The mission of University at Buffalo (UB)'s center of excellence in cybersecurity is graduate education and coordinated research in computer security and information assurance (IA) by faculty members from several schools and departments at the university. This center has been conducting research in the area of intrusion detection, cyber situation awareness, insider threat assessment and mitigation, continuous authentication using behavioral biometrics, language-oriented security, hardware security, and trustworthy computing.

Since the establishment of the center of excellence, it received over $16 million in research and education grants from agencies such as NSF, NSA, DARPA and AFRL and companies such as Intel Corporation and Harris Communication. This center has been running the NSF CyberCorps scholarship for service (SFS) program since 2008 and produced more than 45 cybersecurity experts. Through the DoD's Information Assurance Scholarship Program (IASP), it produced nine scholars between 2004 and 2008.

The center has been running middle school and high school camps since 2015 under the GenCyber program pioneered by NSA. It has run more than 100 cybersecurity awareness workshops in the Western New York region and more than 3,500 middle school and high school students have taken part. The center offers an advanced graduate certificate in cybersecurity with both technical and managerial tracks and more than 175 students received the certificate since its inception. The center also offers a minor in cybersecurity and an MS program in cybersecurity. The center routinely conducts cybersecurity competitions, instilling interest among the participating students.