

IA455 Contemporary Issues in IA

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1 Course Description

A capstone seminar for Computer Security and Information Assurance majors which will vary every term in accordance with the current issues of the time. Students work with the instructor as they explore today's issues and trends in preparation of a thesis or project. Emphasis is placed on critical thinking, research and evaluation of current issues. Prerequisite: IA 340; open to CSIA juniors and seniors, or by instructor permission.

2 Course Objectives

By the end of this course, students will be able to discuss the following current issues at a management level:

- Useful information sources for security professionals (including scholarly and commercial publications, discussion groups, government agencies, professional associations and hacker meetings)
- Recent vulnerabilities and their exploits (e.g., malware such as viruses, worms, Trojans)
- Fighting phishing and pharming
- Fallout (including identity theft, extortion, embarrassment) from disclosures of personally identifiable information
- Security developments in the Internet of Things
- New developments in government opposition to strong cryptography
- Perspectives on information warfare (including state and non-state actors)
- Recent legal developments affecting security management
- Classic security models

3 Course Schedule & Location

- Mondays, Wednesdays & Fridays from 13:00:03 to 13:49:57 in Mack 005 and using NUoodle.

4 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/ia455> >. There are links to these materials and more from the IA455 classroom on NUoodle for easy access.

5 Mechanics

- Classes will meet as stipulated in the syllabus. Attendance is mandatory; a record of attendance will be kept. More than three unexcused absences will result in expulsion from the course with an F grade.
- Readings, videos, and sound recordings (required and optional) are listed in the weekly assignments on NUoodle and on the course pages on the instructor's Website.
- Teaching materials are available through the classroom in NUoodle and on the course Web pages, which are < <http://www.mekabay.com/courses/academic/norwich/ia455/index.htm> >.

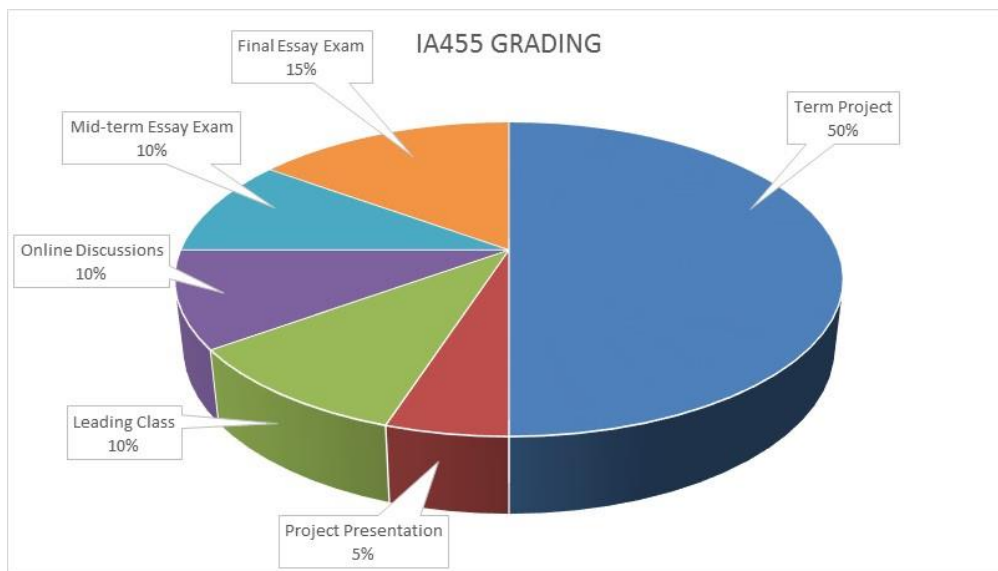
- Students should read, listen to or view specified assigned readings, audio recordings or videos before coming to class.

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.

Responding punctually to professional responsibilities is part of the maturation of students. To encourage promptness, early submissions for the essay exams will result in bonus points of 1% per day for the total score allotted to the assignment. Late submissions of exams are rejected and will result in scores of 0% for the exam. However, see below for details of project grading.

The figure below shows the breakdown of elements of the final grade.



6.1 Term Project: 50% of final grade

Students will write a **5,500 ± 500 word** research paper on a suitable topic to be selected with approval of the instructor. Students should choose a topic they personally find *interesting*—why spend time on something boring? The minimum length is 5,000 words; the upper limit is a suggestion but longer work is not penalized. Papers with word counts lower than the minimum will be graded as a percentage of the minimum; for example a perfect submission (100% grade before penalty) with only 4,000 words would receive a grade of 80% (4,000/5,000).

Students must post their topic proposals in the public discussion group on NUoodle for consideration by the instructor by the deadline specified in the syllabus. 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 and final version of their project via NUoodle no later than the deadlines listed on the syllabus and on NUoodle. Students may discuss their drafts in person with the instructor before submitting the final version. The instructor may offer suggestions on corrections and may offer additional suggestions.

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The deadline for full-grade submissions of the project report is specified in the syllabus. *Early* submission for the project report will result in bonus points of 1% point per day early for the total score allotted to the assignment; for example, a paper submitted 10 days before the deadline will be granted an extra 10% points on the project; the total may exceed 100%. In contrast, late submissions are penalized by 5% per day late. For example, a project report graded at 100% but submitted eight days late will lose 40% points from the maximum and thus be marked with a maximum grade of 60%.

Detailed instructions and suggestions about the term project are available in the “Term-Paper Guidelines” available online. The instructor encourages students to publish their work and provides advice and support to achieve that end. The instructor will *not* add his name to students’ publications unless the students insist on inclusion due to unusual levels of contributions to the final published work.

6.2 Term-Project Presentation: 5% of final grade

Students will present interesting aspects of their research and stimulate discussion in class. 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 Leading Class Discussions: 10% of final grade

Starting in Week 3, teams of two students will research current topics as detailed in the syllabus and will lead in-class discussions of new developments. The instructor will support their efforts by being available for preparatory discussions and by posting additional useful references that the teams identify on the class Web pages.

6.4 Online Discussions: 10% of final grade

Students will respond to questions posted in the online discussions for each week in NUoodle. For each posted topic, **every student is expected to contribute at least one *thoughtful comment*** about the issues raised using reason and include evidence to support their point of view; postings consisting of “I agree” and “Yeah, right” will not be penalized, but they won’t earn points, either.

The instructor will grant extra points for contributions that present new ideas, which point to interesting information on the Web or in the Kreitzberg Library databases, or which comment articulately on issues or arguments already presented.

The discussion *grading* will close two weeks after they open at the start of each week; i.e., the discussions for any given week will be graded from the start of that period and end on the second Sunday after the start. However, the discussion forums themselves will remain open until the end of the course, allowing additional electronic conversations to take place freely.

6.5 Mid-term Essay Exam: 10% of final grade

The mid-term *open-book take-home* essay exam will include

- Four serious
- 500-word (minimum – no maximum) messages
- responding to realistic questions raised by ordinary people such as family members or friends without a technical background
- querying a student about cyberspace issues discussed in the first part of the course.
- The questions will be distributed as shown in the syllabus and submitted electronically via NUoodle in accordance with the schedule listed in the syllabus.
- Grading criteria for the essay exam are listed in the document “Grading Standards for Essay Exams” provided via NUoodle and the course pages of the instructor’s class Website.

6.6 Final Essay Exam: 15% of final grade

The final *open-book take-home* essay exam will include six questions and otherwise conform to the description of the mid-term essay exam.

6.7 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 one percentage 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 two points; a student who achieved 93% in her work throughout the course (an A- grade) could thus achieve a 95% grade (an A) by submission of a good 1,000 word extra essay.

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 three unexcused absences from this course because it meets thrice 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://tinyurl.com/nuar2009> >.)

Thus, students may miss one, two or three sessions of this course without needing any explanation. If students *plan* to be absent, they should discuss the absence with the instructor in advance to be excused; after an absence, the instructor requires a written explanation for consideration. The fourth 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 or for their own learning. 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 before being expelled from the class. 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. The same number may be used for SMS (text) messages. Similarly, Facebook texting using the Messenger app are accepted. Students are also encouraged to use Skype (ID is **mekabay**) and are also welcome to leave voice or video recordings using Skype. The instructor is almost always running Skype; the status icon turns yellow for away after five minutes of inactivity on his system.

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. It is *not necessary to make and appointment* – the instructor welcomes visits and always responds to students with a cheery, “Hi! What can I do for you?” Many students have enjoyed cups of coffee or cocoa and some hungry people have even been fed emergency granola bars. Do come and visit!

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 – the evidence will support the results. Remember that NUoodle keeps detailed log files showing the exact timing and duration of visits to that service; it's hard to claim that a, say, 43% received as a final grade was unfair when the log files show that the student took no quizzes, never participated in discussions, refused to submit mid-term and final exams, and was online in NUoodle for a total of eight visits lasting a total of 22 minutes.
- Students are encouraged to study together, to help each other by reviewing drafts of term projects and making constructive suggestions for improvement, but not to collaborate in preparation of exam responses.
- Students are individually responsible for all assigned readings, lecture, and discussion material.

12 About your Instructor

M. E. Kabay began teaching his high school classmates how to use the slide rule in 1963 (NOT the best way to become popular) and began programming IBM 1401 computers in assembly language in 1965. In 1976, he received his PhD from Dartmouth College in applied statistics and invertebrate zoology (WHAT?!?) and taught statistics, programming and a few biology courses as a university professor in Canada and overseas. In 1979, he joined a compiler team for a new 4GL and RDBMS in the US and wrote the parser and code generator for a set of statistical functions. In 1980 he joined Hewlett-Packard Canada in 1980 as an operating systems and database performance specialist. He won the *Systems Engineer of the Year Award* in 1982. His teaching for HP was primarily on the MPE/3000 operating system, IMAGE/3000 database and VPLUS/3000 GUI-design courses. He served as support engineer to HP's hospital and university customers in Montreal and Ottawa; he also managed HP's bilingual call center (*Phone-In Consulting Service*) for Québec & the Maritime provinces.

He served as Director of Education for the National Computer Security Association (NCSA, later ICSA and then TruSecure and now Verizon's Business Security Solutions) from 1991 to 1999 and then worked with AtomicTangerine where he supported the *International Institute for Information Integrity*® (I-4®). He collaborated in the committees defining the *Common Body of Knowledge* for the *Certified Information Systems Security Professional* (CISSP) designation in the mid-1990s and earned his CISSP in 1997 and his ISSMP (*Information Systems Security Management Professional*) in 2005.

Since 1986 (and as of the end of 2016), he has published over 1,300 articles in operations management and security, written a college textbook on enterprise security (McGraw-Hill, 1996), and served as Technical Editor of the 4th (2002), 5th (2009) and 6th (2014) editions of the *Computer Security Handbook* (Wiley). He wrote two security-management columns a week distributed by *Network World* from February 2000 to September 2011 and published one a week in the *InfoSec Perception* blog from October 2011 through November 2013.

He has been an invited lecturer at the United States War College, the Pentagon, NATO HQ in Brussels, and at NATO Counterintelligence training in Germany. He was inducted into the Information Systems Security Association (ISSA) *Hall of Fame* in December 2004.

From January 2002 to June 2009, he was the Director of the *Master's Program in Information Assurance* (MSIA, now MISA) in the School of Graduate and Continuing Studies (SGCS) at Norwich University, Northfield, Vermont where he was also the Chief Technical Officer of the SGCS from 2007 to 2009.

From June 2001 to April 2011, Dr Kabay was Associate Professor of Computer Information Systems in the School of Business and Management and became Professor of Computer Information Systems in May 2011. He was appointed Associate Director of the *Norwich University Center for Advanced Computing and Digital Forensics* in July 2011.

His LinkedIn page is < <http://www.linkedin.com/mkabay/> > and his Website is < <http://www.mekabay.com> >.

Students are welcome to *friend* him on Facebook (but to protect their privacy he generally does not follow students) for a stream of links to interesting information security and high-technology articles (mostly from *The Guardian*, *BBC News* and *National Public Radio*) with occasional forays into politics, culture, science, and puns.

