



MIS 7223 - Enterprise Information Security
100% Online
CRN 5375 - Summer 2009

COURSE TITLE BLACKBOARD SITE	MIS 7223 – Enterprise Information Security Summer 2009 – http://my.ltu.edu and select CRN 5375
INSTRUCTOR Contact:	Dr. Kamal Kakish 1. Post your questions under “Ask the Professor” in the BB Discussion Board 2. Send an email for more timely issues - profkakash@gmail.com 3. Call 404-826-6195 for urgent issues and emergencies
SCHEDULE	On-line modules and exam period (College of Management schedule): May 13, 2009 – July 23, 2009. See http://www.ltu.edu/registrars_office/calendar_final_exam.index.asp for LTU academic calendar information.
LEVEL / HOURS PREREQUISITE	Graduate Degree / 3 semester credit hours Graduate level MIS 6013 Minimum Grade of C-
REQUIRED TEXT (See Blackboard for additional resources)	Michael E. Whitman & Herbert J. Mattord, <u>Principles of Information Security, 2nd edition</u> – ISBN: 0-619-21625-5 Available for online purchase through LTU Bookstore at: http://lawrence-tech1.bkstore.com/bkstore/TextbookSelection.do?st=489
ADDENDA	LTU Online student resources http://www.ltu.edu/ltuonline/currentonline.asp Course-specific information is provided in the “Course Information” area
TECHNICAL SUPPORT	Technical support for using Blackboard is provided by the LTU Help Desk, 248-204-2330 or vitrc@ltu.edu

Educational Goals

This course is intended to introduce students to Enterprise Information Security from a management perspective. We will first start off by defining Information Security and how important information is as an asset to an organization.

What is the risk of not addressing information security? The proliferation of worms, viruses, and spam continues to grow at an alarming rate and puts an increased strain on IT departments globally. Would you believe it is estimated that anywhere from 50% to 80% of the e-mail on the Internet today is Spam? There have been more worms released in the last 6 months than the previous 10 years. This pace continues. The impact to businesses as security issues continues to grow.

We will look at planning for security. Security is more than just throwing a firewall on your Internet connection and some type of anti-virus software on your PC. You need to protect information, whether it's in the form of Hard Copy, stored on an electronic medium, or during transmission. Each require different methods, and it all starts with planning and establishing security policies.

We will look at risk assessment and how that plays into how much you are willing to spend to protect your information. You would expect a bank to spend more to protect their information than a coffee shop would to express theirs. In fact some industries have established their own standards such as the HIPPA standards for the health care industry.

Finally as we wind down we'll discuss the challenges associated with maintaining Information Security and handling change control to insure that an organization's security objectives are met.

In order to develop a thorough understanding of these areas the instructor employs several teaching methods. Lectures will cover major points from the text and course handouts. Students will learn from the text, from class discussions, individual and group assignments, presentations, and the opportunity to evaluate grasp of the material through a midterm and final exam.

Objectives

Terms and Concepts - Students will be able to identify:

- The difference between Information Management and General Management

- Definition and Characteristics of Information Security and key concepts
- Differentiate between:
 - Physical Security
 - Personal Security
 - Operational Security
 - Communications Security
 - Security
- Importance of Policy to guide Information Security Decisions
- Roles within a security organization
- What are Worms, Viruses, Trojan Horses, and Spam
- What are some of the tools used by a Security Organization such as clear communication, and what tools such as ID cards, biometrics, passwords, encryption, firewalls, intrusion detection devices, anti-virus software, updates and patches to existing software, Spam filtering, SSL, IPSec, etc...
- Law and Ethics
- Business Situation Analysis – Evaluate the impact of information security on businesses today. Evaluate methods of securing information and the price associated with different methods, and what is appropriate to spend to secure information.
- Industry Knowledge - Students will explore current industry trends and developments in Enterprise Information Security through in class article reviews, and an end of term “Information Security Subject Matter” paper and presentation.

Instructional Methods and Course Organization

A variety of instructional methodologies are used in this course which may include but are not limited to:

- **Blackboard learning environment** – Blackboard at my.ltu.edu contains the syllabus, all assignments, reading materials, streaming videos, Powerpoint mini-lectures, written lecture notes, chapter quizzes, links to Web resources, and discussion forums. You will submit all assignments via Blackboard, and are expected to participate regularly in discussion topics. Please take time to familiarize yourself with the organization of the Blackboard site. You will want to check the site frequently for announcements reminding you of new resources and upcoming assignments.
- **Student/Instructor Conversations** – Students keep in touch with the instructor via e-mail messages, telephone conference calls, and IM conversations.

- **Self-assessments** – Pre- and post- self-assessment tools will help students measure their entering skills and progress during the course.
- **Required readings** – Textbook chapters should be read according to the schedule outlined in the syllabus. Chapters will be discussed online.
- **Assignments** – List and briefly describe assignments here.

Class Policies and Expectations

I plan to offer you a valuable learning experience, and expect us to work together to achieve this goal. Here are some general expectations regarding this course:

- Each student has a LTU e-mail account. If you wish to use a different e-mail address for this course, please **change your e-mail address in Blackboard under “Student Tools”** and send an e-mail to me so I can store your address in my e-mail directory.
- In a physical sense attendance does not apply directly for this class, but active participation does apply. You are expected to be actively involved in the discussion threads and make two contributory posts a week within the topic for the week. If business travel will take you away from regular participation, please clear these dates with me in advance.
- It is essential that all students actively contribute to the course objectives through their experiences and working knowledge of business and IT.
- All assignments must be submitted on schedule, via Blackboard View/Submit Assignment. **Please DO NOT use the Digital Drop Box.** If you need to submit an assignment via e-mail, contact the instructor in advance. Late work will be reduced by 10% of the total value of the assignment grade for each late day.
- Assignments must be completed to an adequate standard to obtain a passing grade. Requirements for each assignment are detailed in this syllabus and on the LTU Online web site.
- Be prepared to log into Blackboard at least once each day. Please focus your on-line correspondence within the appropriate Blackboard discussion forums so that your colleagues can learn from you.
- At midterm and the end of the course, you will be invited to participate in a University evaluation of this course. Your feedback is important to the University, to LTU Online, and to me as an instructor, and I encourage you to participate in the evaluation process.
- Honesty - Students are expected to do their own work at all times. While it is acceptable to discuss homework and case assignments with others, students should first attempt to solve assigned work themselves. In no case will copied work from another person be considered acceptable. Any cheating on exams is

grounds for failure and will be referred to the Dean for the strongest possible punishment. Plagiarism is also unacceptable; please site all references accordingly in any work that you turn in.

- Conduct - Students are expected to conduct themselves in a professional manner at all times and to be courteous to their classmates.

Homework

In completing homework assignments, instructors expect that students will attempt to solve assigned problems by themselves, or, only if permitted by the instructor, by a group of students. Normally, instructors allow for general discussion between students about how to solve a problem. In no case, however, is it acceptable for one student to copy a solution from a peer.

Term Papers and Research Papers

Students may be assigned term papers in their LTU coursework. In grading such papers it is important for instructors to know which ideas are the student's own thoughts and which are either copied or paraphrased from another source. Hence, students must cite their sources using a standard style guide, such as American Psychological Association (APA).

It is important for you as students to know what to expect from me as your instructor:

- Help - Students are encouraged to contact the instructor after class. In general, the best way to reach me is via e-mail. In most cases I am able to respond within 24 hours, usually significantly quicker.
- I will maintain the Blackboard web site with current materials, and will resolve any content-related problems promptly as they are reported to me.
- I will periodically send out e-mail updates to all class members to guide upcoming work and remind you of assignment due dates.
- I will return all assignments to you promptly, and will include individualized comments and suggestions with each assignment.
- I will hold our personal written or verbal communications in confidence. I will not post any of your assignments for viewing by the class without requesting your approval in advance.
- I will treat all members of the class fairly, and will do my best to accommodate individual learning styles and special needs.
- If any of these points need clarification, or when special circumstances arise that require my assistance, please contact me so that we can discuss the matter personally.

Course Schedule

This 100% online course begins with a few days of online course orientation period to familiarize yourself with the online learning environment and to meet online or via phone with your instructor. Each week starts on a Monday and ends on a Sunday.

Please note that unless specified, ALL assignments, quizzes, discussions, and other deliverables can be submitted anytime during the active week, but are **due no later than 11:59 p.m. on the last day** (Sunday) of that week.

Dates	Modules	Topics / Readings	Assignments Due
Prior to Start of Semester and Week of May 11, 2009	Module 0	Overview of textbook Online Learning Orientation Course Orientation and group formation	Autobiography: 1-2 paragraphs on your background & what you want to gain out of this class. Include academic, personal, and professional background as related to this course. Confirm that you have read and will honor LTU's Honor Code. No points awarded without acknowledgement that you have read and will abide by LTU's Honor Code. Submit using View/Submit Assignment Link . (10 pts)
Week of May 18	Module 1	Chapter 1 – Introduction to Information Security	Bb Forums Article with Summary (AA#1). Submit using View/Submit Assignment Link . Complete Quiz 1
Week of May 25	Module 2	Chapter 2 – The Need for Security	Bb Forums Brief Assignment #1 (BA#1). Submit using View/Submit Assignment Link . Chapter Quiz 2
Week of June 1	Module 3	Chapter 3 – Legal, Ethical, and Professional Issues in Information Security	Bb Forums Brief Assignment #2 (BA#2) Submit using View/Submit Assignment Link . Chapter Quiz 3
Week of June 8	Module 4	Chapter 4 – Risk Management	Brief Assignment #3 (BA#3) Submit using View/Submit Assignment Link . Bb Forums

Dates	Modules	Topics / Readings	Assignments Due
			Chapter Quiz 4
Week of June 15	Module 5	Chapter 5 – Planning for Security	Submit Security Mgt. Personnel Interview Submit using View/Submit Assignment Link . Bb Forums Chapter Quiz 5
Week of June 22	Module 6	MIDTERM ESSAY EXAM Chapter 6 – Security Technology: Firewalls & Identifying & Assessing Risk	Bb Forums Chapter Quiz 6 MIDTERM ESSAY EXAM Submit using View/Submit Assignment Link .
Week of June 29	Module 7	Chapter 7 – Security Technology: Intrusion Detection, Access Control, & Other Security Tools + Cryptography	Security Paper (BA#5) Submit using View/Submit Assignment Link . Bb Forums Chapter Quiz 7
Week of July 6	Module 8	Chapter 8 – Cryptography	Bb Forums Submit Article Summary (AA#2) Submit using View/Submit Assignment Link . Chapter Quiz 8
Week of July 13	Module 9	Chapter 9 – Physical Security	Submit Individual Security Presentation (ISP) Submit using View/Submit Assignment Link . Bb Forums Chapter Quiz 9
Week of July 20	Module10	Chapter 10 – Implementing Physical Security Final Exam	Bb Forums Chapter Quiz 10 Essay Final Exam Due 7/24/08 Submit using View/Submit Assignment Link .

Student Evaluation

The course has assignments totaling 550 points (left column). Letter grades are awarded based on the total number of points achieved (right column). Points are deducted for late assignments.

Measured Items	Points
Class Participation (First half)	50
Class Participation (2 nd half)	50
Brief Autobiography BIO	10
Brief Assignments (3 @ 20 pts) BA#1, BA#2, and BA#3	60
Articles (2 @ 15 pts) AA#1 and AA#2	30
Paper – Interview Someone within a Security Organization	70
Individual Security Subject Matter Presentation	20
Chapter Quizzes (Multiple Choice – 10 pts each)	120
Midterm Essay Exam	100
Final Essay Exam	100
TOTAL	610

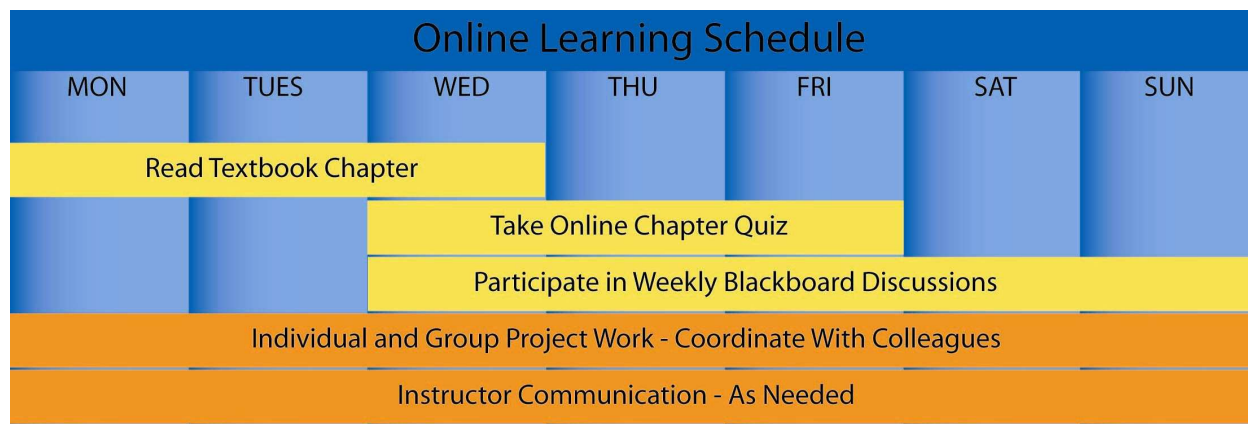
Class Points	Letter Grade
94 and above	A
90 – 93.9	A-
87.5 – 89.9	B+
82.5 – 87.4	B
80 – 82.4	B-
77.5 – 79.9	C+
72.5 – 77.4	C
70 – 72.4	C-
61 – 69.9	D (below 70% is a
60 and below	E failing grade)

Note: Grades lower than “B” fall below the LTU graduate standard

Practical Guidelines for Class Load Expectations

A three-credit graduate course generally requires at least nine hours per week of time commitment. Here are some practical guidelines to help schedule your time commitments for this online course:

- A 14-week semester (the Summer “E” semester is compressed into 11 weeks) would require at least 126 hours of time commitment to successfully complete all readings, activities, assignments, and texts as described in this syllabus.
- You should reserve at least 6-8 hours per week to read the required textbook chapters and resources, participate in online discussions, review presentation materials, and work through online quizzes.
- You should organize your remaining time to roughly correspond with the point value of each major assignment. This means that you should plan to spend at least:
 - 8-9 hours preparing your case study review;
 - 24-40 hours working with your group on the three parts of your semester-long project; and
 - 8-9 hours working on the various components of your reflective consolidation (final exam).
- These guidelines may not reflect the actual amount of outside time that you – as a unique individual with your own learning style – will need to complete the course requirements. The number of hours each week will vary based on assignment due dates, so please plan ahead to insure that you schedule your academic, work, and personal time effectively. The following graphic can be used to guide you in planning your weekly course work to remain on schedule:



Writing Guidelines and Rubric

90%-100% Paper – Exemplary (A)

- Complies fully with the assignment: information clearly and effectively supports a central purpose or thesis and displays a thoughtful, in-depth analysis of a sufficiently limited topic. The reader gains insights.
- Is directed towards and meets the needs of a defined audience (is persuasive or argumentative).
- Begins, flows, and ends effectively. The introduction, body and conclusion of the paper are sound.
- Provides compelling supporting arguments, evidence, examples and details. The use of supporting detail is embedded in a context of discussion.
- Is well-organized and unified with ideas and sentences that relate to the main topic. The ideas are arranged logically to support the thesis.
- Uses appropriate, direct language: the writing is compelling; the sentences are well phrased and varied in length and structure. Paragraphs are well structured, use of headings is excellent, and the paper shows strong organization.
- Correctly acknowledges and documents sources in APA style (e.g., in-text citations, work cited pages, etc).
- Is free of errors in grammar, punctuation, word choice, spelling and format.
- Maintains a level of excellence throughout, and shows originality and creativity in realizing 1-6.

80% - 89.9% Paper – Proficient (B)

- Complies in a competent manner with the assignment: information provides firm support for a central purpose or thesis, and displays evidence of a basic analysis of a sufficiently limited topic. The paper demonstrates overall competency. It shows some originality, creativity, and/or genuine engagement with issues at hand.
- Is directed towards and meets the needs of a defined audience (is persuasive or argumentative).
- Begins, flows, and ends effectively. The introduction, body and conclusion of the paper are adequate.
- Provides adequate supporting arguments, evidence, examples and details. The use of supporting detail is embedded in a context of discussion.
- Is well organized and unified with sentences that relate to the main topic. The ideas are arranged logically to support the thesis. Paragraphs are well structured, use of headings is good, and the paper shows general organization and flow.

- Is comprised of well-phrased sentences, which are varied in length and structure. There are occasional violations in the writing, but they don't present a major distraction or obscure the meaning.
- Correctly acknowledges and documents sources in APA style (e.g., in-text citations, work cited pages, etc).
- Contains minimal errors in grammar, punctuation, word choice, spelling and format.

70% - 79.9% Paper – Marginal (C)

- Complies adequately with the assignment. Information supports the thesis at times. Analysis is basic or general. The purpose is not always clear. The paper completes (rather than engages in) the assignment.
- Presents an unclear (either persuasive or argumentative) rhetorical position.
- Has partial or inadequate introduction and conclusion.
- Does not provide adequate supporting arguments, evidence, examples and/or details.
- Is not arranged logically. Ideas fail to make sense and are not expressed clearly. The reader can figure out what the writer probably intends, but may not be motivated to do so.
- Contains some awkwardly constructed sentences, which present an occasional distraction for the reader. Paragraphs are unstructured, headings are missing, and general organization and flow is lacking.
- Incorrectly or partially acknowledges and documents sources in APA style (e.g., in-text citations, work cited pages, etc). Although occasional references are provided, the writer relies on unsubstantiated statements. The reader is confused about the source of ideas.
- Contains numerous errors in grammar, punctuation, word choice, spelling and format, which is distracting to the reader.

<69.9 Paper – Unacceptable (D/F)

- Does not adequately comply with the assignment. The paper does not successfully identify the thesis. Analysis is vague or not evident.
- Has no rhetorical position.
- Has an inadequate introduction and conclusion.
- Does not provide adequate supporting arguments, evidence, examples and/or details. Paragraphs may “string together” quotations without a context of discussion.
- Is not arranged logically. Frequently, ideas fail to make sense and are not expressed clearly. The reader cannot identify a line of reasoning.

- Contains frequent errors in sentence structure, which present a major distraction for the reader. Paragraphs are unstructured, headings are missing, and the paper lacks general organization and flow.
- Incorrectly or partially acknowledges and documents sources in APA style (e.g., in-text citations, work cited pages, etc). Although occasional references are provided, the writer relies on unsubstantiated statements. The reader is confused about the source of ideas.
- Contains numerous errors in grammar, punctuation, word choice, spelling and format, which obscure the meaning of the passage. The reader is confused and stops reading.

Syllabus Addenda

Please see the LTU Online “Current Students” web site <http://www.ltu.edu/ltuonline/currentonline.asp> for comprehensive information about Lawrence Tech’s academic services, library services, student services, and academic integrity standards. The contents of this web site is explicitly included as syllabus requirements.

The LTU Online “Current Students” web site also includes grading rubrics used by your instructor to evaluate written assignments, discussion forum participation, and group assignments. **Please note that the SafeAssignment anti-plagiarism product will be used for written assignments submitted for this course. Please see the instructions included on the LTU Online web site regarding the use of the SafeAssignment product.**

Assignments

AA#1: Due May 24, 2009

Please find an article that relates to information security and write a summary that is effectively one page long. Please post that summary with either a link or scanned copy of your article. Please also read the articles and summaries posted by your fellow students and provide feedback on your thoughts.

Please create a new thread for your article in the Discussion Board Under “Module 1 Discussion” so that your classmates could benefit from reviewing your research.

BA#1: Due May 31, 2009

Brief Assignment #1 for Module 2
"The need for Security".

Find examples of security breaches (research external to the book) and how they have impacted Enterprise Organizations. This can be anything from the impact of lost/stolen data, to the impact of an attack from a hacker, or an unintentional impact from an internal employee. The objective here is to back up the need for security.

Submit your document with your name and the assignment # (ex: KakishBA#1.doc) using this View/Submit Assignment link. It should be the equivalent of 3 pages double spaced. Therefore at least 3 examples would be appropriate, and more is better.

P.S. Please RUN your assignment first through SAFEASSIGN BEFORE you submit it. You must get a score of <20% to submit for grading.

AA#2: Due date – see schedule

Article #2 Cryptography Assignment

Select a Cryptography / Cryptology article from a reputable institution (ex: IEEE or similar caliber) and summarize it within 3 to 5 pages APA Style, single space, using references within the body of the document and a bibliography section at the end of your document. Make sure you include brief lists of acronyms and glossary for any technical terms.

You are free to include any major topics within this broad subject, but I would like you to consider briefly talking about some or most of the following:

- The purpose of cryptography
- Types of cryptographic algorithms: Secret key cryptography, Public-key cryptography, Hash functions, Why three encryption techniques? The significance of key length
- Trust models: PGP web of trust, Kerberos, Public key certificates and certification authorities
- Cryptographic algorithms: Password protection, Some of the details of diffie-hellman key exchange, Some of the details of rsa public-key cryptography, Some of the details of DES, breaking DES, and DESvariants

- Protocols: Pretty good privacy (PGP), IP security (ipsec) protocol, The SSL "family" of secure transaction protocols for the world wide web, Elliptic curve cryptography, The advanced encryption standard and rijndael, and Cisco's stream cipher
- Your own conclusions and lessons learned, and of course
- References and further reading

So, I hope you'll enjoy this exercise, but please don't make it overkill. If you feel that you need to exceed 5 pages, feel free to do so, but don't go overboard. Most importantly, I trust that this report will be your OWN product, not a copy and past quick activity.

P.S. Please RUN your assignment first through SAFEASSIGN BEFORE you submit it. You must get a score of <20% to submit for grading.

BA#2: Due date – see schedule

Chapter 3 is titled "Legal, Ethical, and Professional Issues in Information Security". There was a ruling recently handed in a case involving TJX the parent company for TJX. Please answer the following questions for this assignment:

1. What information was stolen from TJX?
2. How was it stolen?
3. What was the penalty handed down?
4. Do you think the penalty was appropriate, and will it act as a deterrent to other hackers?
5. Do you believe TJX had sufficiently protected their customer's data?
6. When such information is stolen, do you believe that the company that lost this information (or had it stolen) should have to make their customers aware that the information was stolen? Also, what would you do if you were in a position of management and such an incident occurred, would you tell your customers? If so, what would you tell them?

Please submit your assignment using the View/Submit Assignment. It should be the equivalent of 2 pages double spaced.

BA#3: Due date – see schedule

Brief Assignment #3

Security Certification Research - “Some certifications are hot, some not”

Security Certification has increasingly become an important consideration among business managers and technical professionals alike. With the advent of 9/11 terrorism and the progressive threats and attacks on computer and data systems worldwide, governments and businesses have sharply increased their requirements for information security certified professionals.

Students should research information on the various types and classifications of Security Certifications from a variety of sources. At minimum students should contrast, compare, and report on the following certifications:

CISSP (from ISC2)

CompTIA Security+

SSCP

CISM

CCSP, and

Other relevant Certifications and Exams.

Your personal observations and conclusions on certification

In addition, students should visit the Center for National Security Studies (CNSS), US-CERT <http://www.us-cert.gov/>, and other cyber-terrorism and counter-terrorism websites including the Whitehouse and the Department of Homeland Security (DHS), and summarize their findings, assessments, and personal opinions regarding the US readiness in combating information threats and attacks, and the degree to which Information Technology is able to address national and global information security issues.

The length of the report should be a minimum of 1,200 words but should not exceed 2,000 words, using APA style format with references (both within and at the end) and a font of “Arial 12”.

Paper – Interview someone (IT Security Manager) within a Security Organization – due date: see schedule

Information Security Manager Interview Paper Guidance

I'm trying to leave some room for interpretation to best allow the students flexibility based on the person they interview. My objective is to give each student the opportunity to learn the business side of what Information Security managers do on a day-to-day basis and how they make their decisions. The paper should be 4+ pages long

and should include the following:

- A brief overview of the company
- A brief overview of the person's background
- A brief overview of that person's Education
- Technical background vs. Financial/Business Background
- What does this individual do on a day to day basis
- Discussion on how they make decisions:

Technical vs. Financial (Price and Budget) vs. Political/Relationships

- Summary/Conclusion on what you learned

Potential questions you could use during your interview of the with the selected individual to help drive for the information listed above:

Describe what you do on a day-to-day basis?

What would you use as a job description for your current role?

What type of background would you recommend for your job?

What things in you background best prepared you for this job?

What influences your decision more, the technical solution or the price?

How much does corporate policy do to give you flexibility for your decisions?

At times does corporate policy dictate your decision and limit your flexibility?

Discuss a project that you have been involved with that you are the most proud of and why?

1. Are there any lessons that you learned the hard way that you could provide some insight into?
2. What Security issues worry you the most?
3. How has managing information security changed over the last 5 years?
4. What do you think will be the greatest security risks over the next 5 years?
5. etc...

BA#5

Security Technology Research Paper - Individual Assignment

As a subject matter expert, select any security technology you're interested in (ex: IDS, IPS, Firewalls, Cryptography, etc), do a little research, then write a 5-page paper, APA

style, and put together a PowerPoint presentation. You don't need to actually present the topic, just submit the ppt.

ISP

Individual Security Presentation

For this last assignment of the course, you need to prepare a presentation ONLY. I've waived the requirement of writing a paper.

You may choose any Enterprise Security Topic that you have NOT provided a deliverable (a report or an assignment) on earlier in the course. For example, you should not make a presentation on Cryptography or the role of a Security Manager since you've already done so previously.

OR, as an alternative, you may choose to summarize what you learned in this course.

Your presentation should be between 15 and 20 slides. Anything outside this range will cause point deduction.

The due date for this assignment is Sunday --/--/08 no later than 11:59 p.m.