CNSS No. 4012, the standard for Senior System Managers, NSTISSI No. 4015 for System Certifiers, and CNSSI No. 4016 for Risk Analysts.

The primary teaching method of resident and distributed courses is the seminar, supplemented by guest speakers. This requires interaction and engagement by all participants in discussions, and individual and collaborative exercises.

The IA 4011 certification requires students to complete a series of four courses offered in residence, through distributed learning format via the web or through a combination of these formats. Students must successfully complete the academic requirements of these courses to receive 4011 certification:

C1. Information Assurance and Critical Infrastructure Protection (AII);
C2. Global Enterprise Networking and Telecommunications (GEN);
C3. Managing Information Security in a Networked Environment (SEC); and

A fifth course, C5, Approval to Operate: Information Systems Certification and Accreditation (ATO), can be completed by IRMC students to earn the 4012 certification as well.

It is strongly recommended that the first two courses be AII and GEN, followed by SEC, and finally ESS. Successful completion of this option results in 4011 certification. Completion of three of these four courses may be applied toward requirements for the CIO Certificate Program. Completion of the ATO course results in 4012 certification. Students in the Advanced Management Program also have the opportunity to qualify for the certification.
Chief Information Officer & Advanced Management Program (with IA Emphasis)

Award of the CIO Certificate requires successful completion of eight intensive courses OR the Advanced Management Program (AMP) OR a combination of eight intensive and elective courses. Six courses must be primary courses in different subject areas; the remaining two courses may be either primary or enrichment courses in any subject area. Primary courses in Policy and Performance and Results-Based Management subject areas are mandatory courses for everyone. Students may opt to complete the CIO Certificate with an IA concentration leading to the IA 4011 Certificate. This concentration requires four IA Certificate courses (course C1 through C4 listed above). This option requires completion of nine courses instead of eight. All counts as a primary course; SEC, GEN, and ESS count as enrichment courses.

The AMP is a fourteen-week educational program that provides mid-level and senior leaders with an integrated graduate-level education focused on the policies and imperatives that enable federal national security and civilian agencies to leverage information for strategic advantage. It has three elements that define its unique educational experience. First, the AMP has both core and elective courses that provide a foundation of skills and knowledge in a broad range of information resources management disciplines. All AMP students earn a CIO Certificate, AMP students focusing on IA may complete at least three of the four courses required for an IA 4011 Certificate.
Annex B – Course Requirements at SIS for NDU/IRMC IA, CIO and AMP Students

The course requirements for the SAIS track students within the MSIS and MST programs are as shown in figures 1 and 2.

Figure 1. Requirements for SAIS students in MSIS program at SIS

The MSIS-SAIS students are required to fulfill the area requirements (6 credits Foundations, 6 credits Cognitive systems, 18 credits Systems and Technologies and 6 credits Electives), as indicated in Figure 1. The courses shown are highly recommended for the SAIS track and special permission is needed to replace indicated course by another MSIS courses (not listed here). Similarly, the MST-SAIS track requirements are detailed in Figure 2.
Noting the difference in the structure and content coverage between the SIS’s SAIS curriculum and that of the IRMC certificate programs, primarily because of the NDU/IRMC’s strong focus on the requirements of the federal IT systems and infrastructures, the SIS will give 9 credits of advanced standing to NDU/IRMC IA4011 certificate students for the following courses:

- IS2150/TEL2810 Introduction to Computer Security
- IS2810/TEL2813 Security Management
- One Elective (One S&T Elective for MSIS, One Policy elective for MST)

This advanced placement is based on the coverage of the IA certificate courses C1 through C4 which closely matches the coverage of IS2150 and IS2810. Additionally, the courses C1 through C4 also covers substantial material focused on security and IT issues related to federal systems that are not addressed by the SAIS curriculum. Hence, the transfer student will be considered to have completed an elective within the S&T pool for MSIS-SAIS track and for the Policy pool for the MST-SAIS track.

The NDU/IRMC CIO/AMP certificate students with IA focus will be given 15 credits of advanced placement, 9 credits of which would be that applied to the IA certificate as shown above. Remaining 6 credits of advanced placement will be given for the following courses:

- IS2190/TEL2830 Capstone Requirement
- IS2000 Introduction to Information Science for MSIS, or one Human/Mgmt area requirement for MST
The SAIS capstone requirement is tailored towards facilitating students to develop skills in a particular practical IA issue. The CIO/AMP certificate course requirements significantly focus on the IA issues related to the federal systems and infrastructure and hence will be considered as having fulfilled a capstone requirement. IS2000 covers broad, current issues related to information sciences, which are addressed in the CIO/AMP courses.

Note that once the IRMC certificate holders complete the remaining requirements after transferring to SIS, they are eligible for all the five CNSS standards (CNSS 4011 to 4015). The SAIS curriculum requirements are more rigorous than the general MSIS degree requirements (although admissions requirements are essentially the same) and the SAIS students may have to take more courses than shown above.
Annex C – Overview of the Committee of National Systems Security (CNSS) standards

Pitt’s SAIS curriculum has been certified for the CNSS standards 4011, 4012, 4013, 4014A and 4015. NDU/IRMC’s IA curriculum has been certified for CNSS 4011, 4012, 4015, and 4016.

CNSS 4011 - NATIONAL TRAINING STANDARD FOR INFORMATION SYSTEMS SECURITY (INFOSEC) PROFESSIONALS:

This instruction provides the minimum course content for the training of information systems security (INFOSEC) professionals in the disciplines of telecommunications security and automated information systems (AIS) security.

CNSS 4012- NATIONAL TRAINING STANDARD FOR DESIGNATED APPROVING AUTHORITY (DAA)

This instruction establishes the minimum course content or standard for the development and implementation of training for Designated Approving Authorities in the disciplines of telecommunications security and information systems (IS) security.

CNSS 4013 - NATIONAL TRAINING STANDARD FOR SYSTEM ADMINISTRATORS IN INFORMATION SYSTEMS SECURITY (INFOSEC)

This instruction establishes the minimum course content or standard for the development and implementation of training for system administrator professionals in the disciplines of telecommunications security and information systems (IS) security.

CNSS 4014 - NATIONAL TRAINING STANDARD FOR INFORMATION SYSTEMS SECURITY OFFICERS (Advanced level)

This instruction establishes the minimum course content or standard for the development and implementation of training for Information Systems Security Officers (ISSO) in the disciplines of telecommunications security and information systems (IS) security. Please check with your agency for applicable implementing documents.

CNSS 4015 - NATIONAL TRAINING STANDARD FOR SYSTEM CERTIFIERS

This instruction establishes the minimum course content or standard for the development and implementation of education and training for System Certifier professionals in the disciplines of telecommunications security and information systems (IS) security. Please check with your agency for applicable implementing documents.

For more information on the CNSS standards, see: http://www.nsa.gov/ia/academia/cnssstesstandards.cfm