MEMORANDUM OF UNDERSTANDING (MOU)

Between

Pace University
Seidenberg School of Computer Science and Information Systems
1 Pace Plaza, New York, NY 10038
and
National Defense University
Information Resources Management College
Washington, D.C.

This Memorandum of Understanding (MOU) is made by and between PACE UNIVERSITY and the National Defense University Information Resources Management College (NDU iCollege).

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 PACE UNIVERSITY and the NDU iCollege 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: The NDU iCollege (formerly known as the IRM College or IRMC) has been entering into MOUs with academic institutions for approximately 15 years, with the goal of transferring academic credits for NDU iCollege 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. The NDU iCollege 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 the NDU iCollege to transfer graduate-level course credits into selected graduate programs within PACE UNIVERSITY. The NDU iCollege will provide the manpower to help draft and review this MOU, including renewal when applicable.

3. OBJECTIVE AND SCOPE: This MOU applies to the NDU iCollege and to the above-stated department within PACE UNIVERSITY. The expectations from this MOU include attracting more qualified students into information leadership, 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 Education. Only CAE schools may partner for credit transfer for NDU iCollege IA Certificate Program (IA4011, 4012, 4015, 4016, and CISO). Non-CAE schools may partner in other certificate areas. Since PACE UNIVERSITY is a CAE, they may partner with the NDU iCollege in the area of IA.

5. SPECIFIC RESPONSIBILITIES/AUTHORITY: The NDU iCollege and PACE UNIVERSITY 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 PACE UNIVERSITY, the Seidenberg School of Computer Science and Information Systems is interested in accepting NDU iCollege graduates into its Masters and/or Doctoral programs. PACE UNIVERSITY is willing to award:

In the Cyber-Security* (Cyber-S) Program (formerly the Information Assurance Program – only CAEs may partner in the Cyber-S area):
- 9 graduate credit hours for students who complete the Cyber-Security 4011 Certificate.
- 12 graduate credit hours for students who complete both the Cyber-Security 4011 and 4012 Certificates.
- 15 graduate credit hours for students who complete the Chief Information Security Officer (CISO) Certificate within the Cyber-S Program.

Other Programs:
- 15 graduate credit hours for students who complete the Chief Information Officer (CIO) Certificate.

After NDU iCollege graduates have completed the above-named certificate program at the NDU iCollege, and the remaining requirements at PACE UNIVERSITY, the following degree(s) may be awarded from PACE UNIVERSITY: Master of Science in Internet Technology; Master of Science in Information Systems; and Master of Science in Computer Science. Please see detailed credit transfer information in the Appendix.

Each institution agrees that NDU iCollege student(s) enrolled at PACE UNIVERSITY under this MOU will be subject to all PACE UNIVERSITY 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 PACE UNIVERSITY and at the NDU iCollege, and will communicate mainly by email and phone:

   Andrea Cotoranu, Director of Assessment
   Pace University, Seidenberg School of CSIS
   861 Bedford Rd.
   Pleasantville, NY 10570
   Phone: (914) 773-3193; Fax: (914) 989-8609
   acotoranu@pace.edu

   Ms. Patricia Coopersmith, Director of Outreach and International Relations
   National Defense University iCollege
   300 5th Avenue SW
   Fort Lesley J. McNair, Marshall Hall, Room 201L
   Washington, DC 20319
   Phone (202) 685-2117
   coopersmithp@ndu.edu

7. **RESOURCES:**
   a. **Funding:** No funding will change hands as part of this MOU.
   b. **Manpower:** The NDU iCollege will assign one individual, the POC listed above, to coordinate this MOU. PACE UNIVERSITY may assign as many persons as needed.
   c. **Workload:** The NDU iCollege projects approximately 4-8 hours/year to staff this MOU.
d. **Other Support:** An occasional event at the NDU iCollege 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 iCollege 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 PACE UNIVERSITY and NDU iCollege. Either party may withdraw from this understanding upon 60 days written notice to the other institution. Termination must be from 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: Brenda F. Roth  
Title: Deputy VP / AA  
Signature: [Signature]

Date: **12 Dec 2013**

**PACE UNIVERSITY**

Appropriate Official  
Name: Dr. Uday Sukhatme  
Title: Provost  
Signature: [Signature]  
Date: **November 20, 2013**
Appendix A - Course Information for NDU iCollege Graduates

Annex A: MS in Internet Technology

Course Requirements at Pace University for NDU/iCollege Graduates

Students who pursue the CIO or CISO Certificate will receive 15 credits: IT 603, Overview of Information Security; IT 660, Network Security; IT 662, Web and Internet Security; IT 664, Computer and Internet Forensics; IT 666, Information Security Management.


Students would need to complete the remaining 15-21 credits at Pace University:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT 607</td>
<td>Systems Development and Project Management</td>
<td>3</td>
</tr>
<tr>
<td>IT 610</td>
<td>Web Development with Contents Management Systems</td>
<td>3</td>
</tr>
<tr>
<td>IT 626</td>
<td>Concepts and Structures in Internet Computing</td>
<td>3</td>
</tr>
<tr>
<td>IT 662¹</td>
<td>Web and Internet Security¹</td>
<td>3</td>
</tr>
<tr>
<td>IT 664²</td>
<td>Computer and Internet Forensics</td>
<td>3</td>
</tr>
<tr>
<td>IT 691</td>
<td>Capstone Project</td>
<td>3</td>
</tr>
<tr>
<td>IT</td>
<td>Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

¹ Only required for those students who have completed the Information Assurance (IA) 4011 Certificate.
² Only required for those students who have completed the Information Assurance (IA) 4011 or 4011 and 4012 Certificates.
Annex B: MS in Information Systems

Course Requirements at Pace University for NDU/iCollege Graduates

Students who pursue the CIO or CISO Certificate will receive 15 credits: IT 603, Overview of Information Security; IT 660, Network Security; IT 662, Web and Internet Security; IT 664, Computer and Internet Forensics; IT 666, Information Security Management.


Students would need to complete the remaining 15-21 credits at Pace University:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS 612</td>
<td>Object Oriented Concepts and Development</td>
<td>3</td>
</tr>
<tr>
<td>IS 613</td>
<td>Database Management Systems</td>
<td>3</td>
</tr>
<tr>
<td>IS 617</td>
<td>Information Systems Principles</td>
<td>3</td>
</tr>
<tr>
<td>IS 623</td>
<td>Information Systems Analysis and Design</td>
<td>3</td>
</tr>
<tr>
<td>IS 632</td>
<td>Business Data Communications</td>
<td>3</td>
</tr>
<tr>
<td>IS(^1)</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>IS(^2)</td>
<td>Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

\(^1\) Only required for those students who have completed the Information Assurance (IA) 4011 or 4011 and 4012 Certificates.
\(^2\) Only required for those students who have completed the Information Assurance (IA) 4011 Certificate.
Annex C: MS in Computer Science

Course Requirements at Pace University for NDU/iCollege Graduates


Students would need to complete the remaining 18-21 credits at Pace University:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 502*</td>
<td>Fundamental Computer Science I Using Java</td>
<td>3</td>
</tr>
<tr>
<td>CS 504*</td>
<td>Fundamental Computer Science II Using Java</td>
<td>3</td>
</tr>
<tr>
<td>CS 506*</td>
<td>Computer Systems and Concepts</td>
<td>3</td>
</tr>
<tr>
<td>CS 608</td>
<td>Algorithms and Computing Theory</td>
<td>3</td>
</tr>
<tr>
<td>CS 610</td>
<td>Introduction to Parallel and Distributed Computing</td>
<td>3</td>
</tr>
<tr>
<td>CS 612</td>
<td>Concepts and Structures in Internet Computing</td>
<td>3</td>
</tr>
<tr>
<td>CS 623</td>
<td>Database Management Systems</td>
<td>3</td>
</tr>
<tr>
<td>CS 691/693</td>
<td>Computer Science Project I / Thesis I</td>
<td>3</td>
</tr>
<tr>
<td>CS 692/694</td>
<td>Computer Science Project II / Thesis II</td>
<td>3</td>
</tr>
<tr>
<td>CS**</td>
<td>Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

* Students having little or no background in programming and/or college mathematics will need to resolve academic deficiencies through one or several preparatory courses. Incoming students are advised as to where they may most appropriately begin.

** Only required for those students who have completed the Information Assurance (IA) 4011 Certificate and who do not need preparatory courses.