The National Security Agency (NSA) and the United States Cyber Command (USCYBERCOM) designated the Air Force Institute of Technology as a National Center of Academic Excellence (CAE) in Cyber Operations for the period 2013-2018.

The goal of the CAE program is to strengthen national security by promoting higher education and research in Cyber Operations with a particular emphasis on technologies and techniques related to specialized cyber operations (e.g., collection, exploitation, and response) and producing a growing number of professionals with cyber operations expertise in various disciplines. The program identifies institutions offering a cyber curriculum that has deep technical foundations in computer science, computer engineering and/or electrical engineering, and interdisciplinary research and experimentation. A rigorous academic requirements and program criteria. These degree programs are offered by AFIT’s Department of Electrical and Computer Engineering along with significant support from AFIT's Center for Cyberspace Research (CCR).

The CAE-Cyber Operations Program supports the President’s National Initiative for Cybersecurity Education (NICE): Building a Digital Nation and complements AFIT’s 2009 designation in NSA’s existing CAEs in Information Assurance Education and Research Programs.

The Center for Cyberspace Research (CCR), established in March 2002, conducts defense-focused research at the Master’s and PhD levels. The CCR is forward-looking and responsive to the changing educational and research needs of the Air Force, the Department of Defense, and the federal government. The CCR faculty teaches and performs research to understand and develop advanced cyber-related theories and technologies. These theory and technology advancements include efforts in network intrusion detection and avoidance, insider threat mitigation, cyberspace situational awareness, network visualization, software protection, and anti-tamper technologies development. On June 19, 2008 AFIT was designated by the SECAF and CSAF as the Air Force Cyberspace Technical Center of Excellence.

The CCR was designated by the Secretary of the Air Force and the Air Force Chief of Staff as the Air Force Cyberspace Technical Center of Excellence.
The Center for Cyberspace Research (CCR) is educating cyber asset capabilities, limitations, cyberspace systems. They also explore cyberspace capabilities, as well as the professional courses designed for Department of Defense (DOD) cyber professionals, providing an understanding of the integration and application of cyberspace capabilities, as well as the design, development, and acquisition of cyberspace systems. They also explore cyber asset capabilities, limitations, vulnerabilities and employment in military operations. Cyber 200/300 courses are continually updated to keep DOD cyber professionals current as an always-changing cutting-edge, keeping pace with the rapidly changing cyber domain operations.

Due to AFIT’s cyberspace initiatives, research, and close interactions across the Air Force the Secretary of the Air Force designated AFIT and CCR, as the Air Force Cyberspace Technical Center for Competence in June of 2008. The CCR charter is to lead in the growth of Air Force cyber professionals and provide operationally-focused technical solutions through graduate education. Professional Continuing Education, DOD research, and Advanced Cyber Education (ACE) for ROTC cadets.

As the Air Force and DoD continue to grow its cyber warfare, courses like Cyber 200 and Cyber 300 allow for rapid assimilation to the cyber operational domain.

Embedded systems are electronic systems that have real-world applications.