

Information Security and Intelligence

Program Curriculum Checksheet

Why Choose the Master of Science in Information Security and Intelligence?

The thirty-three (33) credit hour Information Security and Intelligence program has been developed to prepare students for careers in Business Intelligence, Incident Response (proactive and reactive in areas such as hacking and digital forensics), and Project Management utilizing secure practices. Positions include security officers, analysts, forensics experts, project managers, and technical managers.

MS-ISI courses are specifically designed for flexible scheduling to serve both full-time students and part-time students who are working professionals. Full-time students can complete the program in 12 months. Students can start the program at the start of any semester.

The MS-ISI consists of eight core courses, including an integrated capstone project, and an Advanced Studies Certificate that focuses on the student's concentration of choice: Incident Response (computer security), Business Intelligence, or Project Management.

There are several things that distinguish the ISI programs as one of the top 25 in the nation and the premier cyber security:

- The *National Security Agency* and the *Department of Homeland Security* have designated Ferris State University as a **National Center of Academic Excellence in Cyber Defense Education**.
- The *Department of Defense Cyber Crime Center (DC3)* and the *Air Force Office of Special Investigations* has name Ferris State University as the first university in the United States to obtain designation as a **National Center of Digital Forensics Academic Excellence**.
- Michigan's most advanced digital forensic research lab equipped with EnCase, FTK, Nuix, Cellebrite, XRY, Passware Decryption Suite, Maltego, Shadow Dragon Social Net, i2, Stereo and Digital Laser microscopes, network segmentation, Steel Central, Burp Suite, and Palo Alto Academic Partner.
- Funded research grants from the National Science Foundation and various other foundations.
- Extensive publication record consisting of multiple journals, books and periodicals. Some of this work has been cited in the United States Supreme Court such as in the landmark case Riley v. California.
- Students compete in various cyber security competitions and frequently finish in the top

10% nationally.

- Active student organizations including the Information Security & Intelligence Association and Women in Cybersecurity.
- Multiple faculty have been certified as an expert witness in various courts.
- Faculty that have the following certifications: CISSP, E|CSA, GIAC GSSP-.NET, GIAC GCIH, C|ND, CPTE, CLFE, CAN, C|SCU, PMP, EnCE, ACE, CEH, CAPM, Scrum Master.
- Faculty that average over 15 years of work experience ranging from leadership positions in multibillion dollar corporations to law enforcement and licensed professional investigator.
- Faculty that include a Distinguished Professor, Fulbright Scholar, and International Educator of the year.
- Faculty that have taught on 4 continents that includes teaching digital forensics to the entire federal cybercrime units in Chile and Perú
- A student body that includes graduates from over 50 countries.
- Alumni that have distinguished themselves as leaders dozens of organizations worldwide.
- Host site of Michigan's Cyber Range.
- Host of various summer camps and workshops.

Invest in Your Future

An environmental scan of job opportunities and academic programs nationally has confirmed a strong outlook for the field of Information Security and Intelligence and the three concentration areas of the program.

The MS-ISI at Ferris State University not only prepares you for a career in a number of growing fields but also for a career where the analytical and leadership requirements are not easily outsourced or sent offshore. Information Security, Business Intelligence, Project Management, and Cyber Incident Response are some of the areas that you may choose to launch a new career or strengthen the skills needed for advancement in your current career. According to the United States Department of Labor, employment in these areas will grow much faster than average and excellent job prospects are expected.

It is critical to all organizations to be able to ensure their computer systems are safe against vulnerabilities and attacks. Therefore there is a growing demand for Information Security professionals that not only understand how to prevent these vulnerabilities and attacks but also are trained to properly respond to computer security incidents when they occur. Professionals are in high demand that have what it takes to analyze incident data so they can recognize and respond to security risks and threats as well as prevent future incidents.

The ability to analyze and manage data extends far beyond incident data analysis. A recent report from the McKinsey Institute predicts a shortage of 1.5 million business intelligence analysts by 2018. The Bureau of Labor and Statistics also reports growing demand for workers

with deep analytical skills. Potential growth industries are medical and financial where heavy regulations and large amounts of data create a strong need for business intelligence solutions.

If you have an interest or desire to lead and manage then Project Management is a career you should consider. The U.S. Bureau of Labor Statistics also expects job growth in this field to be faster than average through 2018. In addition, a study published by the Anderson Economic Group stated that an average of 1.2 million project management positions will need to be filled each year through 2016. You'll need excellent communication, leadership, organizational, and decision making skills to be successful in a Project Management career. A solid educational foundation in Project Management that is aligned with industry best practices can be found within the ISM program at Ferris State University.

The disciplines of Information Security, Business Intelligence, Project Management, and Cyber Incident Response are not isolated to a particular industry or sector. Job opportunities exist in large corporations, small business, government, and education to name a few. There is clearly no shortage of demand expected in any of these careers if you have the right education and skills.

Some job opportunities are, but not limited to:

- Digital Forensics
- Secure Software Developer
- Network Security
- Penetration Tester (Ethical Hacking)
- Information Security Crime Investigator
- Security Architect
- Security Auditor
- Malware & Intrusion Analyst
- Disaster Recovery/Business Continuity
- Vulnerability Researcher
- Chief Security Officer

Admission Requirements

Applicants to the MS-ISI program must have earned a bachelor degree from a regionally accredited university with an overall Grade Point Average (GPA) of 3.0 or better on a 4-point scale, and a 3.0 GPA or better in the Junior and Senior level courses, and submit the following documents for consideration:

- Completed application (*Free on-line application can be completed at <https://apply.ferris.edu>*)
- Official course transcripts from all undergraduate and graduate colleges and universities previously attended, which include confirmation of a Bachelor degree from a regionally accredited university with an overall Grade Point Average (GPA) of 3.0 or better on a 4.0 scale, and a 3.0 GPA or better is required in the Junior and Senior level courses. (Original documents become property of Ferris State University and cannot be returned.)
- Current resume.
- Statement of Purpose, approximately one typed page, explaining your reasons for seeking admission into the MS-ISI program. *Your Statement of Purpose should show that you*

have taken steps to learn about our programs and are familiar with and prepared for on-line or mixed-delivery, accelerated courses. You should also explain what factors have influenced your decision to apply, and how this degree will help you achieve your short-term and long-term career goals.

- Three academic or professional recommendation letters attesting to your ability to succeed in graduate level studies.
- Official GMAT score of 500 or higher, or GRE score in the upper 50th percentile with the analytical writing score at 2.5 or higher. *(Waiver of test requirement will be considered if applicant has completed a graduate or professional degree or earned a 3.5 GPA or better in their Bachelor degree).*
- International students must have earned a TOEFL score of 70 or above with no sub-score in the Low, Weak, or Limited range.

Graduation Requirements

The MS-ISI is awarded to those individuals who have completed the 33 hour minimum program requirements with a cumulative GPA of 3.0 or greater. No grade below a C may apply toward graduation and no more than two C grades will apply toward graduation. Degree must be completed within five years from first semester of enrollment.

More Information

College of Business - Graduate Programs

119 South Street, BUS 212B

Big Rapids, MI 49307

Phone: 231-591-2168

E-mail: ShannonYost@ferris.edu

Web: <http://ferris.edu/business/program/misi/>