Illinois Institute of Technology
National Center of Academic Excellence in Information Assurance/Cyber Defense Education

National Center of Academic Excellence in Information Assurance/Cyber Defense in Education Four-year+ (CAE IA/CD)

These criteria are applicable to regionally accredited four-year colleges, graduate-level universities, and DoD schools.

Criteria for this designation include:

- Demonstration of program outreach and collaboration, student development, IA/CD Center establishment and maintenance, IA/CD multidisciplinary efforts, practice of IA/CD at the institution level, IA/CD faculty, and student curriculum path and recognition;
- Successful mapping of the institution’s curriculum to all of the two-year Core Knowledge Units (KUs), the four-year Core KUs, and five (5) Optional KUs of the institution’s choice.

CAE IA/CD Program requirements

1. Outreach/Collaboration. The institution must demonstrate how IA/CD is extended beyond the normal boundaries of the Institution.

   Overall Point Value: 15 points minimum/25 points maximum

   a. Shared curriculum (e.g., IA/CD teaching materials provided to minority colleges/universities, two-year community colleges, technical schools, or K-12 schools) or shared faculty (e.g., Faculty on IA/CD curriculum development committee and/or teaching IA/CD at minority colleges and universities, two-year community colleges, technical schools, or K-12 schools.)

   Point Value: Up to 5 points/3 points required

   Industry Professor of Information Technology and Management Ray Trygstad serves on the Advisory Committees for both the Computer Information Systems and Computer Internetworking Technology curricula at College of DuPage, Glen Ellyn, Illinois. Professor Trygstad and Industry Associate Professor of Information Technology and Management Jeremy Hajek serve on the Advisory Committee for the Computer Information Systems curriculum at Triton College, River Grove, Illinois. They actively advise chairs and coordinators at these institutions on cyber security and forensics courses and curricula.

   Two IIT adjunct faculty members, also Members of the IIT Center for Cyber Security and Forensics Education (C²SAFE), are full-time faculty members at local community colleges: Adjunct Industry Associate Professor of Information Technology and Management Sheikh ‘Sam’ Shamsuddin is an Assistant Professor of Computer Information Systems and Computer Internetworking Technology (joint appointment), at the College of DuPage, Glen Ellyn, Illinois where he teaches digital forensics and operating system courses. Adjunct Industry Associate Professor of Information Technology and Management Kevin Vaccaro is an Instructor of Cybersecurity at Moraine Valley Community College, Palos Hills, Illinois, where he teaches a broad variety of courses in cyber security.
b. Reciprocity of credits (e.g., Accepting academic credit in IA/CD courses from minority institutions, two-year community colleges, or technical schools.). Evidence in the form of written agreements must demonstrate that IA/CD-related courses from the above types of schools are accepted for credit at the applying institution.

**Point Value: Up to 5 points/3 points required**
Reciprocity of credits is reflected by the IIT/College of DuPage and IIT/Joliet Junior College Dual Admissions Programs as reflected on page 122 of the IIT Undergraduate Bulletin at http://web.iit.edu/sites/web/files/departments/academic-affairs/Undergraduate%20Academic%20Affairs/pdfs/ugbulletin14-16.pdf. Formal acceptability of IA/CD courses can be seen in the College of Dupage-ITM Transfer Evaluation guidelines at http://appliedtech.iit.edu/sites/sat/files/pdfs/ITM/Student%20Resources/COD-ITMTransferEvaluation.pdf. In addition, a defined Guided Pathway to Success (GPS) into IIT's Information Technology and Management curriculum has been drafted jointly by Chicago City Colleges and IIT. The draft can be viewed at http://dickens.rice.iit.edu/CAEIA/CityColleges-IIT_ITM_pathway.pdf. This pathway is expected to be formally published for use by City College students within the next month.

c. Sponsorship of or participation in Cyber Defense or Forensics Exercises and competitions within 3 years of submission. Sponsorship of state, regional, or national IA/CD curriculum workshops, colloquia, etc. (e.g., sponsorship of workshops for K-12, community colleges, technical schools, state homeland security, industry, etc.)

**Point Value: Up to 5 points**
The IIT School of Applied Technology has sponsored ForenSecure, a regional conference on cyber security and digital forensics, for the last 12 years. As a part of the annual ForenSecure conference, we sponsored and conducted the Malware Challenge in 2013 (http://forensecure.sat.iit.edu/2013/content/session-abstracts) and a more complex Security Challenge in 2014 (http://forensecure.sat.iit.edu/2014/challenge); both were designed and conducted by center member Shawn Davis. In addition, in conjunction with the 2013 ForenSecure conference, our student organization, ITMO, co-sponsored a Hacking Challenge with IIT and Barrier1, with a $1000 prize for the winning team (http://mypages.iit.edu/~itmo/hackthis/).

ITM student Eric Tendian competed in the Cyber Aces State Championship offered by the Illinois Department of Employment Security (IDES) and placed second of 125 participants, many of whom were professionals in the field. (http://blogs.iit.edu/itm_loopback/2014/03/06/iit-itm-student-wins-2nd-place-in-cyber-aces-state-championship/)

d. CAE Collaboration. Partner in research/shared classes or shared events with other institutions. Institutions are encouraged to partner with other CAEs on cyber or IA/CD research/instruction.

**Point Value: Up to 5 points**
IIT is a member of the Center for Systems Security and Information Assurance, a National Science Foundation (NSF) Advanced Technological Education (ATE) National Resource Center (http://www.cssia.org/) located in Palos Hills, Illinois. (http://www.cssia.org/cssia-affiliates-display.cfm?id=340) In addition, faculty,
staff, and students from colleges and universities throughout the region actively participate in ForenSecure, our regional conference on cyber security and digital forensics; see more details on this conference in the following paragraph.

e. Community Outreach. Sponsorship of community events such as cybersecurity education for local schools, adult education centers, senior centers, etc. (e.g., schools in a target region are encouraged to participate in cybersecurity education events, like community computer diagnostic “check-ups” and IA/CD awareness days.)

**Point Value: Up to 5 points**
The IIT School of Applied Technology has sponsored *ForenSecure*, a regional conference and expo on cyber security and digital forensics, for the last 12 years. Upon creation of the IIT Center for Cyber Security and Forensics Education in 2012, the conference became a formal activity of the Center. This conference brings together business professionals, business and industry security practitioners, government and law enforcement, industry sponsors, faculty, and students for two days of presentations in three tracks. These tracks feature discussion and debate over issues related to ethical hacking, security, digital forensics, policy and compliance, cyberterrorism, privacy, cloud computing, and more. A truly regional conference, attendees come from Iowa, Indiana, and Michigan, as well as the greater Chicago area. Student presentations represent an opportunity for the best students in our Cyber Security and Forensics curricula to demonstrate their knowledge and abilities to potential employers from the public and private sectors. Full details are available at [http://forensecure.sat.iit.edu/](http://forensecure.sat.iit.edu/).

Students in our graduate curricula have been called upon to conduct research in public cloud forensics for the FBI and present their findings at the Chicago Regional Computer Forensics Laboratory.

Industry Professor of Information Technology and Management William Lidinsky has conducted courses in digital forensics and evidence for the Cook County Public Defender’s Office, allowing these attorneys the opportunity to better represent their clients in cases involving cybertechnology.