Information Technology Auditing and Cyber Security MS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Master of Science in Information Technology Auditing and Cyber Security.

About the Program

The MS in Information Technology Auditing and Cyber Security (MS ITACS) program prepares students for Information Technology (IT) risk management, cyber security and information systems auditing positions in business and critical infrastructure sectors of the economy identified by the U.S. Department of Homeland Security. The MS ITACS is a STEM program aligned with the ISACA® model curriculum for information security audit and control, which enables graduates to earn a three-year education experience waiver toward the Certified Information Systems Auditor (CISA®) designation.

Upon completion of the MS ITACS program, graduates are able to:

• Describe how an IT organization should be governed and managed.
• Explain how IT systems are implemented and recommend appropriate controls.
• Demonstrate how to protect an organization’s information.
• Demonstrate the ability to conduct research related to emerging IT issues.
• Describe how IT services are delivered and maintained and recommend appropriate controls.
• Demonstrate an understanding of the IT audit process and apply it to business situation.
• Demonstrate an understanding of how organizations’ systems are attacked and the skills used.
• Explain how organizations can mitigate cyber risks through prevention, detection and response.

MS ITACS students take five common core courses focused on IT governance and risk management and specialized courses in one of two concentrations: Information Technology Auditing or Cyber Security. The IT Auditing concentration culminates in a capstone course that prepares the student for the CISA® certification exam, while the capstone course for the Cyber Security concentration prepares the student for the Certified Information Systems Security Professional (CISSP®) certification exam. Qualified students with necessary prerequisites are able to take courses from both concentrations.

Time Limit for Degree Completion: 6 years

Campus Location: Main and/or Online

Full-Time/Part-Time Status: The MS ITACS program can be completed on a full- or part-time basis.

Affiliation(s): Research interests of Fox faculty are supported by numerous centers and institutes throughout the Fox School and Temple University.

Accreditation: The MS ITACS program is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

Areas of Specialization: Two areas of concentration are offered:

• Cyber Security
• Information Technology Auditing

Job Prospects: The Fox Center for Student Professional Development (CSPD) provides students with career coaching and professional development resources that support the job search. The MS ITACS degree prepares graduates for employment in IT risk management, cyber security and information systems auditing positions at accounting and consulting firms, banks and financial companies, businesses producing goods and providing services, computer software and hardware companies, information and data service providers, and governmental agencies and non-governmental organizations. The U.S. Bureau of Labor Statistics reports 35% job growth through 2031.

Licensure/Certification: Preparation for certification varies by area of concentration, as detailed below:

• Certified Information Systems Auditor (CISA®): The MS ITACS program’s IT Auditing capstone course (MIS 5902) prepares students in the IT Auditing concentration to take the CISA® certification exam. The MS ITACS program does not require students to take the CISA® exam. This is optional. Experience required for CISA® certification is a minimum of five years of professional work experience in information systems auditing, control or security. A master’s degree in information security, information systems or related field from an accredited university can be substituted for three years of experience. For more information, visit https://www.isaca.org/credentialing/cisa/get-cisa-certified.

• Certified Information Systems Security Professional (CISSP®): The MS ITACS program’s Cyber Security capstone course (MIS 5903) prepares students in the Cyber Security concentration to take the CISSP® certification exam. The MS ITACS program does not require students to take the
CISSP® exam. This is optional. Experience required for CISSP® certification is a minimum of five years of cumulative paid work experience in two or more of the eight domains of the CISSP® Common Body of Knowledge (CBK). For more information, visit https://www.isc2.org/certifications/cissp.

**Non-Matriculated Student Policy:** This program requires the student to be matriculated in the degree program or graduate certificate program.

**Financing Opportunities:** Citizens and permanent residents of the United States are considered domestic students and are typically eligible for federal student loans and alternative loans through private lenders. The Fox School grants 5% tuition scholarships to alumni who are admitted to the program.

## Admission Requirements and Deadlines

### Application Deadline:

**Fall:**
- December 15 – Early Admissions Deadline
- March 1 – Scholarship Deadline and International Deadline
- June 30 – Final Deadline

**Spring:**
- August 1 – Scholarship Deadline and International Deadline
- November 1 – Final Deadline

Applications are reviewed as they are received and can sometimes be considered after the deadline.

APPLY ONLINE to this Fox graduate program.

### Letters of Reference:

**Number Required:** 1

**From Whom:** Professional references from an immediate supervisor, current or past, are preferred. Academic references are acceptable.

### Bachelor’s Degree in Discipline/Related Discipline:

The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

### Statement of Goals:

Essay prompts can be found in the online application portal.

### Standardized Test Scores:

**GRE/GMAT:** Scores may be requested based on the applicant's academic and/or professional background. Candidates with an undergraduate GPA below 3.0 are required to submit valid GMAT or GRE test scores. Consult an admissions advisor with any questions.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master’s degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

### Resume:

Current resume or CV is required.

### Interview:

Candidates are invited to interview in person or virtually. Interviews are required on a case-by-case basis.

### Writing Sample:

Prompts for this optional essay can be found in the online application portal.

### Transfer Credit:

Upper-level graduate credits from an AACSB-accredited graduate business program, but not previously applied to a conferred degree, may be transferred into the MS ITACS program. The credits must be part of the required degree program at Temple University. To be transferred, the grade must be a "B" or better. The Admissions Committee makes recommendations for transferring credits to the department chair. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

**Number of Credits Required Beyond the Baccalaureate:** 30
### Required Courses:

#### Information Technology Auditing Concentration

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS 5202</td>
<td>IT Governance</td>
<td>3</td>
</tr>
<tr>
<td>MIS 5206</td>
<td>Protection of Information Assets</td>
<td>3</td>
</tr>
<tr>
<td>MIS 5214</td>
<td>Security Architecture</td>
<td>3</td>
</tr>
<tr>
<td>MIS 5687</td>
<td>Business Skills for ITACS Professionals I&lt;sup&gt;1&lt;/sup&gt;</td>
<td>1.5</td>
</tr>
<tr>
<td>MIS 5688</td>
<td>Business Skills for ITACS Professionals II&lt;sup&gt;1&lt;/sup&gt;</td>
<td>1.5</td>
</tr>
</tbody>
</table>

**IT Auditing Concentration Courses**<sup>2</sup>

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS 5201</td>
<td>IT Audit Process</td>
<td>3</td>
</tr>
<tr>
<td>MIS 5203</td>
<td>Systems and Infrastructure Lifecycle Management 1</td>
<td>3</td>
</tr>
<tr>
<td>MIS 5205</td>
<td>IT Service Delivery and Support</td>
<td>3</td>
</tr>
<tr>
<td>MIS 5208</td>
<td>Data Analytics for IT Auditors</td>
<td>3</td>
</tr>
</tbody>
</table>

**IT Auditing Elective**<sup>3</sup>

Select one from the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS 5121</td>
<td>Enterprise Resource Planning Systems</td>
<td>3</td>
</tr>
<tr>
<td>MIS 5170</td>
<td>Special Topics</td>
<td></td>
</tr>
<tr>
<td>MIS 5182</td>
<td>Independent Study</td>
<td></td>
</tr>
</tbody>
</table>

**IT Auditing Capstone Course**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS 5902</td>
<td>IT Auditing Capstone</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours**

30

1 For our partner program with the Beijing National Accounting Institute (BNAI) in China only, students may substitute MIS 5287 Business Skills for ITACS Professionals (3 s.h.) for MIS 5687 Business Skills for ITACS Professionals I (1.5 s.h.) and MIS 5688 Business Skills for ITACS Professionals II (1.5 s.h.).

2 MIS 5122 Enterprise Architecture for IT Auditors (3 s.h.) may also be required of students who are admitted to the program but lack sufficient technical background.

3 Students in the Information Technology Auditing concentration alternately may select up to two courses from the Cyber Security concentration and/or in Computer Science and/or Engineering Security as electives. This is done in consultation with the ITACS Program Director.

#### Cyber Security Concentration

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS 5202</td>
<td>IT Governance</td>
<td>3</td>
</tr>
<tr>
<td>MIS 5206</td>
<td>Protection of Information Assets</td>
<td>3</td>
</tr>
<tr>
<td>MIS 5214</td>
<td>Security Architecture</td>
<td>3</td>
</tr>
<tr>
<td>MIS 5687</td>
<td>Business Skills for ITACS Professionals I</td>
<td>1.5</td>
</tr>
<tr>
<td>MIS 5688</td>
<td>Business Skills for ITACS Professionals II</td>
<td>1.5</td>
</tr>
</tbody>
</table>

**Cyber Security Concentration Courses**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS 5211</td>
<td>Ethical Hacking</td>
<td>3</td>
</tr>
<tr>
<td>MIS 5213</td>
<td>Intrusion Detection &amp; Response</td>
<td>3</td>
</tr>
<tr>
<td>MIS 5215</td>
<td>Operating System Security</td>
<td>3</td>
</tr>
<tr>
<td>MIS 5216</td>
<td>Organizational Forensics</td>
<td>3</td>
</tr>
<tr>
<td>MIS 5217</td>
<td>Network Security</td>
<td>3</td>
</tr>
</tbody>
</table>

**Cyber Security Elective(s)**<sup>1</sup>

Select one or more from the following, if desired:<sup>2</sup>
Information Technology Auditing and Cyber Security MS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS 5170</td>
<td>Special Topics</td>
</tr>
<tr>
<td>MIS 5182</td>
<td>Independent Study</td>
</tr>
<tr>
<td>MIS 5212</td>
<td>Penetration Testing</td>
</tr>
<tr>
<td></td>
<td><strong>Cyber Security Capstone Course</strong></td>
</tr>
<tr>
<td>MIS 5903</td>
<td>Cyber Security Capstone</td>
</tr>
</tbody>
</table>

Total Credit Hours 30

1 Students in the Cyber Security concentration alternately may select up to two courses from the Information Technology Auditing concentration and/or in Computer Science and/or Engineering Security as electives. This is done in consultation with the ITACS Program Director.

2 Students earn credit for any elective course(s) taken. The Cyber Security concentration does not, however, require completion of an elective to earn the degree.

Culminating Event:

*Capstone Course:*
The MS ITACS program culminates in a capstone that prepares students to take the appropriate professional certification examination:

- Certified Information Systems Auditor (CISA®)
- Certified Information Systems Security Professional (CISSP®), with a minimum of five years' experience

Contacts

Program Web Address:

Department Information:

Fox School of Business and Management
1801 Liacouras Walk
701 Alter Hall (006-22)
Philadelphia, PA 19122
foxinfo@temple.edu
215-204-5890
215-204-7678
Fax: 215-204-1632

Submission Address for Application Materials:
https://apply.temple.edu/FOX/Account/Login

Department Contacts:

*ITACS Academic Director:*
David Lanter, PhD, GISP, CISA, CISSP
david.lanter@temple.edu
215-204-3077

*Specialized Master's Programs Coordinator:*
Rachel Carr
Senior Associate Director for Specialized Master's Programs
foxms@temple.edu
215-204-7678