COURSE SYLLABUS

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Course Time Zone

All dates and times mentioned in this course represent Mountain Standard Time (Arizona), which are UTC-7 hours. Arizona does not observe Daylight Savings Time. You can use the following link to get the current local time in Tucson, Arizona: http://www.timeanddate.com/worldclock/city.html?n=393

Course Description

The information security arena contains a broad array of multi-level models for assessing, planning, implementing, monitoring and mitigation of security risks. At the very core of this information security spectrum are the actual system and network devices which store, manage, transmit and secure information. This course is designed to provide a working knowledge of issues and techniques surrounding the proper safeguarding of operating systems and related components. Filled with Information Assurance topics, this course offers a solid base for system administrators and technical managers.

Course Rationale

While there are no specific prerequisites to this course, information presented in the course is technical in nature. Workshops or labs will require technical familiarity with computers and networks. Students will get the most out of the course if they have a general knowledge of Microsoft or Linux style operating systems.

Students typically enter this course with a basic understanding of computer systems, systems management and networks as well as some knowledge of security. The focus of this course is to review or learn the fundamentals of securing information systems, create a knowledge base, and maximize day-to-day applications of security in any professional field. By design, this course will develop the following thinking skills:

- Knowledge
- Comprehension
- Application, using labs, workshops as well as the terminology and references provided throughout the course.

Students are expected to obtain an entry level proficiency in issues surrounding computer systems security and information assurance.

Learning Outcomes

Students who successfully complete this course will be able to: Recognize, Describe, Identify, Discuss, and Explain fundamentals in:

- CNSS Basics
- Security Basics
- Operational Security
- Operating System Security
- Authentication & Encryption
- Account-based Security
- Firewalls & Border Security
- Email Security
- Disaster Recovery, Business Continuity, & Incident Response
- Auditing & Monitoring

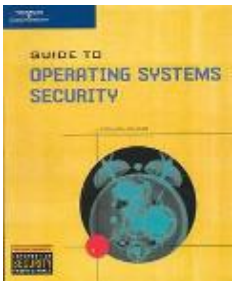
Students will be exposed to these (and many more) security topics specific to the Microsoft Windows Server, Linux, and Mac OS X environments.

ISACA Model Curriculum

This course is also designated, as one of three courses, to be in alignment with the ISACA Model Curriculum for the Certified Information Security Manager (CISM) bodies of knowledge. See http://*www.isaca.org/cism* for complete details on the CISM certification program.

Course Reading Material

There is no mandatory textbook in this course. Most readings will be available on D2L for download in either MS Word or PDF format.



Title: Guide to Operating Systems Security (1st Edition)
Author: Michael Palmer - University of Wyoming
Publisher: Thomson Course Technology
Format: Paperback
Copyright: 2004
ISBN: 0-619-16040-3

Additional readings and materials will be provided in the Reading Materials folder in the individual weeks within the Weekly Materials link on Blackboard. These links will also be noted in each module where the readings are considered important to the topics at hand. Some exam and quiz questions may be taken from these materials, so reading them is important.

ISACA

While not required, this course **highly recommends** that students become *student members* of the **Information Systems Audit and Control Association** (ISACA). The cost of the annual student membership is $25 (US$). This unique offer is available to students enrolling in this course. ISACA is a mainstream international information security organization responsible for many highly-sought professional security certifications to include:

- CISA – Certified Information Security Auditor
- CISM – Certified Information Security Manager
- CRISC – Certified in Risk and Information Systems Control
- CGEIT– Certified in the Governance of Enterprise IT

A membership in ISACA provides the information security student with access to a wealth of professionally written papers and research, journals of information security issues involving risk management, governance, planning and a variety of other topics. In addition, the student becomes a member of a large professional security organization.

Students may view the student membership application and instructions under the Course Information tab. Also visit ISACA on the web at http://www.isaca.org.

Course Workload Expectations

This 3-credit-hour course is structured around 8 weeks. Given this condensed time-frame, students can expect a heavier than normal workload. The course workload is estimated as follows:

Course Item	Estimated Hours	Estimated Total
Learning Modules	2-3 / Week	21
Additional Readings	3 / Week	21
Labs	3 / Lab	12
Quizzes	1 / Quiz	5
Exams	3 / Exam	6
Project	10	10

This averages out to be approximately 10 hours/week and 75 hours for entire course. These estimates will vary depending upon the student's knowledge level and/or time commitment.

Desire2Learn Course Management System

This course uses the Desire2Learn (D2L) course management system. Students are **required** to use D2L with this class and are encouraged to check our D2L class website daily.

Students are strongly encouraged to have their UA email forwarded to their primary email account, assuming the UA email account is not your primary account. The instructor will use D2L for course assignments, quizzes, exams, content distribution, and important announcements. The D2L system is available at: https://d2l.arizona.edu.

Course Grading

Course grades will be determined by the following criteria.

	Percent of Grade	Points Available
Mid-Term Exam (online - covers weeks 1-4)	20%	100
Final Exam (online - covers weeks 5-7)	20%	100
Quizzes (5 online – each quiz covers weeks 1-3, 5-6)	20%	100
Labs (4 online Labs)	20%	100
Project	20%	100
	100%	500

The approximate final course grade breakdown will be as follows:

Points	Letter Grade
450-500	A
400-450	B
350-400	C
300-350	D
0-300	F

Assignments and Assessments

Quizzes

Quizzes are designed to keep the student focused on important issues covered in the learning units. Quizzes help form a study basis for exams. The following apply to quizzes:

- There are five (5) quizzes associated with this course.
- Each quiz is administered online and will contain twenty (20) questions.
- There is a 1 hour time limit on each quiz attempt.
- Students are allowed one (1) attempt at each quiz.

Exams

The following applies to exams:

- There are two (2) exams associated with this course.
- Each Exam is administered online and will contain up to 41 multiple-choice, true/false, and an essay question.
- There is a three (3) hour time limit on each exam.
- Each exam will cover specified weeks of study. The Mid-Term Exam will cover course information from week 1 through (and including) week 4. The Final Exam will cover course information from week 5 through (and including) week 7.

Lab Assignments

There are four (4) labs required for this course. Each lab has specific deliverables. For more information on the labs, refer to the **Lab Overview** document under the **Assignments** folder in D2L.

Course Project

The purpose of the course project is to stimulate the students into thinking about how they would build a case, regarding a particular Information Security issue, and present the case to their management. The course project is centered on the issues of a fictitious company.

The final project is not an individual assignment. The instructor will form project teams in the first few weeks of the course. Each project team will be given a particular Information Security issue in a scenario. The objective is to develop a compelling analysis that informs management of the particular issue and proposed resolution. Note, this is NOT a marketing presentation, but it should be convincing. The project deliverables and the grading

rubric for the project are described in the Fortune-Automotive-Project-Description-and-Deliverables documents.

Extra Credit

Students are encouraged to take advantage of extra credit. Up to a maximum of 30 extra credit points are obtainable. Extra credit beyond what is described herein is obtainable only by approval of the instructor. Remember, **extra credit** does not mean **easy credit**! Extra credit is a chance a student to learn above and beyond in an effort to earn additional points.

Expectations for Written Work

Papers are expected to be written properly, containing an introduction (telling the reader what the paper will cover), the body (telling the reader), and a conclusion (telling the reader what you told them). It does not matter if you write the paper in MLA or APA formats. However, ***do not format your paper as a list or outline***. Outlines and lists have a purpose for relaying many small pieces of information with few details. Using lists (e.g. numbered groupings of information) in place of properly formatted paragraphs is not acceptable as this is providing an outline instead of a paper, and will result in a loss of points.

All papers have specific requirements in the instructions. Please make sure you read the lab instructions and deliverable requirements carefully. The most important requirement involves the proper use of references and citations. It does not matter if you work in the IT field and have direct experience with the topic(s) covered in your papers. Providing research you cite in your papers helps to strengthen your conclusions and protect yourself against claims of plagiarism. If you include a direct quote or use information from another source you must provide an in-text citation for it. When in doubt, cite it. Here is a link that will help you create your citations and reference lists (there are many more you can Google): http://www.ncsu.edu/labwrite/res/res-citsandrefs.html. ***Papers without properly cited references will lose points.***

Course Operation

This course is structured around weekly progress. The expected weekly progress is outlined in the course schedule. (This is a separate document in the Content area under Syllabus and Course Schedule). At a minimum it is recommended that students keep up with coursework by following the outlined course schedule. Note the **DUE DATES** on course deliverables. All items are due on specific dates. While items like Labs might open up simultaneously, **each lab has a specific, designated due date**.

Working Ahead of Schedule

This course is designed to allow the student to work ahead of the normal course schedule. A student can, in theory, complete most course requirements prior to the stated course schedule. The exception to this is the final team project and the final exam. If course projects are assigned by groups, course completion will depend on the progress of the assigned group.

Labs

Labs will open on odd numbered weeks and have a specific due date. The student can work ahead of the normal course schedule by completing the labs AND quizzes early.

Exams and Quizzes

If the student completes Quiz-3 ahead of schedule, the Mid-Term Exam and week 4 section opens up for the student to take early, if desired. If the student completes the Mid-Term Exam ahead of schedule, materials for week 5 are made available. If the student completes Quiz-5 ahead of schedule, the week 7 materials will become available. ***Please note the Final Exam schedule is dictated by University policy and will only be available for the final three days of the course.***

In all cases, quizzes and exams will become available as dictated by the course schedule. However, the student may work ahead of the course schedule as desired.

Course Policies

Late Submissions

Assignments (Labs) are due on specific days. Any assignments submitted after the designated due date will be accepted **up to five (5) days late**; however, **the instructor will deduct 10% for every day the assignment is late up to a total of five (5) days (or 50%)**. After 5 days the submission will not be accepted and the student will receive a zero (0) for that grade.

Missed Exams

Please note, all quizzes and exams are conducted online and are available for a minimum of one full week (the Final Exam being the exception at 3-days), so missing a quiz or exam should not be necessary. However, the following are possible acceptable excuses for rescheduling. **In all cases, the student is required to contact the instructor via email in advance of the quiz or exam due date**. In some cases the instructor may request documentation as proof of the need to reschedule taking the exam. In all cases, the rescheduling will not exceed the University's last day of scheduled exam days (if applicable).

- The student is aware of a scheduling conflict (e.g., interview, field trip, conference) that can be identify at least two weeks prior to the Exam due date. For example, the student may have an important, unchangeable job interview scheduled for one of the exam dates.
- An emergency that comes up before the exam. For example, a family emergency that requires the student to be away from a computer for a period of time or the student has a serious illness.

Academic Integrity

Students assume full responsibility for the content and integrity of the academic work they submit. The guiding principle of academic integrity shall be that all submitted work including assignments, examinations, reports,

projects, etc. must be that student's own work alone, unless clearly following the rules for allowable group work. Students shall be guilty of violating the Code and be subject to proceedings under it if they cheat, fabricate, plagiarize, and represent others work as their own. You are responsible for reading and understanding the College's and University's policy at https://academicaffairs.arizona.edu/syllabus-policies.

In the event of any dishonest behavior, all parties involved (whether they benefited or not) will receive one or more (multiple penalties may be imposed) **severe academic penalties** up to and including (but not limited to):

- A failing grade for the *entire* assessment item (e.g., quiz, homework, exam, etc.) without the option of make-up or replacement (e.g., a 0 on the quiz with no option to drop or make up the score through opportunities normally given to students).
- A letter grade drop in the final class grade (e.g., "B" becomes a "C").
- A failing grade for the entire course.

The course instructor makes the final penalty determination. The department head and/or other faculty members may be consulted if the instructor deems appropriate. In case of any accusations of academic dishonesty, the student case may be forwarded to the Office of the Dean of Students. The office will investigate the suspected violations.

Accessibility and Accommodations

At the University of Arizona, we strive to make learning experiences as accessible as possible. If you anticipate or experience barriers based on disability or pregnancy, please contact the Disability Resource Center (520-621-3268, https://drc.arizona.edu/) to establish reasonable accommodations.

Course Support

The course instructor is available to assist with course related issues. Students may, at any time, send email to the instructor. This course also provides an **Ask Your Instructor** discussion forum. Students may post questions to this forum at any time. The instructor monitors this forum and will respond in a timely fashion. It is common for other students to participate in answering questions posted in the Question and Answer forum. Students should feel free contribute to the solution if he or she can provide knowledge or guidance related to the question.

The following are guidelines for requesting support:

- **Course Questions –** Use either the **Ask Your Instructor forum** or direct email via mis517@eller.arizona.edu for general or specific questions regarding course materials or policy.
- **Personal Questions**. Send direct email to the instructor via mis517@eller.arizona.edu for discussing specific topics related to grades or personal concerns.
- **Course Registration Questions**. Send Email to misonline@eller.arizona.edu.
- **D2L Questions**. Contact the UITS 24/7 IT Support Center at (520) 626-TECH (8324) or (877) 522-7929.

Course Grievance Policy

In case of grievances with a course component or grading, students are encouraged to first try and resolve the issue with the instructor. If the student feels the issue is not resolved satisfactorily, please send Email to misonline@eller.arizona.edu.

Course Surveys and Evaluations

There are two online surveys associated with this course:

- **MIS course specific survey** - assists course designers with refining elements of the course. This survey is conducted by the MISonline team prior to the end of the course.
- **UA Teacher Course Evaluation** – standard course evaluation conducted by the University of Arizona. This will appear be made available through http://uaccess.arizona.edu at the appropriate time during the course.

Please participate in these online surveys!