The unique skills of cybersecurity professionals are in short supply and are vital to the security of businesses today and in the future. Cybersecurity is a focus of a broad range of disciplines, particularly, business and information technology.

The technologies and methods used to ensure the protection of information systems, as well as the confidentiality, integrity, and authenticity of information is the focus of the graduate certificate in Cybersecurity and Information Assurance Management. These topics and skills are priorities in the business world and are critical to the well-being and success of all organizations.

The vast majority of cybersecurity job openings are within the private sector and exist across all industries. Cybersecurity is one of the fastest growing employment segments in IT. As technology grows and progresses, with our devices and lives becoming more and more interconnected, the challenges of cybersecurity and information assurance will continue to grow. This presents a career to those with the necessary skills that will be exciting, rewarding, fast-paced, and highly sought after.

Admission requirements

Prospective students may apply at any time by completing the Graduate Application for Admission found online at apply.mst.edu.

The graduate certificate program is open to all individuals holding a bachelor’s, master’s or Ph.D. degree in areas such as business, social sciences, technology, engineering, or related disciplines. Students must also have the required prerequisites for the courses in the program.

In order to receive a Graduate Certificate, the student must have an average graduate cumulative grade point of 3.0 or better on a 4.0 scale in the certificate courses taken. Students admitted only to the certificate program will have non-degree graduate status but will earn graduate credit for the courses they complete. Students will be given three years to complete the certificate as long as a B or better average is maintained in the courses taken.

If a student completes the four graduate certificate courses with a grade of B or better in each of the courses taken, the student will, upon application, be admitted to the Master of Business Administration or to the Master of Science in Information Science and Technology. The certificate courses taken by students admitted to the program will count toward the student’s MBA or M.S. degree.
COURSE DESCRIPTIONS

REQUIRED CORE COURSES

BUS 5910 Privacy and Information Security Law
Explores issues concerning the use, disclosure, and protection of information (personal, organizational, health, and financial) from a legal perspective. A focus on understanding, planning, protecting, and responding to data breaches and other information risk and threats. Case studies based on litigation are reviewed and analyzed. Assumes MIS familiarity.

IS&T 5780 Human and Organizational Factors in Cybersecurity
In-depth examination of human and organizational factors in cybersecurity and information assurance. Study of how to protect information integrity, availability, and confidentiality, as well as tools, methods, principles, and analytics for fraud prevention, insider threat detection, and forensic investigations. Assumes prior exposure to cybersecurity or IA.

ELECTIVE COURSES (CHOOSE TWO)

ERP 5240 Enterprise Application Development and Software Security
This course provides a conceptual foundation and hands on experience in web and mobile based (HTML5) applications development deployed through an enterprise platform. Enterprise development tools, such as SAP HANA Cloud Platform, will be used to build these apps. The course also covers software cybersecurity from a web and mobile perspective.
Prerequisites: Programming knowledge and either ERP 2110 or preceded or accompanied by ERP 5110.

IS&T 5335 Fundamentals of Mobile Technology for Business
A broad overview of mobile technology use in business environments. Topics include the mobile industry; mobile network and wireless standards; mobile devices; mobile web design and app development; social and user experience issues; mobile marketing and commerce.
Prerequisite: Junior standing or above.

IS&T 6336 Internet Computing and the Internet of Things
The course principally focuses on what's “under the hood” in the Internet. What are the underlying protocols and how do they work? How can constellations of devices (both traditional computing as well as Internet of Things) be configured into networks using the Internet Protocol suite to communicate with each other?
Prerequisite: IS&T entrance requirements, including solid programming knowledge.

IS&T 6641 Advanced Digital Commerce and the Internet of Things
Fundamental concepts of management and application to IT and support of commerce. Examines use of IT in business processes and everyday interactions such as IoT. Explores management issues of integrating IT into processes to run businesses better. Includes a major end-of-semester project.
Prerequisite: Knowledge of management information systems.

* Curriculum is subject to change. Please contact the department for up-to-date information on courses. Other courses approved by the department may be substituted for any of the above listed courses on a case-by-case basis. The administrative coordinators must approve the substitution prior to enrolling in the course.