

ITSY 1400 8430
Fundamentals of Information Security
Summer 2010
06/07/10 - 08/12/10

General Course Information

Instructor: Zoltan Szabo

Office: D112 (DelRio Building)

Office Hours: by appointment only (or on-line using Skype – rlczoltan)

Phone: (972) 238-6059

Mail: 12800 Abrams Rd. #D112

Dallas, TX 75243

E-mail: zszabo@dcccd.edu

Web site: <http://www.RichlandCollege.edu/forensics>

Classroom: on-line (<http://eCampus.dcccd.edu>)

Class Times: scheduled, self paced

Prerequisites: None. It is recommended, however that students know how to type, use Microsoft Windows and have completed a computer literacy course.

Textbook: Mark Ciampa, *Security+ Guide to Network Security Fundamentals*. Course Technology Incorporated, 2009, ISBN 13: 978-1-4283-4066-4

Catalog Description: An introduction to information security including vocabulary and terminology, ethics, the legal environment, and risk management. Identification of exposures and vulnerabilities and appropriate countermeasures are addressed. The importance of appropriate planning, policies and controls is also discussed.

Course Objectives

This course outlines best practices for the information security goals of confidentiality, integrity and availability; explain ethical practices; define vocabulary/terminology related to information security; explain the importance of planning and administrative controls; identify security threats, vulnerabilities, and countermeasures; and identify procedures for security risk management. This course is a comprehensive guide for anyone wishing to take the CompTIA Security+ 2008 exam. The course covers all of the new CompTIA Security+ 2008 exam objectives and maps to the new Security+ 2008 exam. The course covers newly covered exam topics including cross site scripting, SQL injection, rootkits, and virtualization, as well as topics of increasing importance in the industry as a whole, like the latest breeds of attackers, Wi-Fi Protected Access 2, and Microsoft Windows Vista security.

Specific topic coverage includes:

- Introduction to Security
- System Threats and Risks

- Protecting Systems
- Network Vulnerabilities and Attacks
- Network Defenses
- Wireless Network Security
- Access Control Fundamentals
- Authentication
- Performing Vulnerability Assessments
- Conducting Security Audits
- Basic Cryptography
- Applying Cryptography
- Business Continuity Planning and Procedures
- Policies and Legislation

SCANS COMPETENCIES (Secretary’s Commission of Achieving Necessary Skills)

Foundation Skills

- *Read, write, perform arithmetic and mathematical operations, listen, and speak effectively.*
- *Think creatively, make decisions, solve problems, visualize, know how to learn, and reason effectively.*
- *Display responsibility, self-esteem, sociability, self-management, integrity, and honesty.*

Workplace Competencies

- *Identify, organize, plan, and allocate resources effectively.*
- *Acquire and use information.*
- *Work with others effectively.*
- *Understand complex interrelationships.*
- *Work with a variety of technologies*

Institution Policies	Details
<p><u>Stop Before You Drop</u></p> <p>6Drop</p>	<p>For students who enrolled in college level courses for the first time in the fall of 2007, Texas Education Code 51.907 limits the number of courses a student may drop. You may drop no more than 6 courses during your entire undergraduate career unless the drop qualifies as an exception. Your campus counseling/advising center will give you more information on the allowable exceptions.</p> <p>Remember that once you have accumulated 6 non-exempt drops, you cannot drop any other courses with a “W”. Therefore, please exercise caution when dropping courses in any Texas public institution of higher learning, including all seven of the Dallas County Community Colleges. For more information, you may access https://www1.dcccd.edu/6drop</p>
<p>Withdrawal Policy</p>	<p>If you are unable to complete this course, it is your responsibility to withdraw formally. The withdrawal request must be received in the Registrar’s Office by the official drop date for this course (see Course Drop Date mentioned earlier in this syllabus). Failure to do so will result in your receiving a performance grade, usually an “F.” If you drop a class or withdraw from the college before the official drop/withdrawal deadline, you will receive a “W” (Withdraw) in each class dropped. For more information about drop deadlines, refer to the current printed Credit Class Schedule, contact the Admissions/Student Records office at 972-238-6100 or 6101 (Thunderduck Hall, T170), or contact the division office.</p>

<p>Repeating a Course</p>	<p>Effective for Fall Semester 2005, the Dallas County Community Colleges will charge additional tuition to students registering the third or subsequent time for a course. All third and subsequent attempts of the majority of credit and Continuing Education/Workforce Training courses will result in additional tuition to be charged. Developmental Studies and some other courses will not be charged a higher tuition rate. Third attempts include courses taken at any of the Dallas County Community Colleges since the Fall 2002 Semester. <i>See Third Attempt to Enroll in a Course at http://www.dcccd.edu/thirdcourseattempt/</i></p>
<p>Financial Aid</p>	<p>If you are receiving any form of financial aid, you should check with the Financial Aid Office prior to withdrawing from classes. Withdrawals may affect your eligibility to receive further aid and could cause you to be in a position of repayment for the current semester. Students who fail to attend or participate after the drop date are also subject to this policy.</p>
<p>Academic Honesty</p>	<p>Scholastic dishonesty is a violation of the Code of Student Conduct. Scholastic dishonesty includes, but is not limited to, cheating on a test, plagiarism, and collusion. As a college student, you are considered a responsible adult. Your enrollment indicates acceptance of the <u>DCCCD Code of Student Conduct</u> http://www.richlandcollege.edu/conduct .</p>
<p>ADA Statement</p>	<p>If you are a student with a disability and/or special needs who requires accommodations, please contact the college Disability Services Office at 972-238-6180 (Voice/TTY), visit Thunderduck Hall, suite T120, or go to http://www.richlandcollege.edu/dso/ .</p>
<p>Religious Holidays</p>	<p>Absences for observance of a religious holy day are excused. A student whose absence is excused to observe a religious holy day is allowed to contract with the instructor to take a make-up examination or complete an assignment within a reasonable time after the absence.</p>
<p>Campus Emergency Operation and Contingency Plans</p>	<p>Richland College and the Dallas County Community College District have developed policies and procedures for dealing with emergencies that may occur on campus. To familiarize yourself with these procedures, please take time to watch the overview video: http://video.dcccd.edu/rtv/DO/emergency_dcccd.wmv The complete Emergency Operations Plan can be viewed and printed at the following website: http://www.rlc.dcccd.edu/emergency If you have questions or concerns, please contact the Richland College Office of Emergency Management. This office can be reached by phone (972/238-3794) or by e-mail (rlcoem@dcccd.edu). Contingency Plan: Richland College has developed an Instructional Contingency Plan for Temporary College Closing for On-Campus Courses. Please discuss this contingency plan with your instructor. For distance learning courses, your instructor will use email to contact students in the event of extended technology downtime. To assure work in the class continues, it is important for all students to have an accurate email address recorded in both eCampus and eConnect.</p>
<p>Disclaimer Reserving Right to Change Syllabus</p>	<p>The instructor reserves the right to amend this syllabus as necessary.</p>
<p><i>Optional: Classroom Policies</i></p>	
<p>Food, drink, cell phones, etiquette, etc.</p>	<p>Regarding food and drink in the classroom: Instructional staff are responsible for setting policy regarding use of food and drink in each class they teach. In accordance with OM EJ-801 (http://INTRANET.dcccd.edu/intranet/rlc/Operational/EJ801.pdf), faculty will include a statement in course syllabi detailing their policy. Exceptions: This right does not extend to classrooms/areas with or near computers, lab materials, equipment, and/or college-owned books—these are restricted from food and drink.</p>

ATTENDANCE POLICY: Attendance in this class refers to contribution to discussion group(s). Students are expected to post at least two comments and personal observations per chapter or topic covered to earn full grade for attendance. It is expected that students will attend class regularly. Class attendance is 10% of the course grade. Please refer to the college catalog Student Obligations- Attending Classes section.

WITHDRAWAL: The deadline for receiving a "W" is indicated on the academic calendar and the current class schedule. This semester, the drop date is __8/5/2010___. The deadline for dropping without a "W" is __6/29/2010__.

DISABILITY SERVICES/SPECIAL SERVICES:

Student with a disability and/or special needs that requires ADA accommodations should contact the Richland College Disability Services Office, T120, (972) 238-6180.

COMPUTER/INTERNET POLICY:

Richland College students, have access to the Del Rio computer labs for educational and instructional purposes. You are required to show your Richland Student ID when requested by lab personnel. You are expected to follow lab policies as well as the Student Code of Conduct specified in the catalog. Richland Computer Lab cannot provide any software for outside use. <https://www1.dcccd.edu/cat0506/ss/computer.cfm>

TUTORING AND OTHER ASSISTANCE POLICIES:

Tutoring is available through the Center for Teaching and Learning Connections ((972) 238-6226, Medina 216) and the Del Rio lab D229 ((972) 238-6317, large counter center of second floor). Generally, one hour per week is free.

SAFETY POLICY: It is important for students to participate in this class in a safe, appropriate manner. We occasionally have to step over cords for the multimedia cart and/or computer equipment. We also need to watch out for boxes and paper, students' backpacks, etc. During the first few labs, you will be encouraged to build good computing habits, designed to prevent eyestrain, carpal tunnel syndrome, etc.

CAMPUS FOOD AND DRINK POLICY (N/A on-line course): No eating or drinking is allowed at the computer tables in the lab rooms. Students, who wish to eat or drink in the lecture room, must sign the Statement of Responsibility, an agreement to be responsible for removing cans, bottle, and trash, from the learning environment.

DUE DATES: Unit quizzes will be enabled on a schedule base for two consecutive days. Lost scheduled quizzes, assignments, projects, and/or exams will not be allowed to make up at a later time. Students are expected to plan for technical problems and have a contingency plan in to meet assignment due dates.

Important: These requirements are cumulative. Submit your DEs as indicated on the Assignment Schedule, to make up the two DE's. A missed chance for a discovery period is lost and may not be recovered.

GRADING ELEMENTS:	FINAL GRADE VALUES	A 90 - 100
		B 80 - 89
		C 70 - 79
		D 60 - 69
		F 59 below

Web Site

Supplementary information and all support information for lectures and labs will be posted on the class eCmapus site. <http://ecampus.dcccd.edu>

E-Mail

All students are requested to obtain an e-mail account. If you have any questions about the course or need assistance, please contact me in person or by telephone during office hours; or by posting in the Discussion Board any time.

Assignment Submissions

Submissions should be submitted as an attachment in Microsoft Word XP-2003 (doc) format.

DE Topics

DE topics are security concepts that are the latest recommendations or requirements by law. Some of these topics are controlled by national standards and best practices. Student submissions will be graded on completeness of the information presented and the reliability of the sources listed. Each of the two required research report topic will have to be from the following topics:

- Comprehensive Model of Information Systems Security
 - critical information characteristics
 - information states
 - security countermeasures
- threats
- vulnerabilities
- Information Security policies, roles and responsibilities
- emanations security
- physical, personnel and administrative security
- transmission security
- sanitization of media
- effectiveness of security programs
- investigation of security breaches
- monitoring systems for accuracy and abnormalities
- review of accountability controls
- review of audit trails and logs
- review of software design standards
- verification, validation, testing, and evaluation processes
- Transmission Security
- TEMPEST Security

- HUMINT
- technical surveillance countermeasures
- Concepts of System Life Cycle Management
- passwords and voice communications protection
- copyright protection and licensing
- destruction of media
- documentation, logs and journals
- emergency destruction
- external marking of media
- media downgrade and declassification
- preparation of security plans
- reporting of computer misuse or abuse
- repudiation
- reporting security violations
- Risk Management
- Contingency Planning/Disaster Recovery
- construction, changing, issuing and deleting passwords

Grading and Evaluation Criteria

40% of the grade is based on a midterm and a final examination. Both examinations are cumulative and given in a varied format. An in-class review will be held prior to each examination.

20% of the grade is based on quizzes. Quizzes are announced one day in advance and may vary from three to five questions that may be in any format.

20% of the grade is based on security related concept research topic report (DE). Students are required to submit 2 reports on information researched and supported from multiple reliable sources. Students will have to submit a Power Point presentation on their findings which is a short version of the report. The presentation must be uploaded to a designated discussion board.

10% of the grade is based on Lab exercise notes submitted at the end of the semester as a single report showing all assigned lab completion steps.

10% of the grade is based on class attendance (minimum of 2 relevant postings per chapter)

10-Week Course Outline

Week	Topics	Chapter Readings	Exams/Quizzes/ Assignments
6/7-6/13	Introduction to Security	Chapter 1	Ch 1
6/14-6/20	System Threats and Risks Protecting Systems	Chapter 2 Chapter 3	Ch 2 Ch 3

6/21-6/27	Network Vulnerabilities and Attacks	Chapter 4	Ch 4 DE 1
6/28-7/4	Network Defenses	Chapter 5	Ch 5
7/5-7/11	Wireless Network Security Access Control Fundamentals	Chapter 6 Chapter 7	Ch 6 Ch 7
7/12-7/18	Authentication	Chapter 8	Midterm Exam Chapters 1-8
7/19-7/25	Performing Vulnerability Assessments Conducting Security Audits	Chapter 9 Chapter 10	Ch 9 Ch 10
7/26-8/1	Basic Cryptography Applying Cryptography	Chapter 11 Chapter 12	Ch 11 Ch 12
8/2-8/8	Business Continuity Planning and Procedures Policies and Legislation	Chapter 13 Chapter 14	Ch 13 DE 2
8/9-8/12			Final Exam Chapters 9-14