

# MASTER OF SCIENCE IN APPLIED CYBERSECURITY AND DIGITAL FORENSICS

At the conclusion of their studies, graduates of the Master of Science in Applied Cybersecurity and Digital Forensics degree should be able to:

- Design and implement a comprehensive enterprise security program using both policy and technology to implement technical, operational and managerial controls.
- Comprehensively investigate information security incidents and violation of law using computer resources in a manner such that all evidence is admissible in a court of law.
- Technically secure enterprise information assets and resources to deter, detect, and prevent the success of attacks and intrusions.
- Conduct and report on significant research in the areas of cybersecurity and/or digital forensics.

Illinois Institute of Technology has been designated as a National Center of Academic Excellence in Cyber Defense Education by the National Security Agency and the U.S. Department of Homeland Security. This designation results from meeting stringent Center of Academic Excellence criteria and mapping of information technology and management curricula to a core set of cyber defense knowledge units. Students attending Center of Academic Excellence in Cyber Defense Education institutions are eligible to apply for scholarships and grants through the Department of Defense Information Assurance Scholarship Program and the Federal Cyber Corps® Scholarship for Service Program. This designation reflects Illinois Institute of Technology's commitment to producing professionals with cyber defense expertise for the nation.

Students may choose from two research options to complete the degree:

## Thesis Option

The thesis option requires coursework and six credit hours ITMT 591 for a total of 32 credit hours. The result is a master's thesis.

## Master's Project Option

The master's project option requires coursework and three credit hours of ITMT 594 or ITMT 597 for a total of 32 credit hours. The result is a project that results in one of the following:

1. A paper submitted for publication as an article or as a technical report
2. A security or forensic software product
3. A security hardware device or appliance

Software or hardware must have an accompanying technical report and user documentation.

## Master of Science in Applied Cybersecurity and Digital Forensics (Thesis Option)

Code	Title	Credit Hours
<b>Required Core Courses</b>		(15) <sup>1</sup>
ITMS 538	Cyber Forensics	3
ITMS 543	Vulnerability Analys and Ctrl	3
ITMS 548	Cyber Security Technologies	3
ITMS 578	Cyber Security Mgmt	3
LAW 273	Evidence	3
<b>Research Courses</b>		(6-8)
ITMT 591	Independent Study/Research	6-8
<b>Elective Courses</b>		(9-11)
Select seven to nine credit hours from the following:		7-9
Any 500-level ITMS course not listed in the required courses above. <sup>2</sup>		3
ITMM 585	Lgl&Ethical Issu In Info Tech	3
ITMM 586	IT Auditing	3
ITMO 556	Intro to Open Source Software	3
ITMT 597	Special Problem in IT	3
Select a minimum of two credit hours from the following: <sup>3</sup>		2
LAW 240	National Security Law	2

LAW 495	Electronic Discovery	2
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**Minimum degree credits required: 32**

- <sup>1</sup> Core course requirements may be waived upon presentation of evidence of equivalent coursework, certification, or experience. Approval of waivers will be made by the student's adviser or the ITM associate chair.
- <sup>2</sup> ITMS 579 may be taken more than once.
- <sup>3</sup> LAW electives not listed above or ITMS electives may be substituted as approved by the student's adviser or the ITM associate chair.

## Master of Science in Applied Cybersecurity and Digital Forensics (Master's Project Option)

Code	Title	Credit Hours
<b>Required Core Courses</b>		(18) <sup>1</sup>
ITMS 538	Cyber Forensics	3
ITMS 539 or ITMS 549	Steganography CST: Projects & Adv Methods	3
ITMS 543	Vulnerability Analys and Ctrl	3
ITMS 548	Cyber Security Technologies	3
ITMS 578	Cyber Security Mgmt	3
LAW 273	Evidence	3
<b>Research Course</b>		(3)
ITMT 594 or ITMT 597	Special Projects in IT Special Problem in IT	3
<b>Elective Courses</b>		(11)
Select a minimum of nine credit hours from the following:		9
Any 500-level ITMS course not listed in the required courses above. <sup>2</sup>		3
ITMM 585	Lgl&Ethical Issu In Info Tech	3
ITMM 586	IT Auditing	3
ITMO 556	Intro to Open Source Software	3
ITMT 597	Special Problem in IT	3
Select a minimum of two credit hours from the following: <sup>3</sup>		2
LAW 240	National Security Law	2
LAW 495	Electronic Discovery	2
<b>Total Credit Hours</b>		<b>32</b>

- <sup>1</sup> Core course requirements may be waived upon presentation of evidence of equivalent coursework, certification, or experience. Approval of waivers will be made by the student's adviser or the ITM associate chair.
- <sup>2</sup> ITMS 579 may be taken more than once.
- <sup>3</sup> LAW electives not listed above or ITMS electives may be substituted as approved by the student's adviser or the ITM associate chair.