# ITM 579

**Advanced Information Security Management**  
**Spring 2014**

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**Course Catalog Description:** In-depth examination of topics in advanced information security. Students will be required to complete a term paper.  
**Prerequisites:** None  
**Credit:** 3-0-3 Semester Hours

**Lecture Day, Time & Place:**  

**Schedule of Topics/Readings:** *All readings should be done prior to class.*

<table>
<thead>
<tr>
<th>Class Session</th>
<th>Date</th>
<th>Topic</th>
<th>Reading</th>
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<tr>
<td>1</td>
<td>January 15</td>
<td>Introduction</td>
<td>ISC2</td>
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<td>2</td>
<td>January 22</td>
<td>Security Governance and Risk Management</td>
<td>ISC2</td>
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<td>3</td>
<td>January 29</td>
<td>Security Governance and Risk Management</td>
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<td>4</td>
<td>February 5</td>
<td>Business Continuity and Disaster Recovery</td>
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<td>5</td>
<td>February 12</td>
<td>Business Continuity and Disaster Recovery</td>
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<td>6</td>
<td>February 19</td>
<td>Physical and Environmental Security</td>
<td>ISC2</td>
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<td>February 26</td>
<td>Operations Security</td>
<td>ISC2</td>
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<td>8</td>
<td>March 5</td>
<td>Telecommunications and Network Security</td>
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<td>9</td>
<td>March 12</td>
<td>Software Development Security</td>
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<td>10</td>
<td>March 19</td>
<td><strong>SPRING BREAK</strong></td>
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<td>11</td>
<td>March 26</td>
<td>Cryptography</td>
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<td>12</td>
<td>April 2</td>
<td>Cryptography</td>
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<td>13</td>
<td>April 9</td>
<td>Security Architecture and Design</td>
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<td>April 16</td>
<td>Access Control</td>
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<td>15</td>
<td>April 23</td>
<td>Legal, Regulations, Investigations and Compliance</td>
<td>ISC2</td>
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<tr>
<td>Exam</td>
<td>April 30-May 9</td>
<td>Take home final and paper/project due at 9:05 pm. May 9</td>
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**Course Materials:**  
Readings will be assigned by the instructor and posted to Blackboard for students to download or reserved in the library for reading onsite.

**Course Objectives:** Each successful student will demonstrate foundation knowledge and application of advanced information security concepts as they apply to securing the environment in a large organizational environment. Students will study core disciplines in the CISSP Common Body of Knowledge (CBK), frameworks, legal and compliance implications, and best practices in this area.

**Course Outcomes:** Students completing this course will be able to:  
- Describe what advanced information security is and how it came to mean what it does today  
- Identify and define key terms and critical concepts  
- Describe the role of professionals involved in information security in an organizational structure
• Explain the need for information security
• Describe the more common attacks used against organizations and individuals
• Define threat management and its role in cyber security
• Explain what a vulnerability management program is and identify its major components
• Discuss how vulnerability assessment and remediation tie into cyber security
• Discuss and delineate cryptography and cryptographic tools/algorithms
• Discuss and delineate network security and the design of secure network architecture
• Discuss and delineate laws and ethics requirements for advanced information security
• Discuss and delineate information security governance and risk management concepts, practices and tools
• Discuss and delineate access control concepts, methods and tools
• Discuss and delineate physical and environmental security concepts, methods and tools
• Discuss and delineate business continuity and disaster recovery concepts, methods and tools
• Discuss and delineate operations security concepts, methods and tools

Course Notes: Copies of the course lecture slides decks will be available on Blackboard. Additionally, they will be available online for use by remote students or if you have missed a class session. You should be aware that note taking is encouraged and should help your understanding of the material.

Course Web Sites: http://blackboard.iit.edu/

Blackboard: The course will make intensive use of Blackboard (http://blackboard.iit.edu/). All remote students will view the course lectures online via Blackboard.

Readings: Readings are a necessary and integral part of the class and will form the basis for any class discussions on the topic. Specific readings are assigned by topic above. Any online resources will be uploaded to Blackboard.

Papers: There will be a paper or project required for this class, as follows. Papers must be satisfactorily completed in order for students to pass this course and count for 30% of your grade.

A research paper or a project addressing a topic in advanced information security is required. The paper can be a solution to a problem in advanced information security, a discussion of information security strategy or a case study. The paper will be fifteen to twenty pages long and will meet standards expected of a paper submitted for journal publication. Submission of the paper for actual publication is highly encouraged. Papers/projects are due at the end of the class (9:05 pm May 9).

Guest Speakers: Guest speakers may be featured as part of course topics. When a guest speaker is expected students should make an extra effort to be seated and ready prior to class time. A question & answer/discussion period will be held at the end of each speaker’s presentation.

Examinations: The final examination will consist of a take-home exam. The exam will be posted on Blackboard for you to download and complete no later than one week prior to the end of the term; students will have at least one week to complete the exam and may use any reference materials to complete the exams. Because the exam is administered as an open book exam, grading will be more rigorous for this final. This exam will count for 40% of your grade. The final exam must be satisfactorily completed in order for students to pass this course.

Extensions: Automatic extensions (“I”) will be granted to students not turning in required materials by the due date.

Plagiarism: All work submitted by students must be your own. Plagiarism may result in an automatic grade of “E”. All material directly quoted in papers must be fully attributed and all sources used in the preparation of the paper must be documented using APA-style.
bibliographic entries. No more than thirty-three percent of material included in any paper may be direct quotes.

**Grading:**

Grading criteria will be as follows:

- **A**  
  *Outstanding work reflecting substantial effort* ............................................................. 90-100%

- **B**  
  *Adequate work fully meeting that expected of a graduate student* ............................ 80-89.99%

- **C**  
  *Weak but marginally satisfactory work not fully meeting expectations* ............... 65-79.99%

- **E**  
  *Unsatisfactory work* .................................................................................................... 0-64.99%

The final grade for the class will be calculated as follows:

- **Paper/Project/Homeworks** ................................................................. **60%**
- **Final Exam** ................................................................. **40%**