

IS455 Fall 2011: Strategic Applications of Information Technology

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1 Course Description

Information technology (IT) is permeating every aspect of organizational operations. This course examines specific case studies with a focus on how effective use of IT supports (and poor use of IT hinders) management, productivity, operations, effectiveness and profitability. Key concepts include the use and effects of IT on organizational structures and business relationships; the cost-justification of IT investments; the strategic roles of internetworking technologies; service levels and information assurance as mission-critical objectives; working with external service providers; managing the IT functions; outsourcing; project management; and long-term perspectives on the future of IT in a global economy.

Prerequisites: IS302 or permission of instructor. (3 Credits)

2 Course Objectives

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

- Can and should IT play a role in strategic planning for today's enterprise?
- How do executives use IT to create business advantages and manage risk?
- How are organizations managing to apply IT successfully to reach their strategic goals?
- How does the explosive rise in interconnectivity affect organizational interrelations?
- How do IT managers successfully make the case for integrating IT into upper-management thinking and planning?
- How is the pace of technological change in networking infrastructure affecting business decisions?
- What is the value of information assurance in strategic planning?
- How are IT managers coping with heterogeneous computing environments?
- What are the key issues IT managers face in supporting their user communities?
- How are IT shops coping with outsourcing?
- What are the factors that differentiate successful IT project management from catastrophes?
- How are international organizations managing IT resources for effective applications to their strategic goals?

3 Course Schedule & Location

- Mondays, Wednesdays, and Fridays from 13:10:03-13:59:57 in Dewey 106.

4 Course Web Site

- Course materials are posted and updated at < <http://www.mekabay.com/courses/academic/norwich/is455> > and are also available via NUoodle.
- Lecture notes are available in a folder divulged only to students, to help protect the intellectual property of the textbook authors, who provide the notes only for users of their textbook. These materials should not be distributed to anyone else or posted on any Website without permission of the authors.

5 Text

Applegate, L. M., R. D. Austin & D. L. Soule (2009). *Corporate Information Strategy and Management, 8th Edition*. McGraw-Hill Irwin (ISBN 978-0071263191). 513 pp. Index.

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, late submissions for any of the essay exams and assignments will result in reduction of grades by 10% per day from the total score allotted. However, because of the constraints on NUoodle quizzes, the time limits on quizzes have to be definite; therefore, quizzes close at their deadlines and cannot be taken or retaken after closure.

6.1 Preliminary Written Assignment: 5% of final grade

Students will write a 500 ± 50 word research paper on an assigned topic. This essay will provide an opportunity for detailed commentary and correction that will support better research and writing of the term papers. Your instructor has been a professional editor since 1970, so this is a good opportunity to get some practical guidance that can improve your work in later essays. Pick anything interesting to you and relating to anything mentioned in the syllabus and upload via NUoodle by the deadlines indicated.

6.2 Term Paper #1: 10% of final grade

Students will write a $1,500 \pm 200$ word research paper on a suitable topic to be selected in conjunction with the instructor. Instructor approval helps to avoid the problem of discovering that you have picked a topic worthy of a textbook! Don't hesitate to work with your instructor to review draft versions before you prepare your final version. Submit your final version via NUoodle no later than the deadline listed there.

6.3 Quizzes: 20% of final grade

Using NUoodle, there will be nine sets of weekly quizzes (each individual quiz will cover a single chapter or case study in the 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 Saturday mornings (00:05) a week after the material being tested and will close at the end of the next Friday day night (23:55). There are three attempts possible for each quiz with 24 hours minimum delay between attempts. The final grade for each quiz will be the average of the grades for the quizzes attempted. For example, if a student tries the quiz at 09:00 on Thursday and gets 80%, and tries again at 13:30 on Friday and gets 100%, the recorded final grade for that quiz will be $180\%/2 = 90\%$. If the student continues and takes the quiz again on Saturday at 14:00 and achieves 100%, the final recorded grade for that week's quiz will be $280\%/3 = 93.3\%$.

6.4 Teaching in Class: 10% of final grade

Students will lead discussions in teams of two throughout the semester starting in Week 4. Evaluation depends on the quality of preparation and of the discussions prompted by the student leaders.

6.5 Mid-term Exam: 15% of final grade

The mid-term exam will be an open-book take-home essay exam with four management-level 450- \pm 100 word memoranda responding to realistic questions raised by managers querying a CIO or about strategic applications and governance of information technology. Exam coverage is the first four weeks of the course.

6.6 Term Paper #2: 20% of final grade

Students will write a second research paper in $3,000 \pm 400$ words on a suitable topic to be selected in conjunction with the instructor. The topic is to be approved on or before the posted deadline. Late

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submissions for topic selection or for final drafts will result in reduction of grades by 10% per day from the total score allotted to the assignment.

6.7 Final exam: 15% of final grade

The final exam will be an open-book take-home assignment with six management-level 450- ± 100-word memoranda responding to realistic questions raised by managers querying a CIO about applications and governance of information technology. Exam coverage is the entire course.

6.8 Term-Paper Presentation: 5% of final grade

Students will create a *narrated* PowerPoint lecture for the first or second term-paper topic for posting on NUoodle and will then lead a full-length class discussion of their research (with or without their PowerPoint). Grading will include the quality of the content and the professionalism of the presentation.

6.9 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.
- Particularly good articles may be considered for publication in collaboration with the student author.
- Contributions to the online discussions can generate 0.1 pt on the final score per *good* contribution with references or an intelligent response to a posted message. (MAX 10 pts)

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, ask the instructor for a review of your 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 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) will be distributed to students throughout the term. 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).
- Attendance Policy – no more than three unexcused absences. 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

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warning letter will include the course number and section and dates(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> >.) Therefore, students may miss exactly three sessions of this course without explanation; 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. If you plan to be absent, discuss the absence with the instructor in advance. Do not be absent without permission for your own assigned lecture period – that gets you a zero.

9 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); 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**).

Office hours are posted on the 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.

10 About your Instructor: M. E. Kabay, PhD, CISSP-ISSMP

M. E. Kabay began teaching his high school classmates how to use the slide rule in 1963 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 and taught biology, statistics and programming as a university professor in Canada and overseas. In 1979, he joined a compiler team for a new 4GL and RDBMS in the U.S. and then joined Hewlett-Packard Canada in 1980 as an operating systems and database performance specialist, winning the *Systems Engineer of the Year Award* in 1982 and teaching primarily MPE operating system, IMAGE/3000 database and VPLUS/3000 GUI-design courses as well as serving as support engineer to HP's hospital and university customers and managing HP's 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) 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.

Since 1986 (and as of mid-2011), 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 (2013) 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.

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 and earned his *Information Systems Security Management Professional* (ISSMP) designation in November 2005.

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

From June 2001 to April 2011, Dr Kabay was Associate Professor of Information Assurance in the School of Business and Management from 2001 to 2011 and became Professor of Information Assurance and Statistics starting in May 2011. He was appointed Associate Director of the Norwich University Center for Advanced Computing and Digital Forensics in July 2009.

Dr Kabay also serves as Acting Chief Technical Officer of a high-tech startup, Adaptive Cyber Security Instruments, Inc.

