

## ***MIS 412 Administration of the Management Information Systems Function***

Instructor: Steve Creason  
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Text Book: None...there will be handouts in class, WatchIT, presentations, and cases that are available online.

Reading: Article and News Clips – Instructor supplied

Course Pre-Requisite: You must have completed the necessary Pre-Requisites to complete this course. IT IS YOUR RESPONSIBILITY TO DETERMINE AND COMPLETE THE PRE-REQUISITES.

### **Course Description**

This course emphasizes technical and strategic planning and organization frameworks necessary to successfully select, implement, staff and convert from past information systems. Other areas of study include the roles of executive and staff, administrative structures, outsourcing decisions, data custodianship and ownership, microcomputer impact, and the concept of a service organization.

Not only do business students need to understand how to manage the capabilities they need to know what role technology plays in cutting costs and revenue generation. It extends marketing capability, customer service responsibilities, supply chains and demand for real-time inventory. It puts stress on the financial resources, computer networks and technical personnel.

This course is targeted at students who are working business managers with a need to understand the impact of the new and emerging telecommunications services and how they can be harnessed to add value to business operations.

This course will cover a range of enterprise infrastructure applications and explore how those technologies are impacting the business enterprise. It will address corporate governance and the impact of various services on business operations. The course will also address the issue of creating mass customization for end users.

### **Competence Statement:**

Knows the fundamentals and basic constructs of enterprise infrastructure and the impacts on the business model of an organization.

**Learning Outcomes:** Successful completion of this course will provide knowledge of:

1. The wide range of enterprise infrastructure services and applications available.
2. Historical and legal development and future trends of technology.
3. Roles and responsibilities of technical and non-technical participants in Enterprise systems development and utilization.
4. Applications of information technology in business organizations and managerial decision making, and associated ethical and societal implications.
5. Emerging technologies that will change organizations and individual job responsibilities.
6. Matching the business model to technology

### Evaluations:

**Research Project:** The research project presents an opportunity for the students to work in groups to offer opinions and observations. The project will be assessed for content and quality of a paper and presentation. The research paper will be 8-10 pages in length. The **format** of the research paper will include a title page and table of contents (not included in the page count), a one page introduction, 1-2 page overview, 2 - 5 page discussion of the issue/topic, 1- 4 page conclusion and/or recommendation. Students must use the Metro State Style guide as appropriate to present a professional appearance for your paper. Proof reading by a human proofreader is essential! **Topics** must be submitted to the instructor for approval by the **fourth** class. Topic ideas could come from the essential terms at the end of each chapter in the text.

**Research sources** could include the sources at the end of each text chapter. At least two sources must be from the Internet. These should be identified by their URL or WWW address. Personal interview sources may be included. All sources reviewed during the research must be listed in the bibliography; sources from which ideas are used or quotations made must **also** be cited using foot or end notes. **Tutor help:** Metro State has **free** writing tutors to assist students in writing assignments. The Quarterly Schedule and Student Services office will provide tutor schedules and location.

**Examinations:** The exams will be constructed with be: multiple choice, short answer, and true/false. The test material will be drawn from class, readings, lecture and the study questions at the end of each chapter. Students are responsible for all terms in every glossary of all the texts.

**Evaluation and Measurement Criteria:** Each student must complete all assignments satisfactorily and on time. (Any assignment may be turned in one week after the due date without penalty.) **Students may not opt out of assignments, and expect the other assignments to "average out" for a passing grade.** All written work must be done on a word processor, formatted, spell checked and proof read. All writing will be evaluated based on technical

content, quality of thought and analysis, and format quality. Spelling, punctuation, capitalization, etc. should be graduate level work. All papers must be done on white paper, stapled, page numbered, and have a title sheet listing student name, instructor name, class title and section, date, and assignment topic.

**Participation**

The participation grade is based upon comments and contributions made during class discussion.

A significant portion of the participation grade is based upon a student bringing current IT news events articles to class during the term and spending about two minutes describing the issue or event to the class. Approximately 10-15 minutes of each class will begin with a discussion of current events in IS.

Other factors which are important for the participation grade:

- Each student is expected to come to class prepared to discuss the content of the assigned readings and case for the week.
- Even though students must prepare written case analyses for only some of the cases used in the class, students must nevertheless come to every class sufficiently prepared to engage in a group discussion on the assigned week's topics and cases for each class.
- After completing the readings for the class, it is suggested that each student should have made a few notes for herself/himself on the relevance of the chapter material to the cases under discussion.
- Excellent contributions are defined as those that advance the group discussion forward and that utilize the material presented in the readings.
- Obviously, absence from class results in non-participation in class discussions, and can negatively affect the participation grade.

<b>Evaluation weights:</b>		Grades will be awarded as follows:	
Exam 1	20%	“A”	90% -
Final	20%	100%	
Group project		“B”	80% -
And presentation	50%	90%	
Class participation	10%		
participation in classroom discussions)			(Attendance and active)

***Class Schedule***

Date	In Class	Next Week	Assignments Due
May 8	Class Overview  Discussion Issues and Trends Business Capabilities	Readings,  Class Handout  <a href="http://www.baselinemag.com/c/a/IT-Management/Top-10-Trends-in-IT-for-2009/">http://www.baselinemag.com/c/a/IT-Management/Top-10-Trends-in-IT-for-2009/</a>	
<b>May 15</b>	The future of IT	<a href="http://video.techrepublic.com/2422-14074_11-363756.html">http://video.techrepublic.com/2422-14074_11-363756.html</a>	
	Competition ain't all its cracked up to be, or is it? McDonalds, Amazon, And other myths	Net Economy Presentation of business models	
May 22	Next generation of Networks MCommerce	Amazon Ebay	
May 29	MODE Service oriented architecture		
June 5	Corporate Governance ITIL, CoBit, ISO 9000 and others		
June 12	<b>Exam 1 Take home</b> <b>NO CLASS</b>		
June 19	Knowledge capital Legal Issues: Copyright, Patents, etc.		
June 26	Disruptive technologies, Is technology a commodity; Complex adaptive systems		
July 3	HAPPY FOURTH OF		

Date	In Class	Next Week	Assignments Due
JULY NO CLASS			
July 10	International Business: IT Issues and Outsourcing issues		
July 17	Metrics how do I know I am doing well	TCO, ROI, <a href="http://www.compaid.com/default.aspx?pageid=194">http://www.compaid.com/default.aspx?pageid=194</a>	
July 24	Does it really change how we do business and will it affect the norms;	Wireless and Emerging technologies Research all you can for class discussion.  <a href="http://www.bus.iastate.edu/mennecke/server/Commerce.htm">http://www.bus.iastate.edu/mennecke/server/Commerce.htm</a>	
July 31	Human Resources: Issues and Trends More legal different issues	Why is the law so stubborn? Problems of legal v technical regulation	
Aug 7	Presentations	Presentations	
Aug 14		Final	

### MIS Undergraduate Curriculum: General Class Policies

This document sets forth the policies for all MIS undergraduate courses taught in the College of Management of Metropolitan State University. It also sets forth mutual expectations for the students and instructor, as well as a general list of relevant University support resources for students. However, your course section instructor may elect to add course specific policies.

## **Academic Honesty Policy**

You are expected to submit your own original work for all assignments. When making use of others' words or ideas, you must give proper credit through the use of quotations and attributions. Failure to do so constitutes plagiarism. The Metro State Student Handbook policies on academic honesty apply in this course.

Plagiarism will be grounds for failure in this course and may lead to expulsion from the University. You are urged to consult the Student Handbook in full (<http://www.metrostate.edu/handbook/index.html>) and to refer to William Coyle's Research Papers, Fourth Edition, available at the bookstore, for further details.

## **Disability Policy**

If you have a documented learning disability, or if you suspect you have a learning disability which may impact your opportunity to succeed in this course, contact the instructor before the second week of the semester so he or she can join you in exploring possible ways to reasonably accommodate your learning style. All accommodations have to be arranged through the Disability and Special Services office (651 793-1540).

## **Student Responsibilities:**

1. As of last year, the IT department of the University began providing many services such as E-mail, grade-checking, network file storage and off-campus access to Library database services through a new intranet portal called NetDirect. The IT department provides assistance to students in gaining access to these services. All students who take an MIS course must have NetDirect access. Students must and take the initiative to access NetDirect and familiarize themselves with the new services. For more details, please see: <http://www.metrostate.edu/it/studentssupport.html>
2. All students are expected to check their NetDirect e-mail accounts every 2 days. Even if the course section instructor specifies that: (a) the enrolled students should use D2L private discussion forums (or internal D2L course e-mail, coming in Jan 2005) to communicate with the instructor and; (b) students should not use NetDirect e-mail for internal course-related electronic communications to the instructor, it is nevertheless the policy of the MIS curriculum unit that all students taking MIS courses in the College of Management **MUST CHECK THEIR NetDirect E-mail once every 2 days.** The reason for this is simple: The College of Management and the MIS curriculum unit will increasingly be utilizing NetDirect to post messages and bulletins to all enrolled students.
3. Students are responsible for mastery of pre-requisite knowledge for the course in which they are enrolled. For example, in the case of MIS

310, this means that the student has successfully completed the requirement of the MIS 100 course, "Fundamentals of Information Technology in Organizations" or its equivalent. In the case of other MIS courses, this means the student has completed whatever prerequisites have been specified in MIS major flowchart (for a copy of this, please see <http://www.metrostate.edu/com/advising/majors.html> ).

4. Students are responsible for understanding all the information in the syllabus and all due dates. Since the instructor may alter due dates during the semester, students are responsible for keeping up with all communications from the instructor, whether they are made electronically or conveyed by the instructor in class.

5. All MIS courses are either web-supported, web-enhanced (reduced seat time with online support) or purely online. In any event, the complete content of the Desire-to-Learn (D2L) course site (or the instructor-specified web site) for your section is considered to be the course syllabus that the student is expected to understand and be aware of, in addition to (a) all internal course e-mail that the instructor sends to the class & (b) all postings by the instructor to the course discussion boards.

6. Students are responsible for completing assignments on their own. Recognition is given for consultation with experts and the assistance of writing tutors; however, each student must be the sole author of written work assignments, unless otherwise specified by the instructor in the course syllabus.

7. Students should have, or be prepared to develop, skills in giving an oral presentation on a system or topic that they have researched, since this may be a component of the course. The ability to present findings orally from a study, requirements of a systems request, or progress of an activity to one's colleagues or to management is an on-going need in the business and public sector world.

8. All assignments must be completed to receive course credit. Students must submit required work on time. Moreover, it is essential that students maintain copies (electronic if possible) of all work that they submit. In NetDirect, any work submitted by the student via e-mail will produce an automatic record in the OUTBOX. Students are encouraged NOT to delete messages from this OUTBOX. Likewise, if an instructor specifies that he/she should receive assignments as attachments to internal D2L course site e-mail or discussion forum messages, then that is the way that the student should submit all work.

9. The student must come to class having read all the assigned readings (chapters, cases, special readings, etc.) for the week and having read and thought about any questions or issues posed by the instructor.

10. The instructor expects all students to attend each and every class. Class participation is a must - so if the student is not in class there is no way this cannot affect the student's grade. If for some reason, the student cannot make it to a class, there is a minimal generic expectation that, as an elementary courtesy, an e-mail ought to be sent by the instructor PRIOR to the class explaining (a) the reason for the absence and (b) how the student intends to catch up on the class work. Simple sending an e-

mail to the instructor after the absence asking for the instructor to update you on the missed class or assignments is quite insufficient.

11. All students are expected to attend all class sessions, including the first session. Students who have missed the first class session will be admitted to class subsequently only with the approval of the course section instructor.

12. The student must have access to a computer with an internet connection that has reasonable bandwidth for the internet browser. This can be in the computer labs of the University or even in your local public library.

13. The MIS curriculum is very writing intensive, so students should have reasonably good writing skills, including the ability to write an undergraduate level paper with some independent research utilizing appropriate library resources. Free writing tutors are available at Metro State, and students are responsible for seeking assistance. Call 651-793-1460 to make an appointment. An instructor may elect to specify that any student (or all students) enrolled in a course section must seek the assistance of the writing center before or after submission of any course assignment.

14. Each student must complete the Student Information Sheet (S.I.S.) that they will receive in the first class and return it to the instructor at the end of the first class. This is to help the instructor maintain contact with the student, if necessary even by telephone. Please indicate any calling restrictions on the sheet. Given the extent of D2L supported classes, this S.I.S. may be accomplished by the instructor through the use of an online survey. Regardless of whether this survey is released to the students in class or outside regular class sessions, the student is expected to complete this survey.

15. University closings – Occasional weather or adverse events may result in the sudden closure of all or part of the University campuses. In such an event, the university will notify students in advance via a notice on the University homepage, NetDirect e-mail to the university community, an notification of WCCO-AM radio (830 AM). Students are highly encouraged to check these information sources before coming to campus.

16. The student must have knowledge of how to use the following software/technology resources. If you are not comfortable with these skills, consider enrolling in a workshop to acquire or upgrade the skills.

A. Word processing software - How to insert page numbers, headers & footers, how to set appropriate and required margins, how to set text alignment, how to change font sizes and styles, etc.

B. Presentation software (e.g. MS Power Point) - Needed so that the student can prepare the slides for the Final project presentation.

C. E-mail - To open and read messages in the NetDirect portal (at least once every 2 days), to attach word processed files to e-mail messages when necessary, to use an updated virus checker on all attachments and files prior to sending them off or uploading them to a server.

D. WWW browser - The student must know not only how to use construct search terms and use online search engines, but also how to find and access full text articles from Metro State's library services/online.

E. D2L & NetDirect – The student is responsible for familiarity with access to and utilization of all resources provided via the NetDirect portal or the D2L instructional management platform, as specified above.

### **Instructor's Responsibilities:**

1. The instructor will respond in a timely manner with written feedback and a grade to all submitted work by students, usually by the next class meeting (although sometimes by the succeeding {i.e. 2<sup>nd</sup> subsequent} class).
2. The instructor will respond to e-mail messages within 72 hours, unless on a weekend or if an absence is indicated by the instructor via broadcast e-mail. The instructor will respond to phone messages within 1 week's time.
3. The instructor will specify to the class how he or she will receive e-mail from students. This may be via his or her NetDirect account, via private discussion forums on the D2L course site or via D2L course-specific e-mail (coming in January 2005). The instructor is responsible for replying to student e-mail within 72 hours (see prior note) only via the specified e-mail channel.

For example, if an instructor indicates that students should only send course-related e-mail messages via private discussion forums on D2L, then he/she does not have to reply to student e-mails sent via NetDirect. Nevertheless the instructor still has the same obligation as the student to check NetDirect e-mail on a regular basis. This may seem a bit complicated but it is a result of the unfortunate temporary lack of direct course-specific internal e-mail within D2L in the academic year 2004-2005. As this problem is rectified, it is anticipated that this situation will become clearer in future years.

4. The instructor will return assignments or papers via mail if requested by the student and if the student supplies a self-addressed & stamped envelopes. The instructor is not responsible for insufficient postage on student envelopes.
5. The instructor will treat all students fairly and with respect. All students are treated equitably, and all students have equal access to the same resources of the university.
6. In the unlikely event that the instructor is unable to attend class and unable to get a substitute, the instructor will attempt to notify students by e-mail prior to the start of class.
7. The instructor will maintain a grade book that provides a detailed (assignment by assignment, deliverable by deliverable) record of the

grades that the student has received. The total of these grades, according to the weighting of course deliverables designed by the instructor in the course syllabus will provide an audit trail for the calculation of the student's grade. At the end of the semester, the student is entitled to ask the instructor for a copy of this audit trail of assignment/deliverable grades. If the course is D2L-supported, the instructor can satisfy this request through direct release of the appropriate components of the student's grade record to them online.

### **Support Resources:**

- **Library Services** conducts free workshops for on-line searching and article finding. Many of the on-line services require the use of passwords (unless accessed while on campus). Call library services at 651-793-1616/612-659-7216 or check the Metro State home page for library information ([www.metrostate.edu](http://www.metrostate.edu)).
- **Information Technology Learning Services**, based out of the computer centers in the St. Paul campus (with satellite desks in the Midway and Minneapolis campuses), can provide many ways to help train you and to assist you in software usage. You can reach the IT DESK at 651-793-1240 or by e-mail at [itdesk@metrostate.edu](mailto:itdesk@metrostate.edu) (<http://www.metrostate.edu/it/studentsupport.html>).
- **Writing Services:** There are writing centers in each of the 3 main university campuses. Staff at these writing centers are well versed in helping with all sort so writing problems, including those whose native is other than English. Call 651-793-1460 to make an appointment. (<http://www.metrostate.edu/writingcenter/>)
- **Career Services:** Metro State provides excellent FREE career services and preparatory workshops for all students regardless of how close you are to graduation. Check them out at: <http://www.metrostate.edu/career/> , and watch for announcements in the *Catalyst*. This office can also put you in touch with the alumni network of graduates who are happy to do an information interview with students. It also sponsors a job posting board on the web site.
- **Student Counseling Services:** If you would like to work with a free, private, personal counselor on time/stress management skills, test anxiety, public speaking anxiety, grief/loss, conflict resolution or any personal issues, take advantage of the Metro State Student Counseling Services. To make an appointment, call 651-793-1558. It is totally confidential. (<http://www.metrostate.edu/counsel/>)

Student Information sheet

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Internet Address: \_\_\_\_\_

Phone Numbers

Work: \_\_\_\_\_

Home: \_\_\_\_\_

Fax: \_\_\_\_\_

**Software Experience:**

(# of yrs experience in blanks)

MS-Word \_\_\_\_\_

MS-Excel \_\_\_\_\_

MS-Access \_\_\_\_\_

MS-PowerPoint \_\_\_\_\_

Major: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

When do you plan on graduating? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# **MIS 450 MIS Auditing and Security Controls**

SPRING 2009

Instructor: Ted Wallerstedt  
Telephone: 651-353-9978 (Cell)  
Email (**the preferred method of contact**) [theodore.wallerstedt@metrostate.edu](mailto:theodore.wallerstedt@metrostate.edu)

Text Book: IT Auditing Using Controls to Protect Information Assets, by Davis, Schiller and Wheeler, published by McGraw-Hill, Osborne ISBN: 0072263431, ISBN-13: 9780072263435 (2006)

Reading: Articles, Cases and News Clips; there will be a fair amount of outside reading for this class.

Course Pre-Requisite: You must have completed the necessary Pre-Requisites to complete this course. **IT IS YOUR RESPONSIBILITY TO DETERMINE AND COMPLETE THE PRE-REQUISITES.**

This course is designed to be an introduction to MIS Auditing and Controls. The primary focus of the course will be on regulatory and technical assessments of the technological infrastructure. The target audience is mainly undergraduate students in their junior or senior year of study seeking a degree in Information Assurance. This class will consist of lectures, articles, case readings and material from the text book.

## **Learning Objectives**

Successful completion of this course will provide knowledge of:

1. The wide range of strategic and governance models for IT.
2. Historical development and future trends of IT governance.
3. Roles and responsibilities of technical and non-technical participants in Enterprise systems auditing, security and governance.
4. Applications of information technology in business organizations and managerial decision making, and associated ethical and societal implications.
5. Emerging technologies that will change organizations and individual job responsibilities.

The testing mechanism to meet the objective will come in two forms.

1. Short answer essay exams on topics covered by readings.
2. A class project culminating in a research paper with a presentation on a topic pertaining to a topic presented in the class.

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## **Course Description**

Corporate governance is a broad and important topic that matters a lot to managers, directors, accountants and auditors, shareholders, regulators and society as a whole. Serious students of corporate governance must know the law, economics, finance, accounting and auditing, sociology, psychology and political science. This course takes a look at corporate governance from the position of auditing your IT infrastructures. The course includes auditing entities, software, operating systems and networks. It ends with auditing projects and risk management.

## **Evaluations:**

**Research Project:** The research project presents an opportunity for the students to work in groups to offer opinions and observations. The project will be assessed for content and quality of a paper and presentation. The research paper should be a minimum of 10 pages in length.

The **format** of the research paper will include a title page and table of contents (not included in the page count), a one page introduction, 1-2 page overview, 2 - 5 page discussion of the issue/topic, 1- 4 page conclusion and/or recommendation. Students must use the Metro State Style guide as appropriate to present a professional appearance for your paper. Proof reading by a human proofreader is essential!

**Topics** must be submitted to the instructor for approval by the **fifth** class.

**Research sources** could include the textbook. At least two sources must be from the Internet. These should be identified by their URL or WWW address. Personal interview sources may be included. All sources reviewed during the research must be listed in the bibliography; sources from which ideas are used or quotations made must **also** be cited using foot or end notes. **Tutor help:** Metro State has **free** writing tutors to assist students in writing assignments. The Quarterly Schedule and Student Services office will provide tutor schedules and location.

**Examinations:** The exams may be constructed with be short answer, true/false, or multiple choice questions. The test material will be drawn from class, readings, and lecture materials. Students are responsible for all terms in all the texts and materials presented.

**Evaluation and Measurement Criteria:** Each student must complete all assignments satisfactorily and on time. **Students may not opt out of assignments, and expect the other assignments to "average out" for a passing grade.** All written work must be done on a word processor, formatted, spell checked and proof read. All writing will be evaluated based on technical content, quality of thought and analysis, and format quality. Spelling, punctuation, capitalization, etc. should be graduate level work. All

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papers must be submitted electronically, page numbered, and have a title sheet listing student name, instructor name, class title and section, date, and assignment topic.

### **Evaluation weights:**

Midterm	20%
Final	30%
Group project/presentation	40%
Class participation (Attendance/active participation)	10%

### **Grades will be awarded as follows:**

“A”	92% - 100%
“A-”	90% - 91%
“B+”	88% - 89%
“B”	82% - 87%
“B-”	80% - 81%
“C+”	78% - 79%
“C”	72% - 77%
“C-”	70% - 71%
“D+”	68% - 69%
“D”	62% - 67%
“D-”	60% - 71%
“F”	59% or less

### **Class Schedule**

Date	In Class	Readings For Next Week	Assignments Due
January 15, 2009	Class Overview	Chapter 1, 2	
January 22, 2009	Audit process and Function	Chapter 3	
January 29, 2009	Entity Level Controls	Chapter 4	Groups Chosen
February 5, 2009	Business Continuity	Chapter 5	Topic Chosen
February 12, 2009	Network Controls	Chapter 6	
February 19, 2009	Windows	Chapter 7	
February 26, 2009	Unix and Linux	Midterm Exam Ch 1-7	
March 5, 2009	Virtual Class - Midterm Exam		Midterm Exam Ch 1-7
March 12, 2009	Spring Break	Chapter 8, 9	
March 19, 2009	Webservers, Databases	Chapter 10	Draft of Paper
March 26, 2009	Application Controls	Chapter 11	
April 2, 2009	WLAN & Mobile Devices	Chapter 12	
April 9, 2009	Project Process	Chapter 13	Final Paper, Presentation 1
April 16, 2009	COBIT, ITIL, ISO and other frameworks	Chapter 14, 15	Presentation 2
April 23, 2009	Regulations & Risk Management	Final Exam Ch 1-15	Presentation 3
April 30, 2009	Virtual Class - Final Exam	N/A	Final Exam Ch 1-15

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## **MIS Undergraduate Curriculum: General Class Policies**

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Plagiarism will be grounds for failure in this course and may lead to expulsion from the University. You are urged to consult the Student Handbook in full

(<http://www.metrostate.edu/handbook/index.html>) and to refer to William Coyle's Research Papers, Fourth Edition, available at the bookstore, for further details.

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2. All students are expected to check their NetDirect e-mail accounts every 2 days. Even if the course section instructor specifies that: (a) the enrolled students should use D2L private discussion forums (or internal D2L course e-mail, coming

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in Jan 2005) to communicate with the instructor and; (b) students should not use NetDirect e-mail for internal course-related electronic communications to the instructor, it is nevertheless the policy of the MIS curriculum unit that all students taking MIS courses in the College of Management **MUST CHECK THEIR NetDirect E-mail once every 2 days**. The reason for this is simple: The College of Management and the MIS curriculum unit will increasingly be utilizing NetDirect to post messages and bulletins to all enrolled students.

3. Students are responsible for mastery of pre-requisite knowledge for the course in which they are enrolled. For example, in the case of MIS 310, this means that the student has successfully completed the requirement of the MIS 100 course, “Fundamentals of Information Technology in Organizations” or its equivalent. In the case of other MIS courses, this means the student has completed whatever prerequisites have been specified in MIS major flowchart (for a copy of this, please see

<http://www.metrostate.edu/com/advising/majors.html> ).

4. Students are responsible for understanding all the information in the syllabus and all due dates. Since the instructor may alter due dates during the semester, students are responsible for keeping up with all communications from the instructor, whether they are made electronically or conveyed by the instructor in class.

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9. The student must come to class having read all the assigned readings (chapters, cases, special readings, etc.) for the week and having read and thought about any questions or issues posed by the instructor.
10. The instructor expects all students to attend each and every class. Class participation is a must - so if the student is not in class there is no way this cannot affect the student's grade. If for some reason, the student cannot make it to a class, there is a minimal generic expectation that, as an elementary courtesy, an e-mail ought to be sent by the instructor PRIOR to the class explaining (a) the reason for the absence and (b) how the student intends to catch up on the class work. Simple sending an e-mail to the instructor after the absence asking for the instructor to update you on the missed class or assignments is quite insufficient.
11. All students are expected to attend all class sessions, including the first session. Students who have missed the first class session will be admitted to class subsequently only with the approval of the course section instructor.
12. The student must have access to a computer with an internet connection that has reasonable bandwidth for the internet browser. This can be in the computer labs of the University or even in your local public library.
13. The MIS curriculum is very writing intensive, so students should have reasonably good writing skills, including the ability to write an undergraduate level paper with some independent research utilizing appropriate library resources. Free writing tutors are available at Metro State, and students are responsible for seeking assistance. Call 651-793-1460 to make an appointment. An instructor may elect to specify that any student (or all students) enrolled in a course section must seek the assistance of the writing center before or after submission of any course assignment.
14. Each student must complete the Student Information Sheet (S.I.S.) that they will receive in the first class and return it to the instructor at the end of the first class. This is to help the instructor maintain contact with the student, if necessary even by telephone. Please indicate any calling restrictions on the sheet. Given the extent of D2L supported classes, this S.I.S. may be accomplished by the instructor through the use of an online survey. Regardless of whether this survey is released to the students in class or outside regular class sessions, the student is expected to complete this survey.
15. University closings – Occasional weather or adverse events may result in the sudden closure of all or part of the University campuses. In such an event, the university will notify students in advance via a notice on the University homepage, NetDirect e-mail to the university community, an notification of WCCO-AM radio (830 AM). Students are highly encouraged to check these information sources before coming to campus.
16. The student must have knowledge of how to use the following software/technology resources. If you are not comfortable with these skills, consider enrolling in a workshop to acquire or upgrade the skills.
  - A. Word processing software - How to insert page numbers, headers & footers, how to set appropriate and required margins, how to set text alignment, how to change font sizes and styles, etc.

## **MIS 450 MIS Auditing and Security Controls**

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- B. Presentation software (e.g. MS Power Point) - Needed so that the student can prepare the slides for the Final project presentation.
- C. E-mail - To open and read messages in the NetDirect portal (at least once every 2 days), to attach word processed files to e-mail messages when necessary, to use an updated virus checker on all attachments and files prior to sending them off or uploading them to a server.
- D. WWW browser - The student must know not only how to use construct search terms and use online search engines, but also how to find and access full text articles from Metro State's library services/online.
- E. D2L & NetDirect – The student is responsible for familiarity with access to and utilization of all resources provided via the NetDirect portal or the D2L instructional management platform, as specified above.

### **Instructor's Responsibilities:**

1. The instructor will respond in a timely manner with written feedback and a grade to all submitted work by students, usually by the next class meeting (although sometimes by the succeeding class).
2. The instructor will respond to e-mail messages within 72 hours, unless on a weekend or if an absence is indicated by the instructor via broadcast e-mail. The instructor will respond to phone messages within 1 week's time.
3. The instructor will specify to the class how he or she will receive e-mail from students. This may be via his or her NetDirect account, via private discussion forums on the D2L course site or via D2L course-specific e-mail (coming in January 2005). The instructor is responsible for replying to student e-mail within 72 hours (see prior note) only via the specified e-mail channel.

For example, if an instructor indicates that students should only send course-related e-mail messages via private discussion forums on D2L, then he/she does not have to reply to student e-mails sent via NetDirect. Nevertheless the instructor still has the same obligation as the student to check NetDirect e-mail on a regular basis. This may seem a bit complicated but it is a result of the unfortunate temporary lack of direct course-specific internal e-mail within D2L in the academic year 2004-2005. As this problem is rectified, it is anticipated that this situation will become clearer in future years.

4. The instructor will return assignments or papers via mail if requested by the student and if the student supplies a self-addressed & stamped envelopes. The instructor is not responsible for insufficient postage on student envelopes.
5. The instructor will treat all students fairly and with respect. All students are treated equitably, and all students have equal access to the same resources of the university.
6. In the unlikely event that the instructor is unable to attend class and unable to get a substitute, the instructor will attempt to notify students by e-mail prior to the start of class.

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7. The instructor will maintain a grade book that provides a detailed (assignment by assignment, deliverable by deliverable) record of the grades that the student has received. The total of these grades, according to the weighting of course deliverables designed by the instructor in the course syllabus will provide an audit trail for the calculation of the student's grade. At the end of the semester, the student is entitled to ask the instructor for a copy of this audit trail of assignment/deliverable grades. If the course is D2L-supported, the instructor can satisfy this request through direct release of the appropriate components of the student's grade record to them online.

### **Support Resources:**

- **Library Services** conducts free workshops for on-line searching and article finding. Many of the on-line services require the use of passwords (unless accessed while on campus). Call library services at 651-793-1616/612-659-7216 or check the Metro State home page for library information ([www.metrostate.edu](http://www.metrostate.edu)).
- **Information Technology Learning Services**, based out of the computer centers in the St. Paul campus (with satellite desks in the Midway and Minneapolis campuses), can provide many ways to help train you and to assist you in software usage. You can reach the IT DESK at 651-793-1240 or by e-mail at [itdesk@metrostate.edu](mailto:itdesk@metrostate.edu) (<http://www.metrostate.edu/it/studentsupport.html>).
- **Writing Services:** There are writing centers in each of the 3 main university campuses. Staff at these writing centers are well versed in helping with all sort so writing problems, including those whose native is other than English. Call 651-793-1460 to make an appointment. (<http://www.metrostate.edu/writingcenter/>)
- **Career Services:** Metro State provides excellent FREE career services and preparatory workshops for all students regardless of how close you are to graduation. Check them out at: <http://www.metrostate.edu/career/> , and watch for announcements in the *Catalyst*. This office can also put you in touch with the alumni network of graduates who are happy to do an information interview with students. It also sponsors a job posting board on the web site.
- **Student Counseling Services:** If you would like to work with a free, private, personal counselor on time/stress management skills, test anxiety, public speaking anxiety, grief/loss, conflict resolution or any personal issues, take advantage of the Metro State Student Counseling Services. To make an appointment, call 651-793-1558. It is totally confidential. (<http://www.metrostate.edu/counsel/>)

MIS 462-01

Spring 2009

Course

**Distributed System Design and Management**

Instructor: Steve Creason

Telephone: 612-659-7289 (email is the preferred method of contact.)

Email: steve.creason@metrostate.edu

Text Book: None

Reading: Article and News Clips as needed

Web references on this syllabus

Downloads for Distributed Computing

**Topic Presentation List** You will need sign up for two case studies as soon as possible. Each student must do two case studies during the course. This involves doing research on each issue, preparing a set of PowerPoint slides on the issue, providing those slides in the discussion group or an email by the deadline date so they can be made them available to everyone, and leading a discussion on that topic in D2L based on the PowerPoint slides. You will be graded on your presentation (50 for slides plus 150 for leading the discussion). The other students will be graded on significant questions or significant comments on the topic (10 points per topic, up to 200 points).

ASSIGNMENTS

Web References

Distributed Methods

Distributed Computing

Sockets and Ports

Firewalls

Distributed Processing

Stack Frame

Marshalling

Middleware

Security

Distributed File Systems

Name Services

Timing and Synchronization

Election and Multicasting

Transactions

Replication

Multimedia

Distributed Memory

Network Management

Network Management Basics

Service Oriented Architecture

Mobile Technologies

Virtualization

Grid Computing

**COURSE DESCRIPTION:** Managers need to know how to manage the diverse distributed computing environments in which they work, and leverage the opportunities these architectures provide. Integration of data and users, graphics and telephony are illustrated through emphases on client/server and N-Tier architectures, Internet, intranet/extranet, and groupware and other technologies. This course reviews state-of-the-art technologies in each of the basic software and hardware arenas, while emphasizing management models and higher-level analysis, including the relationship with general database strategy and data warehousing. Practical projects are assigned, giving students real-world opportunities to use the tools to enhance their work and build productivity. Theory and models are taught with a management perspective as opposed to platform-specific training. Participants are asked to complete computer lab assignments, a written needs assessment, a comprehensive and applied class project, and final exam.

**PREREQUISIT:** MIS 600 Management Information Systems or equivalent with instructor's consent.

**COMPETENCE STATEMENT:** Knows the basic principles of distributed computing, the process of systems development and structured methodologies to accomplish these tasks, and understands the system life cycle. Can perform the functions required to accomplish these tasks at least at an introductory level.

**LEARNING STRATEGIES:**

- a. Reading Assigned and Web Related.
- b. Research and Analysis Oral Presentations, Research Paper.
- c. Writing Case Studies, Research Paper, Midterm, and Final

- d. Speaking Class Presentation and Class Discussion.

**EVALUATION:** Research paper, topic presentation, homework, class participation.

**LEARNING OUTCOMES:** After successful completion of this course, you should have achieved competence in the subject matter and be able to:

- a. Describe the concept of a distributed system.
- b. Understand the issues unique to a distributed architecture.
- c. Discuss trends in systems architecture.
- d. Describe and understand the standard systems architectures.
- e. Discuss system feasibility and cost/benefit techniques.

**COURSE APPROACH:** This course is an introduction to and a survey of many topics of concern to information professionals working on distributed applications. Some of the topics are addressed at more length in other I&CS course offerings. Classes will consist of short student presentations on technical subjects, lectures, case studies, and discussion topics covering the subject matter. Active class participation is mandatory. Because strong communications skills are important to IS professionals, each student will participate in a group project where each student will prepare a short topic to present to the class related to the group paper.

**ON-LINE D2L CLASS AVAILABLE:** :

### **MIS 662-01 Management of Distributed Computing**

**MEASUREMENT CRITERIA:** Weighting factors as percent of final grade.

**Note:** Every student can achieve outstanding competence (A).

a. Examination 2 .....	200
b. Research project paper and abstract.....	200
Summary .....	50
Final Written Form.....	150
c. Topic Presentations (2 at 200).....	400
Leading Discussion (2 at 150).....	300
Hand in slides (2 at 50).....	100
g. Discussion Participation.....	200
Total .....	1000

**RESEARCH PAPER:** All written assignments must be typed, double-spaced and proofread. All papers must be stapled, not paper clipped together. Pages should be numbered and every paper should have a cover sheet indicating title, instructor name, date, and course section. Handwritten work is not acceptable. Word processing software and printers are available in Metro States Computer Labs.

The research paper will have five sections. The student will seamlessly integrate all five sections for the final paper. The format of the paper should be as follows:

Section 1: Executive Summary (Abstract style)

Section 2: Technology Description.

Section 3: Technology Analysis

This section is a three to four page section which will be the students subjective analysis of the technology being analyzed. This is a highly subjective section and should incorporate principles learned during the course and in the reading. The goal of this section is to identify best practices.

Section 4: Summary of Findings and Recommendations

Section 5: Bibliography and References (including web references)

The final paper includes all sections, revised to provide a seamless total report written in past tense, with the Executive Summary as the first page of the report. The writing style should be that of a report done by a business consultant to client management. Typographical errors, misspellings, or poor grammar are not acceptable in a business situation and are not acceptable in you paper.

**RESEARCH SOURCES:** should include web references (no WIKIs please). Be sure to identify all sources in any homework assignment. Web sources should be identified by their URL (or WWW address) and the title of the web site. Include sources of information from personal interview sources by indicating the name, title, and company that the person represents. All sources reviewed during the research must be listed in the bibliography. Sources from which specific ideas are used or quotations made must **also** be cited using foot or end notes.

**HOMEWORK AND EXAMINATIONS:** The homework exams will described as we come to them. The test material will be drawn from class, readings, lecture and the master case study used in class. Students are responsible for all terms used in the readings.

**Schedule**

Module	In Class	Readings	Discussions
1 Jan 14	Introduction, syllabus review, course objectives, class procedures, and discussion of class assignments.	Case material introduction	
2 Jan 21	Distributed systems, system architecture, and standard architectures, <b>choose cases.</b>	MODE Framework <a href="#">N-Tiered Architecture</a>	Network, N-Tier distribution of systems

3 Jan 28	Inter-process communication RPC Sockets and Ports Serialization Marshalling	Systems communication issues  <a href="#">RPC</a>  <a href="#">RMI</a>	RPC, RMI, sockets and ports
4 Feb 4	Distributed objects Proxies	FCAPS, SNMP and CMIP	Discussion of Distributed Management Issues
5 Feb 11	Operating system layers, Security	<a href="#">Middleware</a>  <a href="#">Sockets</a>  <a href="#">Ports</a>  <a href="#">Firewalls</a>	
6 Feb 18	Distributed file systems and name services	<a href="#">NFS</a> , <a href="#">AFS</a> , <a href="#">DNS</a>	
7 Feb 25	Time and state	<a href="#">Chandy and Lamport</a>	
8 Mar 4	Coordination, agreement, and transactions	<a href="#">Distributed Mutual Exclusion</a>  <a href="#">Election</a>	Exam 1. TNA
March 11	SPRING BREAK		
9 Mar 18	Distributed transactions	<a href="#">.NET Transactions</a>  <a href="#">Concurrency</a>  <a href="#">Two Phase Commit</a>	
10 Mar 25	Replication	<a href="#">Replication and Consistency</a>	
11 Apr 1	Events and Notification	<a href="#">Multimedia</a>  <a href="#">Fundamentals of DSM</a>	
12 Apr 8	Communications Models		
13 Apr 15	Global Impacts of Distributed Systems		
14 Apr 21		Presentations	

15 Apr 29	<b><u>Research Paper Due</u></b>		Final Exam
	<b>Final Completed</b>		
	<b>ALL ASSIGNMENTS</b>		
	<b>DUE BY April 29</b>		

**CASE STUDIES:** Look at the possibilities for a case in this class. You will do two separate cases. We will negotiate who does the cases between the first two classes of the course. I will announce the cases by the end of the second class.

The Case studies PowerPoint slides must be attached to an email before the due date of that case so the entire class can have them available. Then that due date class the student presenter will lead a discussion on the subject. The other students are expected to comment or ask questions about the topic. Participation by all will be graded. The presenter should answer most of the questions. The teacher will intervene if I feel the question requires my comments.

Participation by other students is worth 10 points per case with a maximum of 200 points for this effort on all cases. Each case has a point total of 200 (50 for the slides themselves and 150 for leading the discussion) making the cases worth a total of 400.

Below is the case list that you need to choose from.

Case	Individual Names
1 Networks	
2 Wireless LAN	
3 Wireless Security	
4 UNIX	
5 Event and Fault Management	
6 Firewalls	
7 Security controls	
8 Communications	
9 Secure Sockets Layers	
10 Security – Layers	
11 Global Name Service	
12 Virtualization	
13 Global Distributed Issues	
14 CORBA Intro	
15 Grid Computing	
16 Service Oriented Architecture	
17 Mobile technologies	
18 Middleware	
19 Grid Computing	
20 Social Networking	
21 Others with Approval of Instructor	

# MIS 662-01

Fall 2007

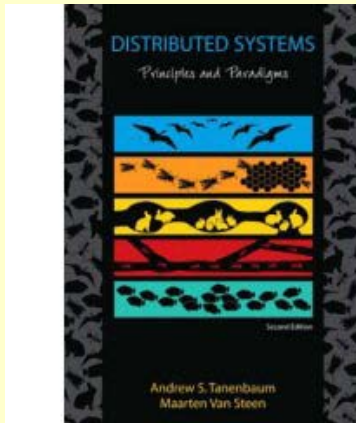
## Distributed System Design and Management

Instructor: Steve Creason

Telephone: 612-659-7289 (email is the preferred method of contact.)

Email: steve.creason@metrostate.edu

Text Book: **Distributed Systems Principles and Paradigms, Second Edition**, By Tanabaum and van Steen



Additional Reading: Article and News Clips as needed and Web references on this syllabus

**Case Studies List** You will need sign up for two case studies as soon as possible. Each student must do two case studies during the course. This involves doing research on each issue, preparing a set of PowerPoint slides on the issue, providing those slides by the deadline date so they can be made them available to everyone, and leading a discussion on that topic based on the PowerPoint slides.

You will be graded on your presentation (50 points for slides plus 150 points for leading the discussion). The other students will be graded on participation based on significant questions or significant comments on the topic (10 points per topic, up to 200 points). The instructor is the sole arbiter of what is "significant."

**COURSE DESCRIPTION:** Managers need to know how to manage the diverse distributed computing environments in which they work, and leverage the opportunities these architectures provide. Integration of data and users, graphics and telephony are illustrated through emphases on client/server and N-Tier architectures, Internet, intranet/extranet, and groupware and other technologies. This course reviews state-of-the-art technologies in each of the basic software and hardware arenas, while emphasizing management models and higher-level analysis, including the relationship with general database strategy and data warehousing. Practical projects are assigned, giving students real-world opportunities to use the tools to enhance their work and build productivity. Theory and models are taught with a management perspective as opposed to platform-specific training.

**PREREQUISITE:** MIS 600 Management Information Systems or equivalent with instructor's consent.

**COMPETENCE STATEMENT:** Knows the basic principles of distributed computing, the process of systems development and structured methodologies to accomplish these tasks, and understands the system life cycle. Can perform the functions required to accomplish these tasks at least at an introductory level.

**LEARNING STRATEGIES:**

- a. Reading Textbook and Web Related.
- b. Research and Analysis Oral Presentations, Research Paper.
- c. Writing Case Studies, Research Paper, Midterm, and Final
- d. Speaking Class Presentation and Class Discussion.
- e. Participation is expected and can be enhanced by bringing in articles on distributed environments to share with the class.

**EVALUATION:** Research paper, topic presentation, class participation.

**LEARNING OUTCOMES:** After successful completion of this course, you should have achieved competence in the subject matter and be able to:

- a. Describe the concept of a distributed system.
- b. Understand the issues unique to a distributed architecture.
- c. Discuss trends in systems architecture.
- d. Describe and understand the standard systems architectures.
- e. Discuss system feasibility and cost/benefit techniques.

**COURSE APPROACH:** This course is an introduction to and a survey of many topics of concern to information professionals working on distributed applications. This is a business course. Some of the topics are addressed in more technical depth in I&CS course offerings. Classes will consist of short student presentations on technical subjects, lectures, case studies, and discussion topics covering the subject matter. Active class participation is mandatory. Each student will participate in a group project where each student will prepare a short topic to present to the class related to the group paper.

**MEASUREMENT CRITERIA:** Weighting factors as percent of final grade.

**Note:** Every student can achieve outstanding competence (A).

- a. Final Examination..... 20%
- b. Research project paper and abstract..... 20%
- c. Case studies (2 at 200)..... 40%
- Leading Discussion (2 at 150).....300
- Hand in slides (2 at 50).....100
- d. Participation..... 20%

**RESEARCH PAPER:** All written assignments must be typed, double-spaced and proofread. All papers must be stapled, not paper clipped together. Pages should be numbered and every paper should have a cover sheet indicating title, instructor name, date, and course section. It is particularly important to number your pages if you hand in the paper by email. Handwritten work is not acceptable. Word processing software and printers are available in Metro States Computer Labs. Free introductory workshops on using the software are offered weekly. Check with the Academic Computer Labs for workshop scheduling. If you choose to not use the computer labs, make arrangements for other computer resources. All papers must conform to APA style. Writing style assistance is available from Metro State writing tutors. Check Student Services for their schedule.

The research paper will have five sections. The student will seamlessly integrate all five sections for the final paper. The format of the paper should be as follows:

Section 1: Executive Summary (Abstract style)

Section 2: Technology Description.

Section 3: Technology Analysis

This section is a three to four page section which will be the students subjective analysis of the technology being analyzed. This is a highly subjective section and should incorporate principles learned during the course and in the reading. The goal of this section is to identify best practices.

Section 4: Summary of Findings and Recommendations

Section 5: Bibliography and References (including web references)

The final paper includes all sections, revised to provide a seamless total report written in past tense, with the Executive Summary as the first page of the report. The writing style should be that of a report done by a business consultant to client management. **Typographical errors, misspellings, or poor grammar are not**

**acceptable in a business situation and are not acceptable in you paper and you will be graded accordingly.**

**RESEARCH SOURCES:** could include web references and the sources. Be sure to identify all sources in any homework assignment. Web sources should be identified by their URL (or WWW address) and the title of the web site. Include sources of information from personal interview sources by indicating the name, title, and company that the person represents. All sources reviewed during the research must be listed in the bibliography. Sources from which specific ideas are used or quotations made must **also** be cited using foot or end notes.

**EXAMINATIONS:** The exams will be drawn from class, readings, lecture and the study questions at the end of each chapter. Students are responsible for all terms in the glossary of the text.

**LEARNING DISABILITIES:** If you have a documented learning disability, or if you suspect you have a learning disability that may impact your opportunity to succeed in this course, let me know right away. We can explore possible ways to reasonably accommodate your learning style. All accommodations have to be arranged through the Disability and Special Services office (651 793-1540).

**ACADEMIC HONESTY:** You are expected to submit your own work for all assignments. When making use of others' words or ideas, you must give proper credit through the use of quotations and attributions. Failure to do so constitutes plagiarism. Plagiarism will be grounds for failure in this course. For more information on Metro State's academic honesty policies, follow the link to Metro State's Student Handbook (<http://www.metrostate.edu/studaff/context.htm#rights>).

**CASE STUDIES:** Look at the possibilities for a case in this class. You will do two separate cases. We will negotiate who does the cases between the first two classes of the course. I will announce the cases by the end of the second class.

The Case studies PowerPoint slides must be attached to an email before the due date of that case so the entire class can have them available. Then that due date class the student presenter will lead a discussion on the subject. The other students are expected to comment or ask questions about the topic. Participation by all will be graded. The presenter should answer most of the questions. The teacher will intervene if I feel the question requires my comments.

Participation by other students is worth 10 points per case with a maximum of 200 points for this effort on all cases. Each case has a point total of 200 (50 for the slides themselves and 150 for leading the discussion) making the cases worth a total of 400.

<b>Module</b>	<b>In Class</b>	<b>Readings for next week</b>	<b>Assignments Due</b>
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1 Aug 30	Introduction, syllabus review, course objectives, class procedures, and discussion of class assignments.	Chapters 1  Distributed what?	
2 Sept 6	Intro to Distributed systems, system architecture, ,	Chapter 2  The possibilities are Remote	Choose topics for presentations
3 Sept 13	Inter-process communication RPC Sockets and Ports Serialization Marshalling	Chapter 3  Nice Threads	Presentations
4 Sept 20	Clients/ Server, Code migration and Agents	Chapter 4 What's in a name?	Presentations
5 Sept 27	Entities	Chapter 5  Time and Jelly donuts	Presentations
6 Oct. 4	Synchronization, Clocks, States and exclusions	Chapter 6  Doing it over and over and over	Presentations
7 Oct 11	Consistency models and replication	Chapter 7  Dude it's not my fault	Presentations
8 Oct 18	Event and Fault and DR and Resilience	Chapter 8  Put up the walls and dig the mote	Presentations
9 Oct 25	Legal, ethical and technical approaches to security	Chapter 9  It's all Geek to me	Presentations
10 Nov 1	Distributed Standards	Chapter 10 File it	Presentations

Nov 8	Distributed file systems	Chapter 11 What is the web?	Presentations
11 Nov 15	Distributed documents	Chapter 12 How does it all work together	Presentations
12	<b>No Class</b>		
Nov 22	<b>Give Thanks</b>		
13 Nov 29	Coordination Models	SOA, SAN, NAS	Final handed out
14 Dec 6	New and emerging architectures....or are they	Nanotechnology and other problems you will encounter in the future	Presentations
15 Dec 13	<u>Things are getting smaller and larger</u>  <b>Research Paper Due</b>  <b>Final Completed</b>  <b>ALL ASSIGNMENT</b>  <b>DUE BY December 14</b>		

# **MIS 680-50: Introduction to Information Assurance Issues and Methods**

METROPOLITAN STATE UNIVERSITY

## **COURSE SYLLABUS**

### **Course Objective**

1. The objective of this course is to provide an introduction to information assurance (IA) and to explore a wide range of business services and how they are impacted by IA issues.
2. How to assess risks, develop a security policy for your operational integrity are learning outcomes for this course.
3. Roles and responsibilities of technical and non-technical participants in Enterprise systems development and utilization.
4. Applications of information technology in business organizations and managerial decision making, and associated ethical and societal implications.
5. Emerging technologies and the risks they pose to organizations.

Assessment will be based upon regular postings within the class discussion and two written exams. Students will also work in groups to solve technology problems using telecommunication technology. Students and groups will critique the work of other students and groups and be able to defend their critique. In addition to the thoughtful postings to class and group discussions a 6 10-page written report will be required..

### **Target Audience**

1. Graduate MBA and MMIS students in the college of Management.
2. Students pursuing a graduate certificate in Information assurance.
3. Students who can keep up with an almost daily demand of work.

### **Texts**

- Information Assurance for the Enterprise by Schou and Shoemake

### **Additional Reading:**

Article and News Clips. Instructor supplied

### **Measurement Criteria**

Weighting factors as percent of final grade. Every student can achieve outstanding competence.

1. Final Project..... 40%
2. Essay Exam.....30%
3. Class Participation... .....30%

Letter Grades are awarded as follows:

90 to 100.....	A
80 to 89.....	B
70 to 79.....	C
Below 70.....	F

## Evaluation

### 1. Class Participation

Each student can earn all participation points by participating in discussions weekly online. There will be research and evaluation activities that enhance students reading between lectures. The object for class discussion activities will be to enable student to practice critical thinking. Simply logging into the D2L portal looking at a discussion thread and posting “I agree”, or something similar is not participating. All students enrolled into a graduate program are expected to be able to demonstrate critical thinking. Thus, participation will be graded on the quality of a student’s postings. The instructor is the sole judge of what is and what is not a quality post.

### 2. Essay Exam Requirements:

There will be 5 to 10 questions per assignment to be answered by few paragraphs. References and citations are a must. The questions posed in the assignments are not intended to be a test of your memory. They are designed to encourage critical thinking about issues raised by available readings, class presentations, and discussions. Your answers are expected to reflect a familiarity with the literature. All assignments will be due at the end of the semester. There will be no extensions or “Incomplete” given except in rare and extreme cases, and only with prior approval of the instructor.

### Final Project (Can be done in group)

For the project, the student will should assume the role of consultant or corporate executive. The purpose of the project is to focus on developing the rationale and business case to take advantage of the many opportunities to strategically deploy, re-deploy, acquire, shrink-wrap - sell, create corporate information assurance assets. Information Assurance management in its various forms and roles is quickly becoming the framework of choice among leading edge companies, especially those with large investments in intangible information assets. For example, companies in the Internet market space are structuring their operations to take advantage of these technologies to focus on their core competencies and lines of business to ensure delivery of

superior products and services. This presents opportunities to develop new strategies that will take advantage of their corporate knowledge assets.

Your job is to develop an Information Assurance strategy for a company that your team selects and develop an IA assessment plan. You should cover, at a minimum, the areas of analysis suggested below. However, you will also want to develop insights of your own that will play a critical role in creating your assessment plan.

## **Points of Analysis**

1. Review the industry within which the company competes to identify risks.
2. Obtain the following benchmark financial data (please remember this is not a financial exercise) if available. This will allow you to determine the order of magnitude value of the potential areas for your assessment strategy in terms of its impact on gross revenues and cost savings from operations.
  - Market share
  - Cost for operations
  - Revenue per employee
  - Market value
  - Operating margins, cash-flow from operations
1. Do an analysis of the companies' operational performance to determine potential gaps security policy and practice. You may have to make a few phone calls and obtain corporate reports (from the EDGAR government database, your stock broker, 10Ks for the companies if they are publicly traded, corporate balance sheet, KVA analysis, interviews).
2. Determine the extent of the gaps, redundancies that will help target your assessment plan. Make sure to include an analysis of the value of the information collected and used in the information systems that support core processes such as sales/order fulfillment, billing, marketing, production.
3. Project the company's cost/benefit locally, nationally, and internationally as a result of your Information Assessment plan.
1. The report must be no more than 20 pages of content excluding cover page, table of contents, charts, graphs and bibliography.
2. The written report itself is worth 35% of the semester project grade.
3. The presentation is worth 5% of your semester project grade, so please take it seriously.

Your project grade will depend upon the thoroughness, depth, and creative insights of your analysis. You must assume that I will look at your report as if my company had paid you large sums of money to provide us with an assessment strategy that would have dramatic impact on the company bottom line. If the relationship between your strategy and its financial impact is unclear, you should work harder to clarify this relationship.

I suggest you start on this project as soon as you feel you have a good grasp of the concepts, frameworks, and language of Information Assurance.

I will be available online or via telephone to help you with this project because I am convinced that this project will help you take the first steps to becoming an expert in Information Assurance.

## **Final Project Report**

There will be several data sources that each team will use to investigate the firm and its information technology application:

- o Articles from general business periodicals
- o Articles from trade journals
- o Web sites
- o Contacts with inter-industry trade and support organizations, as well as contacts with professional organizations associated with the industry
- o Contacts/Interviews with staff at the firm. This is a particularly helpful source.

Structure for the final project:

- Cover-page with: (a) Name of students on the project team, (b) their e-mail addresses, and (c) the title of the firm that has been investigated
- 20 pages of content maximum with all sources footnoted excluding a full bibliography (2 - 3 pages) with all data sources identified and enumerated: articles, contacts/interviews, Web sites
- Double line-spaced!
- 12-point font!

## **Internet tools needed**

- Bulletin board or discussion board that is asynchronous and threaded.
- Email that is private within the course or that can be accessed from the course.
- Way to compile or gather together multiple postings or emails for a new file.
- Area for students and faculty (?) to exchange files.
- Group work area.
- Essay quiz options.
- Grading book (online)
- Way to reveal grades to students without violating privacy.
- Password protection for everything above.
- Calendar that students and faculty can use for announcements or event dates.
- Way to make announcements to students.
- Way to give them the syllabus online
- Accessible formatting and interface for everything done online.
- Way to organize materials, handouts, unexpected items to be included later.
- Ability to put in picture and possible voice recording of faculty for personal touch.

# Schedule Summer 2007

Module	Assignment for Discussion	Topics and Readings	Assignment Due
1	Syllabus review, course objectives, class procedures, and discussion of class assignments.	Readings Chapter 1, 2, <a href="http://www.itsecurity.com/features/mafia-2-security-crime-011807/">http://www.itsecurity.com/features/mafia-2-security-crime-011807/</a> <a href="http://www.sans.org/resources/policies/Information_Sensitivity_Policy.pdf?portal=3175920b260c38e449fea825435d265c">http://www.sans.org/resources/policies/Information_Sensitivity_Policy.pdf?portal=3175920b260c38e449fea825435d265c</a> <a href="http://www.security-risk-analysis.com/introduction.htm">http://www.security-risk-analysis.com/introduction.htm</a>	
2	Knowing what to secure? Assessing Risks	Readings Chapter 3, 4 <a href="http://csrc.nist.gov/organizations/guidance/framework-final.pdf">http://csrc.nist.gov/organizations/guidance/framework-final.pdf</a> <a href="http://www.owasp.org/index.php/Documentation_Framework">http://www.owasp.org/index.php/Documentation_Framework</a>	
3	Policy and documentation frameworks	Readings Chapters 5,6 <a href="http://www.informit.com/articles/article.asp?p=101399&amp;rl=1">http://www.informit.com/articles/article.asp?p=101399&amp;rl=1</a> <a href="http://72.14.203.104/search?q=cache:s0H0HFkfbFYJ:www.radium.nesc.mil/tpep/library/protection_profiles/CAPP-1.d.pdf+controlled+access&amp;hl=en&amp;ct=clnk&amp;cd=6&amp;gl=us">http://72.14.203.104/search?q=cache:s0H0HFkfbFYJ:www.radium.nesc.mil/tpep/library/protection_profiles/CAPP-1.d.pdf+controlled+access&amp;hl=en&amp;ct=clnk&amp;cd=6&amp;gl=us</a>	
4	Access and Operations	Readings Chapter 7,8 <a href="http://www.ccert.edu.cn/education/cissp/hism/687-693.html">http://www.ccert.edu.cn/education/cissp/hism/687-693.html</a>	
5	Personnel and Physical Security	Readings Chapters 9, 10 <a href="http://www.schneier.com/blog/archives/2005/10/liabilities_and.html">http://www.schneier.com/blog/archives/2005/10/liabilities_and.html</a> <a href="http://www.schneier.com/blog/archives/2005/10/liabilities_a">http://www.schneier.com/blog/archives/2005/10/liabilities_a</a>	Exam

		<a href="#">nd.html</a>	
6	Software Vulnerabilities and Business Continuity	Readings Chapters 11 <a href="http://www.cybercrime.gov/">http://www.cybercrime.gov/</a> <a href="http://www.crime-research.org/">http://www.crime-research.org/</a>	
7	Crime, Law and regs	Readings Chapters 12, 13, 14 <a href="http://www.interhack.net/pubs/network-security/">http://www.interhack.net/pubs/network-security/</a> <a href="http://www.garykessler.net/library/crypto.html">http://www.garykessler.net/library/crypto.html</a>	
8	Network, software and Cryptology	Readings Chapters 15, 16 <a href="http://www.useit.com/alertbox/20001126.html">http://www.useit.com/alertbox/20001126.html</a> <a href="http://www.andrewpatrick.ca/passwords/passwords.pdf">http://www.andrewpatrick.ca/passwords/passwords.pdf</a> <a href="http://www.uga.edu/~compsec/">http://www.uga.edu/~compsec/</a>	
9	Human Factors and Ethics	<a href="http://www.itcinstitute.com/display.aspx?id=363">http://www.itcinstitute.com/display.aspx?id=363</a> <a href="http://www.infosecwriters.com/text_resources/pdf/human_factors.pdf">http://www.infosecwriters.com/text_resources/pdf/human_factors.pdf</a>	Project

# MIS 681 Data, Network Security and Convergence Issues

METROPOLITAN STATE UNIVERSITY

## COURSE SYLLABUS

### Course Description

Organizations with computer networks, Web sites, and employees carrying laptops, iPhones and Blackberries face an array of security challenges. Among other things, they need to keep unauthorized people out of the network, thwart Web site hackers, and keep data safe from prying eyes or criminal hands. This course provides a high-level overview of these challenges. This course is not for the hard-core IT security engineer who works full time on networks. Instead, it is aimed at the nontechnical executive with responsibility for ensuring that information and assets stay safe and private. The course presents a guide to Thwarting Data Thieves and Hackers and covers the following technical issues in a nontechnical manner: -The concept of "defense in depth" -Network design -Business-continuity planning -Authentication and authorization -Providing security for your mobile work force -Hackers and the challenges they can present -Viruses, Trojans, and worms But it doesn't stop there. The course goes beyond the technical and covers highly important topics related to data security like outsourcing, contractual considerations with vendors, data privacy laws, and hiring practices.

### Course Competency

Students who achieve competency in this course will be able to:

1. Understand the essential of data and network security
2. Indentify data security risks in a network.
3. Assess the risks identified in a converged network.
4. Model and create policy to manage the risks in a network.

Course competency will be assessed based upon regular postings within the class discussion two written exams. Students may also be asked to work in groups to solve technology problems using telecommunication technology. In addition to the thoughtful postings to class and group discussions a written report will be required.

### Target Audience

1. Graduate MBA and MMIS students in the college of Management.
2. Students pursuing a graduate certificate in Information assurance.
3. Students who can keep up with an almost daily demand of work.

## **Texts**

1. The Management of Network Security by Carr, Snyder and Bailey, Pearson Education, 2010
2. Securing Converged IP Networks by Tyson Macaulay, Auerbach Publications, 2006

### **Additional Reading:**

Instructor supplied and assigned as necessary

## **Measurement Criteria**

Weighting factors as percent of final grade. Every student can achieve outstanding competence.

1. Final Project..... 400 points
2. 2 Exams x 150 each.....300 points
3. Class Participation... .....300 points

Letter Grades are awarded as follows:

900 to 1000.....	A
800 to 899.....	B
700 to 799.....	C
Below 700.....	F

***\*\*I DO NOT GRADE ON A CURVE AND DO NOT GIVE + OR – GRADES WITHOUT SIGNIFICANT JUSTIFICATION\*\****

## **Evaluation**

### **1. Class Participation**

Each student can earn all participation points by participating in discussions weekly online. There will be research and evaluation activities that enhance students reading between lectures. The object for class discussion activities will be to enable student to practice critical thinking. Simply logging into the D2L portal looking at a discussion thread and posting “I agree”,

or something similar is not participating. All students enrolled in a graduate program are expected to be able to demonstrate critical thinking. Thus, participation will be graded on the quality of a student’s postings. The instructor is the sole judge of what is and what is not a quality post.

NOTE: Discussions are extremely dynamic in nature. They will exhibit an ebb and flow that may not always seem on point. Here is the general rubric used to assess critical thinking:

Summarizes questions and comments accurately	<b>1.</b> Misses the point; does not show evidence of understanding.	<b>2.</b> Partially responds to questions, identifies, reasons, and support.	<b>3.</b> Identifies, reasons, and support; perhaps not maintaining author's emphasis.	<b>4.</b> Accurately identifies, reasons, and support without oversimplifying or distorting.
Excludes nonessential information	<b>1.</b> Does not distinguish introductory information from query; includes unneeded examples.	<b>2.</b> Does not distinguish introductory information from argument; perhaps includes unneeded examples.	<b>3.</b> Includes a little background or an unneeded example or two.	<b>4.</b> Excludes introductory information and unneeded examples.

## 2. Essay Exam Requirements:

There will be 5 to 10 questions per assignment to be answered in a few paragraphs. References and citations are a must. The questions posed in the assignments are not intended to be a test of your memory. They are designed to encourage critical thinking about issues raised by available readings, class presentations, and discussions. Your answers are expected to reflect a familiarity with the literature. All assignments will be due at the end of the semester. There will be no extensions or “Incomplete” given except in rare and extreme cases, and only with prior approval of the instructor.

## Final Project (Can be done in group)

For the project, the student will should assume the role of consultant or corporate executive. The purpose of the project is to focus on developing the rationale and business case to take advantage of the many opportunities to strategically deploy, re-deploy, acquire, shrink-wrap - sell, create corporate information assurance assets. Information Assurance management in its various forms and roles is quickly becoming the framework of choice among leading edge companies, especially those with large investments in intangible information assets. For example, companies in the Internet market space are structuring their operations to take advantage of these technologies to focus on their core competencies and lines of business to ensure delivery of superior products and services. This presents opportunities to develop new strategies that will take advantage of their corporate knowledge assets.

Your job is to develop an Information Assurance strategy for a company that your team selects and develop an IA assessment plan. You should cover, at a minimum, the areas of analysis

suggested below. However, you will also want to develop insights of your own that will play a critical role in creating your assessment plan.

## Points of Analysis

1. Review the industry within which the company competes to identify risks.
2. Obtain the following benchmark financial data (please remember this is not a financial exercise) if available. This will allow you to determine the order of magnitude value of the potential areas for your assessment strategy in terms of its impact on gross revenues and cost savings from operations.

- Market share
- Cost for operations
- Revenue per employee
- Market value
- Operating margins, cash-flow from operations

1. Do an analysis of the companies' operational performance to determine potential gaps security policy and practice. You may have to make a few phone calls and obtain corporate reports (from the EDGAR government database, your stock broker, 10Ks for the companies if they are publicly traded, corporate balance sheet, KVA analysis, interviews).
2. Determine the extent of the gaps, redundancies that will help target your assessment plan. Make sure to include an analysis of the value of the information collected and used in the information systems that support core processes such as sales/order fulfillment, billing, marketing, production.
3. Project the company's cost/benefit locally, nationally, and internationally as a result of your Information Assessment plan.

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Double line-spaced 12-point font!

## Schedule Spring 2010

Module by Week	Assignment for Discussion	Topics and Readings	Assignment Due
1 IT Security Fundamentals	Syllabus review, course objectives, class procedures, and discussion of class assignments.	Readings Chapter 1, 2, Carr  Assess Risk  Properties of a Good Network Environment	
2 Computer Security Fundamentals and Critical Infrastructure	Knowing what to secure? Assessing Risks	Readings Chapter 3 Carr	
3 Threats to your Environment and Security		Readings Chapter 4,5 Carr	

Techniques		<a href="http://www.cybercrime.gov/">http://www.cybercrime.gov/</a> <a href="http://www.crime-research.org/">http://www.crime-research.org/</a>	
4 Managing system protection		Readings Chapter 6,7 Carr	
5 Wireless and Web 2.0 a whole new Dimension		Readings Chapters 8 Carr	
6 Disaster recovery and Network Design		Readings Chapters 9, 10 Carr <a href="http://www.sans.org/reading_room/whitepapers/recovery/">http://www.sans.org/reading_room/whitepapers/recovery/</a>	Exam 1
7 Management and Policy		Readings Chapters 11, 12 Carr	
8 Understanding IP		Readings Chapters 1 Macaulay	
9 Converged Infrastructure		Readings Chapters 2 Macaulay	
10 Threats in an all IT world		Readings Chapters 3 Macaulay <a href="http://www.sans.org/reading_room/whitepapers/threats/">http://www.sans.org/reading_room/whitepapers/threats/</a>	
11 Controls and Safeguards		Readings Chapters 4 Macaulay	Exam 2
12 Managing Assurance		Readings Chapters 5 Macaulay <a href="http://iase.disa.mil/help/ia-basics/related-links.html">http://iase.disa.mil/help/ia-basics/related-links.html</a> <a href="http://ia.advanceITMN.org">http://ia.advanceITMN.org</a>	

13 What comes next		Readings Chapters 6 Macaulay	Exam
Project work			
		ALL WORK MUST BE TURNED IN NO LATER THAN MAY 4, 2010	