

**Oklahoma State University  
Spears School of Business  
Department of Management Information Systems**

**Information Assurance Management**

TCOM 5223

Spring 2015

Wednesday 4:30 PM – 7:10 PM (Central Time)

Location: Tulsa – North Hall Room 222

**FACULTY**

Instructor: Shalon Simmons

Office Hours (Tulsa): By Appointment

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Class web page: See D2L

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**COURSE DESCRIPTION**

The history of information technology development over the past half century, and increasingly over the past 15 years, has altered the way that information can be created, transmitted, used, and abused. The days of just “locking up the computer room” are gone forever, as businesses and individuals struggle to strike a balance between adequate information system controls and system usefulness. This course presents the student with an understanding of the issues of information security from the perspective of MIS. The material covered will include offensive and defensive information operations, information security on the Internet, leadership development for information security professionals and information security as it relates to electronic commerce.

**LEARNING GOALS AND COURSE OBJECTIVES:**

Upon completion of this course in each of the categories below the student should be able to:

*Ethical Decision Making*

- Identify the ethical issues of various forms and degrees of hacking
- Identify the ethical responsibilities of Information Assurance professionals
- Identify the different roles of law enforcement, politics, court decisions, corporate influence and consumer attitudes surrounding issues of intellectual property rights

*Business Knowledge and Competency*

- Demonstrate a basic knowledge of the vocabulary, processes, environment and practices of the IA function in the context of the business environment.
- Recognize interrelationships between the MIS security function and the other core business disciplines.
- Recognize and appreciate the global differences and similarities in the application of IA in the differing legal and cultural environments worldwide.

*Technological Competence*

- Recognize, discuss and evaluate a variety of core MIS technical skills including (but not limited to): hardware, software and network configurations; basics of application development; end-user involvement and requirements; open vs closed source software; selecting and building computers.
- Recognize, discuss and evaluate a variety of core Information Assurance skills including (but not limited to): symmetric and asymmetric encryption; social engineering; steganography; program and o/s security; authentication; network attacks and controls;

the administration, risk management and economics of cyber security; legal and ethical issues of information assurance.

## IMPORTANT DATES

January 14, 2015	Class begins
March 6-11, 2015*	Mid-term examination (D2L)
April 24-April 29, 2015*	Final examination (D2L)

\*Dates are subject to change

## LECTURES

Most presentations will be accompanied by MS PowerPoint slides. Some guest speakers may be included in the program, and all of the material they present is subject to being on an exam/quiz. Current events will be emphasized, and students will be expected to contribute their findings from both the popular and trade press. Current events may be included in examinations. E-mail may be used for faculty/student communications.

**When sending email please always include:**

SUBJECT LINE: **TCOM 5223, last name, subject**

BODY OF EMAIL: TCOM 5223, your full name

E-mail to me without the course number in the subject line MAY be filtered and discarded as "spam".

## TEXTBOOK

**The REQUIRED textbook is:**

Whitman, Michael E. and Herbert J. Mattord. Management of Information Security, 4<sup>th</sup> Edition © Thompson Learning, Inc. ISBN 1-285-06229-9.

**Optional References**

Security in Computing, 4<sup>th</sup> Edition by Charles P. Pfleeger and Shari Lawrence Pfleeger. © 2007, Prentice Hall Publishers. ISBN 0-13-239077-9

## GRADES

Your final grade will be determined by the weighted sum of all grading items, according to the grading scheme table below. Each of the grading categories will include one or more grading items. Please note that some items within a category may not have the same weight as the other items within the same category.

Grading Category	Weight
<b>Participation (Current Events &amp; Attendance)</b>	<b>10%</b>
<b>Final Project</b>	<b>20%</b>
<b>Research/Term Paper</b>	<b>10%</b>
<b>Assignments, Review Questions, Chapter Exams</b>	<b>40%</b>
<b>Exams (Midterm &amp; Final)</b>	<b>20%</b>
<b>Total</b>	<b>100%</b>

Letter Grades will be assigned as:

Total Weighted Score	Grade
<b><math>\geq 90.00</math></b>	<b>A</b>
<b><math>\geq 80.00</math></b>	<b>B</b>
<b><math>\geq 70.00</math></b>	<b>C</b>
<b><math>\geq 60.00</math></b>	<b>D</b>
<b><math>\leq 59.99</math></b>	<b>F</b>

## GRADE CATEGORIES

Below are explanations for each grading category. Please note any questions about grades must be brought to the attention of the instructor within seven calendar days of receiving the grade. No grade changes will be considered after seven days.

### Midterm and Final Exams (20%)

The mid-term examination will cover material through Chapter 6, and may consist of Essay, True/False, multiple choice, and multi-select questions.

The final examination will be comprehensive in scope, but will emphasize the second half, and may consist of Essay, True/False, multiple choice, and multi-select questions.

Both the midterm and final examinations will be conducted via D2L, and taken at a time and place of your choosing. These exams will be open book, open note. No proctors will be needed. Students must take the exam with no help from others.

### **Participation (10%):**

**Attendance** Punctual and regular class attendance is expected of all students. Each student is expected to attend every class. A “sign in sheet” will be available at the beginning of each class period for students to sign in. If you do not sign in, records will indicate that you are absent. Since each part of this course builds on previous material, it is essential that students keep up with the progress of the class. If it is not possible to attend class, you must tell the instructor in advance to be excused. Please note that some supplemental lecture materials may not be available elsewhere and you are responsible for getting them from the instructor or classmates. If you miss a class, identify what you have missed and take appropriate measures to catch up prior to the next class.

**Weekly Current Event Articles** All students are required to participate in the discussion board. Every week students should provide a brief overview (2-5 sentences) and a link to an article about a current event (less than 2 months old) in Telecommunications, Information Technology or Cyber Security. Students can comment about other student’s post in addition to posting their own. Failure to post will count against the attendance/participation grade for the week.

### **NOTE FOR ONLINE STUDENTS:**

The Weekly Current Event Article alone will be used for the Attendance Grade.

### **Assignments, Review Questions, Chapter Exams (40%)**

There will be several assignments used to assess student learning including (but not limited to) review questions, chapter exams, cases, labs, etc. **All assignments should be turned into the appropriate Dropbox by the Date indicated.** It is expected that students will complete all reading assignments prior to the relevant class session.

**Assignments** are to be turned in via D2L and will require you to have a computer with Internet access. The instructor is not liable for any loss of material submitted. Please keep a back-up copy of all material that you submit. Do not submit electronic media that may contain confidential information (e.g., from your employer), since its safety, security against loss, destruction or tampering cannot be guaranteed by the instructor. The student is responsible to take all steps to protect information that you consider to be “mission critical” for yourself.

**Review Questions** will be available via D2L in the quiz section. You are to open the quiz and answer the questions presented. Time is unlimited and you may use as much time as necessary to answer the questions prior to the due date and time. The Review Questions will automatically close at the designated time on the due date.

**Chapter Exams** will be available via D2L in the quiz section. You are to open the quiz and answer the questions presented. The exam has a limited amount of time. You will only have one attempt for the test. The exam is open book, open notes and does not require a proctor. Students must take the exams with no help from others.

The exam will automatically close at the designated time on the due date regardless of whether you have finished the exam or not.

### **FINAL PROJECT (20%)**

**The final project** will give the student the opportunity to demonstrate what they have learned during the semester regarding Information Assurance Management. Students will be expected to provide a research paper and a make a presentation. The instructor will provide specific instructions for the project.

### **RESEARCH/TERM PAPER (10%)**

Graduate students will be required to write a term paper related to a topic of the student's choice related to cyber security, networks, or telecommunications. Make mention of any applicable topics covered in class (e.g. contingency planning).

### **LATE WORK**

**Late Work will not be accepted. Assignments are "past due" if not submitted by the due date and time specified.** Students missing assignments or exams without notifying the instructor in advance can expect to receive a zero. In-class projects cannot be made up. At the instructor's discretion make-ups may be available for reduced credit.

### **Academic Integrity Policy**

Oklahoma State University is committed to the maintenance of the highest standards of integrity and ethical conduct of its members. This level of ethical behavior and integrity will be maintained in this course. Participating in a behavior that violates academic integrity (e.g., unauthorized collaboration on homework or assignments, plagiarism, multiple submissions of the same assignment, cheating on examinations, fabricating information, helping another person cheat, having unauthorized advance access to examinations, altering or destroying the work of others, and fraudulently altering academic records) will result in your being sanctioned. Violations may subject you to disciplinary action including the following: receiving a failing grade on an assignment, examination or in the course, receiving a notation of a violation of academic integrity on your transcript, and being suspended from the University. You have the right to appeal the charge. Contact the Office of Academic Affairs, 101 Whitehurst, (405) 744-5627. See also <http://academicintegrity.okstate.edu>.

It is expected that all work submitted (papers, analyses, quizzes, examinations, homework, etc.) will be the student's **individual work**. It is intended for students to refer to journals and other relevant outside sources, evaluate their findings in light of the current scenario, draw appropriate conclusions from their research, and then present their conclusions in a straightforward and convincing manner. Reference to resources on the Internet (with proper citation) is acceptable, but "copy and paste" **IS NOT** acceptable. The English language is important in the information technology industry, and it is important in this class. Grammar, usage and spelling in all student work will be graded.

**Attachment from Academic Affairs** – Forms a part of this syllabus, and is to be read. See additional documents in the syllabus section of D2L.

### **Students with Disabilities**

According to the Americans with Disabilities Act, it is the responsibility of each student with a disability to notify the University of his or her disability and to request accommodations. If any

member of this class feels that he or she has a disability and needs special accommodation of any nature whatsoever, the instructor will work with you and the OSU-Tulsa Office of Student Disability Services to provide reasonable accommodations to ensure that you have a fair opportunity to perform in this class. Please advise the instructor of such a disability and the desired accommodations at some point before, during or immediately after the **first scheduled class period**.

**COURSE TOPICS AND DATES  
(tentative)**

UNIT	TOPICS	HOMEWORK (by dropbox due date)	LECTURE DATES (tentative)
0	Introductions Syllabus	None Start Chapter 1	1-14-15
1	Introduction to the Management of Information Security <ul style="list-style-type: none"> <li>• Principles of Info Security Mgmt</li> <li>• Project Mgmt</li> <li>• Project Mgmt Tools</li> </ul>	Review Questions CH 1 Chapter 1 Exam	1-21-15
2	Planning for Security <ul style="list-style-type: none"> <li>• Roles of Planning</li> <li>• Strategic Planning</li> <li>• Information Security Governance</li> </ul>	Review Questions CH 2 Chapter 2 Exam	1-28-15
3	Planning for Contingencies <ul style="list-style-type: none"> <li>• Components of Contingency Planning</li> <li>• Business Resumption</li> <li>• Testing Contingency Plans</li> </ul>	Review Questions CH 3 Chapter 3 Exam	2-4-15
4	Information Security Policy <ul style="list-style-type: none"> <li>• Enterprise Info Sec Policy</li> <li>• Issue Specific Info Sec Policy</li> <li>• System Specific Info Sec Policy</li> <li>• Guidelines for Effective Policy</li> <li>• SP 800-18 Guide to Developing Plan for Federal Systems</li> </ul>	Review Questions CH4 Chapter 4 Exam	2-11-15
5	Developing the Security Program <ul style="list-style-type: none"> <li>• Organizing for Security</li> <li>• Info Sec within Organization</li> <li>• Security Roles and Titles</li> <li>• Security Education Training Awareness</li> <li>• Administering Security</li> <li>• Trusted Systems</li> <li>• Operating System Security</li> </ul>	Review Questions CH 5 Chapter 5 Exam	2-18-15
6	Security Management Models <ul style="list-style-type: none"> <li>• Access Control Models</li> <li>• Security Architecture Models</li> <li>• Security Mgmt Models</li> </ul>	Review Questions CH 6 Chapter 6 Exam	2-25-15

7	<p>Security Management Practices</p> <ul style="list-style-type: none"> <li>• Benchmarking</li> <li>• Performance Mgmt</li> <li>• Certification and Accreditation</li> </ul>	<p>Review Questions CH 7 Chapter 7 Exam</p>	3-4-15
	<b>MIDTERM EXAM</b>	<b>REVIEW FOR MIDTERM</b>	<b>Opens 3-6-15 Close 3-11-15</b>
8	<p>Risk Management: Identifying and Assessing Risk</p> <ul style="list-style-type: none"> <li>• Risk Mgmt</li> <li>• Risk Identification</li> <li>• Risk Assessment</li> <li>• Results of Risk Assessment</li> </ul>	<p>Review Questions CH 8 Chapter 8 Exam</p>	3-11-15
	<b>SPRING BREAK MARCH 16-20, 2015</b>	<b>SPRING BREAK</b>	<b>SPRING BREAK MARCH 16-20, 2015</b>
9	<p>Risk Management: Controlling Risk</p> <ul style="list-style-type: none"> <li>• Risk Control Strategies</li> <li>• Risk Control Strategies</li> <li>• Managing Security Risk</li> <li>• Economics of Cyber Security</li> </ul>	<p>Review Questions CH 9 Chapter 9 Exam</p>	3-25-15
10	<p>Protection Mechanisms</p> <ul style="list-style-type: none"> <li>• Access Controls</li> <li>• Firewalls</li> <li>• Intrusion Detection Systems</li> <li>• Remote Access</li> <li>• Wireless</li> <li>• Scanning and Analysis</li> <li>• Encryption</li> <li>• Steganography</li> <li>• Network Security</li> <li>• Quantum Computing</li> </ul>	<p>Review Questions CH 10 Chapter 10 Exam Labs</p>	4-1-15
11	<p>Personnel and Security</p> <ul style="list-style-type: none"> <li>• Staffing</li> <li>• Credentials</li> <li>• Policies/Practices</li> <li>• Authentication</li> <li>• Social Engineering</li> </ul>	<p>Review Questions CH 11 Chapter 11 Exam</p>	4-8-15
12	<p>Law and Ethics</p> <ul style="list-style-type: none"> <li>• Info Sec and Law</li> <li>• Ethics in Info Sec</li> <li>• Liability</li> <li>• Managing Investigations</li> </ul>	<p>Review Questions CH 12 Chapter 12 Exam</p>	4-15-15
	Final Project/Presentation	Final Project	4-22-15
	<b>FINAL EXAM</b>	<b>Final Exam</b>	<b>Opens 4-23-15 Closes 4-29-15</b>

NOTE: This schedule is tentative and is subject to change at the discretion of the instructor. If changes are made the instructor will inform students.