COURSE TITLE BLACKBOARD SITE	MCS4993 Introduction to Computer Security (Online) Fall 2011 – http://my.ltu.edu and select CRN 2034 Graduate / 2035 Undergraduate
INSTRUCTOR	Terrance Dillard, PhD, CISSP Adjunct Professor, Lawrence Technological University 248-219-8703 tdillard@ltu.edu Monday – Friday, 10:00 AM – 8:30 PM. (E-mail preferred)
SCHEDULE	August 31, 2011 – December 22, 2011 Refer to http://www.ltu.edu/registrars_office/calendar_final_exam.index.asp for the last date to withdraw and other important registration related information.
LEVEL/HOURS PREREQUISITE	Graduate or Undergraduate Degree / 03 credit hours Graduate: Undergraduate Degree Undergraduates: No Restrictions
REQUIRED TEXT (See Blackboard for additional resources)	Matt Bishop, Introduction to Computer Security, 1st Edition, Addison, ISBN: 9780321247445 (Required) Available for online purchase through LTU Bookstore at: http://lawrence-tech1.bkstore.com/bkstore/TextbookSelection.do?st=489
ADDITIONAL RESOURCES	LTU Online student resources: http://www.ltu.edu/ltuonline/
TECHNICAL SUPPORT	Technical support for using Blackboard is provided by the Helpdesk, 248.204.2330 or helpdesk@ltu.edu. Send the Help Desk a form detailing any issues by clicking here http://tinyurl.com/3yqrvne.

COURSE SCHEDULE FOR COLLEGE OF MANAGEMENT (GRAD) SEMESTER COURSES

This fully online course begins with a partial week online course orientation period to familiarize yourself with the online learning environment and to meet online or via the phone with your instructor. Each subsequent week starts on a Monday and ends on a Sunday.

Dates	Modules	Topics / Readings	Assignments Due
Prior to Semester Start and Aug 31 – Sep 07	Module 0	Textbook Overview Online Learning Orientation Course Orientation and group formation Bishop, M. (2003, February). What is computer security? IEEE Security & Privacy, February, 67-69.	Course orientation Instructor conversation Icebreaker Discussion
Week of Sep 08 – Sep 14	Module 1	Ch 1 – Overview of Computer Security: Components and Mechanisms Sandhu, R. S., & Samarati, P. (1994, September). Access control: Principles and practice. IEEE Communications Magazine, September, 40-48.	Blackboard Discussion Mod 1 assignments within Blackboard
Week of Sep 15 – Sep 21	Module 2	Ch 2 – Access Control Matrix	Blackboard Discussion Mod 2 assignments within Blackboard
Week of Sep 22 – Sep 28	Module 3	Ch 4 – Security Policies Ch 5 – Confidentiality Policies	Blackboard Discussion Mod 3 assignments within Blackboard
Week of Sep 29 – Oct 05	Module 4	Ch 6 – Integrity Policies Ch 7 – Hybrid Policies	Blackboard Discussion Mod 4 assignments within Blackboard
Week of Oct 06 – Oct 12	Module 5	Ch 8 – Basic Cryptography	Blackboard Discussion Mod 5 assignments within Blackboard
Week of Oct 13 – Oct 19	Module 6	Ch 9 – Key Management	Blackboard Discussion Mod 6 assignments within Blackboard
Week of Oct 20 – Oct 26	Module 7	Proposal Paper Midterm Examination	Blackboard Discussion Submit Proposal Paper
Week of Oct 27 – Nov 02	Module 8	Ch 10 – Cipher Techniques Ch 11 – Authentication	Blackboard Discussion Mod 8 assignments within Blackboard
Week of Nov 03 – Nov 09	Module 9	Ch 23 – Network Security Wilson, C. (2008). *Botnets, cybercrime, and cyberterrorism: Vulnerabilities and policy issues for Congress* (RL32114). Retrieved July 19, 2011, from Congressional Research Service website: Congressional Research Service website: http://www.csmweb.com/Library%20Documents/RL32114.pdf	Blackboard Discussion Mod 9 assignments within Blackboard

Dates	Modules	Topics / Readings	Assignments Due
Week of Nov 10 – Nov 16	Module 10	Ch 24 – System Security	Blackboard Discussion Mod 10 assignments within Blackboard
Week of Nov 17 – Nov 23	Module 11	Ch 25 – User Security *Light Week – Thanksgiving Break*	Blackboard Discussion Mod 11 assignments within Blackboard
Week of Nov 24 – Nov 30	Module 12	Chapter 26 – Program Security	Blackboard Discussion Mod 12 assignments within Blackboard
Week of Dec 01 – Dec 07	Module 13	Draft Paper Final Examination	Blackboard Discussion Draft Paper Due
Week of Dec 08 – Dec 14	Module 14	Final Paper	Blackboard Discussion Final Paper Due

STUDENT EVALUATION

The course has 7 areas of academic engagement totaling 100 points. Letter grades are awarded based on the total number of points achieved. Points are deducted for late assignments.

EXAMPLES:

Assignments	Points
Module Assignments	20
Proposal Paper	05
Draft Paper	15
Final Paper	20
Midterm Examination	10
Final Examination	10
Blackboard Participation	20
Total Points	100

Class Points	Letter Grade
96 and above	A
90 – 95	A-
87 – 89	B+
83 – 86	B
80 – 82	B-
77 – 79	C+
73 – 76	C
70 – 72	C-
61 – 70	D (Undergrad Only)

60 and below	E

Note: Grades lower than a "B" fall below the LTU graduate standard

EDUCATIONAL GOALS

Introduction to information security concepts at the system, application, and user levels; encryption and decryption; access control models; security mechanisms in computer programs, operating systems, databases, networks, administration of computer security, and legal/ethical issues in computer security. This course provides foundational knowledge that will enable further study of security concepts within information systems.

STUDENT LEARNING OBJECTIVES / OUTCOMES

To successfully complete this course, you will be expected to:

1. Distinguish the five critical security components of confidentiality, integrity, availability, nonrepudiation, and authenticity; and apply them when evaluating a given security scenario.
2. Describe the process for designing secure applications, including development of security policies, relationship between security mechanisms and policies, as well as various types of security mechanisms.
3. Understand fundamentals of basic cryptography, such as encryption, decryption, symmetric key, asymmetric key, key distribution, message digests, digital signatures, PKI, etc.
4. Identify legal and ethical issues surrounding computer security and protection of personally identifiable information (privacy issues, Computer Security Act, HIPPA, etc.) within information systems.
5. Illustrate an overall understanding of some security applications, including access control, authentication, network security, system security, and user security.

PREREQUISITE SKILLS

Graduate: Undergraduate Degree Undergraduates: No Restrictions

INSTRUCTIONAL METHODS AND COURSE ORGANIZATION

The following instructional mechanisms will be employed:

Blackboard Learning Environment – Blackboard at my.ltu.edu contains the syllabus, all assignments, reading materials, streaming videos, narrated PowerPoint mini-lectures, podcasts, 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 Reading – Textbook chapters should be read according to the schedule outlined in the syllabus. Chapters will be discussed online.
Literature – Scholarly peer-reviewed literature should be read according to the schedule outlined in the syllabus. Literature will be discussed online.

Assignments – Assignments are comprised of the following:

- Weekly Module Assignments (20%)
- Project Paper Proposal (5%)
- Draft Project Paper (15%)
- Final Project Paper (20%)

CLASS POLICIES AND EXPECTATIONS

This course is based on interactive engagement, learning, and communication. Instructors and students actively contribute to the learning experience through critical dialogue, integrative discovery, and collaborative learning. To acquire knowledge and enhance skills, learners are expected to:

- Read and become familiar with expectations as shown within course syllabus.
- Stay current with assignments and readings.
- Seek clarification regarding any material or course expectations that may be unclear.
- Examine assigned readings and offer thoughtful insights.
- Read all courseroom postings.
- Make a minimum of two substantive postings per week that are collegial and advance the quality of the learning.
- Engage other learners by responding to their postings.
- Be respectful of diverse perspectives and refrain from making inappropriate comments within courseroom discussions and personal communications.

Each student has a LTU email account. If you wish to use a different email address for this course, please **change your email address in Blackboard under "Blackboard Tools", then "Personal Information"** and send an email to me to store your email address in my directory.

It is important to contact the instructor as needed to discuss personal needs regarding course requirements and assignments.

All assignments must be submitted on schedule, via Blackboard, and using Microsoft Office compatible software. If you need to submit an assignment via email, contact the instructor in advance.

Assignments must be completed to an adequate standard to obtain a passing grade. Requirements for each assignment are shown within the rubric posted on Blackboard for each assignment.

Be prepared to log into Blackboard at least once each day. Please focus your online correspondence within the appropriate Blackboard discussion forums so that your colleagues can learn from you.

At midterm and at 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.

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

- I will be available to you via e-mail and phone, and will promptly reply to your messages.
- I will be available to you for face-to-face appointments as requested.
- 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 send out a weekly e-mail update 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 should special circumstances arise that require my assistance, please contact me so that we may discuss and resolve the matter.

PRACTICAL GUIDELINES FOR CLASS LOAD EXPECTATIONS

A three-credit course generally requires <u>at least</u> 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 semester is compressed into 10 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 hours per week to read the required textbook chapters and resources, participate in online discussions, review presentation materials, and work through online quizzes. This effort will total at least 84 hours over the course of the semester.
- 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 <u>at least</u>:
    - 2 – 4 hours preparing your Project Paper Proposal;
    - 30 – 40 hours working on your Draft and Final Project Papers;
    - 10 – 12 hours working on various components of your reflective consolidation (Midterm & Final examinations).

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 may be used to guide you in planning your weekly course work to remain on schedule:
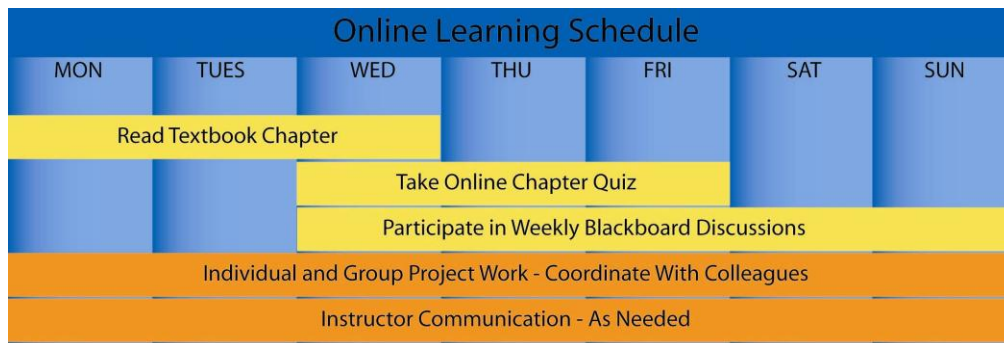
ASSIGNMENT DETAILS

Course assignments and evaluation criteria are detailed below. Please review these requirements carefully. See the section Academic Resources / Assessment Guidelines for information about assessment of written and oral presentations.

Details for all assignments are shown below. Please note that you should not submit any assignments to the Blackboard "Digital Drop Box." All assignments are submitted using the Blackboard "Assignments" or "SafeAssign" function. Some assignments are also posted to the Blackboard Discussion Forum for student comments.

Assignment (40 Points)

Each student is expected to demonstrate scholarship by actively engaging and completing assigned work. Assignments are evaluated to a maximum of 40 points based on:

Assignments	Points
Proposal Paper	05
Draft Paper	15
Final Paper	20
Total Points	40

Examinations and Online Participation (60 points)

Each student is expected to demonstrate scholarship by actively participating in online or on-ground classroom activities. Class participation is evaluated to a maximum of 60 points based on:

Assignments	Points
Module Assignments	20
Midterm Examination	10
Final Examination	10
Blackboard Participation	20
Total Points	60

SYLLABUS ADDENDA

Please see the LTU Online "Current Students" web site http://www.ltu.edu/ltuonline/ for comprehensive information about Lawrence Tech's academic services, library services, student services, and academic integrity standards. The content of this web site is explicitly included in these 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 SafeAssign anti-plagiarism product will be used for written assignments submitted for this course. Please see the instructions included on the eHelp web site regarding the use of the SafeAssign product.

Undergraduates: Leadership Transcripts

The leadership transcript enables students to track co-curricular activities that are undertaken above and beyond the requirements of the LTU curriculum. The leadership transcript serves students by enhancing the leadership portfolio; providing the opportunity for a transcript of distinction; enhancing their resumes; and assisting in articulating leadership experience. It can be accessed by logging on to Banner Web and clicking the Student and Financial Aid tab. Leadership Activities is located at the bottom of the list.