

# Management of Information Assurance

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## 1 Course Description

This course focuses on management of the information assurance process. Topics include human factors in reducing security breaches, security incident detection and response, remediation, management's role in information assurance, and other considerations in framing and implementing information assurance policies. The final section reviews current topics of particular interest and activity in the field of information assurance. IS342 may be taken before taking IS340. All specifics of topics, schedule and deadlines are in the IS342 Syllabus. Prerequisite IS228 or permission of instructor. (3 Credits)

## 2 Course Objectives

The goal of the course is to provide a foundation for practical work and further study in information assurance. By the end of the course, students should be able intelligently and usefully to discuss these topics at a management level:

- Fundamentals of intellectual property law
- Software development and quality assurance
- Managing patches and vulnerabilities
- Principles of ethical decision-making in the information technology field.
- Guidelines for effective security policies.
- Effective employment practices relevant to security in conjunction with human resources staff.
- Vulnerabilities assessments
- Suitable operations security controls on production systems.
- Appropriate-use policies for Internet access and e-mail.
- Effective security-awareness programs.
- Social psychology to implement security policies effectively.
- Standards for security products
- Application-program security controls
- Monitoring and control systems
- Audit and control of information systems.
- Cyber investigations
- Computer security incident response team management
- Data backup and recovery procedures to support business continuity and disaster response plans.
- Business continuity plans.
- Disaster recovery plans.
- Collaboration with law enforcement in data gathering, preservation and forensic analysis.
- Modern principles of risk assessment and risk management.
- Management responsibilities for information assurance.
- US legal and regulatory issues
- The role of the CISO
- Developing security policies
- Outsourcing security
- Privacy online
- Security in the medical informatics field.
- Censorship and content filtering in the USA and overseas.

## 3 Course Schedule & Location

- Tuesdays and Thursdays in Dewey 211 from 10:50:03 to 12:04:57 and using NUoodle.

## 4 Text

- Bosworth, S., M. E. Kabay, & E. Whyne (2014), eds. *Computer Security Handbook, 6th Edition*. Wiley (ISBN 978-0471716525). 2 volumes, 2240 pp. AMAZON < <http://www.amazon.com/Computer-Security-Handbook-Seymour-Bosworth/dp/1118127064/> > Volume 1 is used for IS340; Volume 2 is used for IS342.
- Additional readings are provided on the course Web pages.

## 5 Course Web Site

Course materials including assigned readings and lectures are posted online on the instructor's Website at < <http://www.mekabay.com/courses/academic/norwich/is342> >. There are links to these materials from the IS342 section of NUoodle for easy access.

## 6 Methods of Assessment

All assignments and quizzes are submitted using NUoodle. Deadlines for each assignment are posted in NUoodle and on the class syllabus.

### 6.1 Term Project: 25% of final grade

Students will write a 4,000 ± 500 word research paper on a suitable topic in the management of information assurance to be selected with approval of the instructor. Students should choose a topic they personally find *interesting* – why spend time on something boring?

Students must post their topic proposals in the public discussion group on NUoodle 2 for consideration by the instructor. Topics must be approved to avoid the problem of discovering that students have picked a topic so broad as to be worthy of writing a textbook or so technical that it doesn't apply to the management focus of this course. Approval also prevents duplicate topics among students, making for more interesting presentations at the end of the course.

Students should not hesitate to work with the instructor to review draft versions before submitting the final version. Students must submit the topic, outline, and final version of their project via NUoodle no later than the deadline listed on the syllabus and on NUoodle. Students may discuss their drafts in person with the instructor before submitting the final version.

Detailed instructions and suggestions about the term project are available in the “Term-Paper Guidelines” available online.

Early submissions for any of the essay exams and assignments will result in bonus points of 1 point per day for the total score allotted to the assignment. Late submissions are rejected.

### 6.2 Term-Project Presentation: 5% of final grade

Students will present interesting aspects of their research. Students usually prefer an informal chat with the class – no presentation notes are required. However, if students do want to prepare such notes, they are welcome to do so, and may ask the instructor for review to see if there are any improvements he can suggest before the presentation itself. The order of presentations is determined by the instructor to link topics together in an interesting way.

### 6.3 Weekly Quizzes: 15% of final grade

Using NUoodle, there will be 13 sets of weekly quizzes (each individual quiz will cover a week's assigned readings). These open-book, automatically graded quizzes will test for concepts and technical vocabulary and

must be completed in 30 minutes or less. These quizzes open on Monday mornings (00:05) in the week when the material being tested is presented and close at the end (23:55) of the Sunday night twelve days later.

### **6.4 Mid-term Multiple-Choice Exam: 10% of final grade**

The mid-term MC exam will be an open-book multiple-choice exam taken via NUoodle 2.

### **6.5 Mid-term Memo Questions: 10% of final grade**

At mid-term, students will complete an open-book take-home assignment with **four** management-level 350-word memoranda (longer memos are acceptable but not required) responding to realistic questions raised by hypothetical managers querying an information systems security officer (ISSO) or chief information security officer (CISO) about security issues. Exam coverage is Weeks 1 through 4 of the course. These exams have proven popular with students who recognize the value of honing their skills in professional writing. Graduates have been grateful for the training and have consistently reported that they are at the top of their managers' evaluations on communication skills.

### **6.6 Final Multiple-Choice Exam: 20% of final grade**

The final exam will be an open-book multiple-choice exam similar to the weekly quizzes but covering all the material in the course. The exam will be offered via NUoodle. As with the quizzes and exams in IS340, this exam is designed to be useful to students in preparing for professional certification exams in security such as the CompTIA *Security+* and those offered by (ISC)<sup>2</sup>. The major justification for such exams is that they encourage review and therefore support long-term retention of terminology and concepts.

### **6.7 Final Memo Questions: 15% of final grade**

At end of term, students will complete an open-book take-home assignment with **six** management-level 350-word memoranda (longer memos are acceptable but not required) responding to realistic questions raised by hypothetical managers querying an information systems security officer (ISSO) or chief information security officer (CISO) about security issues. Exam coverage is Weeks 5 through 11 of the course.

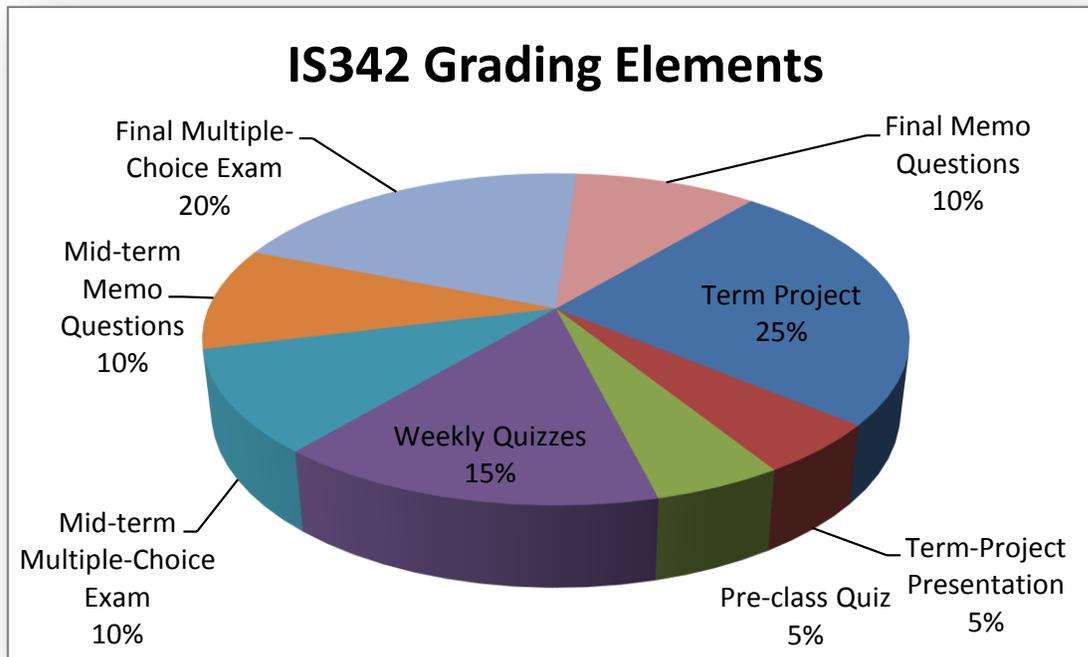
### **6.8 Extra Work for Extra Points:**

- Students may submit extra work for extra points on their final grade with permission of the instructor.
- For example, the instructor will agree to accept suitable short essays such as summaries of interesting incidents, articles or books relevant to the course materials.
- The rate granted for extra work is 1 point added to the final grade for 500 words of professional-grade writing. Thus a 1,000 word essay could improve the final grade by 2 points – and could be the difference between, say, an A- and an A grade.
- Particularly good essays may be considered for publication, which can make a significant difference in attractiveness to employers.
- Contributions to the online discussions generate 0.1 point on the final score per *good* contribution with references or an intelligent response to a posted message. (MAX 10 points)
- Replacement quizzes available through NUoodle at the end of the course allow a lower grade on a quiz to be replaced by a higher grade but cannot lower existing grades. These quizzes have more questions and shorter time allowances than the original quizzes; these additional constraints are intended to discourage students from skipping the original quizzes and missing the opportunity for better learning through review and repeated use of new information.

### **6.9 Summary of Assignments**

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- Responding punctually to professional responsibilities is part of the maturation of students. To encourage promptness, early submissions for any of the essay exams and assignments will result in bonus points of  $\frac{1}{2}\%$  **per day** for the total score allotted to the assignment. Late submissions are rejected and will result in scores of 0% for the assignment.
- For all NUoodle2 quizzes and exams, quizzes close at their deadlines and cannot be taken or retaken after closure. However, replacement quizzes are provided.
- The figure below shows the breakdown of elements of the final Grade.



## 7 Cheating and Plagiarism

Students are graded on an individual basis and must therefore complete their own work. Students are reminded of the University's Policy against cheating and plagiarism:

< <http://www.norwich.edu/about/policy/academic/appendix1.html> >.

If in doubt as to what constitutes plagiarism, students should ask the instructor for a review of their work before submitting an assignment. All instances of cheating and of plagiarism must be reported to the Academic Integrity Committee by the instructor or by students who have observed the dishonesty. Penalties include expulsion from the University. **Ignorance of the University's Rules is not a valid defense against accusations of academic dishonesty.**

### 8 Attendance Policy

There can be no more than two unexcused absences from this course because it meets twice a week.

University regulations stipulate that “Unless stated otherwise, the maximum number of permitted absences is the number of times the course meets per week. When the student has reached the maximum number of permitted absences, the faculty member will warn the student of impending dismissal from class with a grade of ‘F.’ This warning letter will include the course number and section and date(s) of absence(s). The letter will state that any future unexcused absences may result in recommendation to the Vice President of Academic Affairs through the course School Dean that the student be dismissed from the class with a grade of ‘F.’ A copy of the warning letter will go to the student’s academic advisor and to the Commandant and Vice President of Student Affairs.” (See pp 69-70 of the PDF version of the *Academic Regulations* available online at < <http://about.norwich.edu/policy/academic/> >.)

Thus, students may miss one or two sessions of this course without needing any explanation. If students plan to be absent, they should discuss the absence with the instructor in advance or write an explanatory note on one of the attendance sheets before the planned absence; after an absence, the instructor requires a written explanation for consideration. The third and subsequent unexcused absences will be reported as stipulated in the academic regulations and may lead to dismissal from the course with an F grade.

### 9 Policy on Electronic Distractions

Some students constructively use computers to take notes or to research discussion points to contribute to class sessions. However, some students have displayed immature and rude behavior by using their mobile phones, tablets, and laptop computers to access services such as online games, chat services, social-networking sites, or other services that have no value for the class discussions. Some of these students have distracted other students and irritated the instructor. Students must understand that divided attention does *not* improve learning.

Therefore, in this course, students are on notice that anyone using their electronic equipment (or for that matter, reading a novel, taking a sitz-bath, training a gerbil, or preparing breakfast on a camping stove) for non-class-related purposes will be interrogated in public with multiple questions about the current matter under discussion. Anyone wishing to avoid embarrassment and potential humiliation will want to avoid such interactions with the instructor.

### 10 Office Hours & Contact Information:

Students are welcome to call the instructor at **(802) 479-7937** at *any time* (that number rings in his office or his cell phone but cannot disturb him at home); leave a voice-mail message with a return number if necessary.

Students may also use Instant Messaging at any time using Skype (ID is **mekabay**) and are also welcome to leave voice or video recordings using Skype.

Office hours are posted on the instructor’s Website home page, class Web site, on NUoodle, and on the instructor’s office door (Dewey 209). The **Dewey 209** office door is almost always open when the instructor is present; all students are most welcome to drop in without having to make appointments – everyone is welcome at any time.

## 11 Additional Notes

- There will be no *grading on a curve*. There are no predetermined numbers of final letter grades. Students do not compete with each other for grades; if everyone gets A, great. If everyone fails, tough.
- Review questions (without answers) are distributed to students throughout the term via NUoodle. These example questions will not limit the scope of actual exam questions, and are intended to help students review and in exam preparation.
- Students are encouraged to study together but may not collaborate during exams. Students are individually responsible for all assigned readings, lecture, and discussion material, unless otherwise noted (specifically, the case studies result in the same grade for each team member).
- The instructor uses Facebook (ID *Mich Kabay*) to post links and commentary on interesting news or professional articles; the hashtag *#is342nu* identifies material specifically relevant to this course. The postings are public, so students need not “friend” the instructor but are welcome to do so if they wish.

## 12 About the Instructor: M. E. Kabay, PhD, CISSP-ISSMP

See < <http://www.mekabay.com/cv/index.htm> > for background information.

