

# **TMGT 7200-01 MIS in Transportation Spring 2013**

## **Syllabus**

### **Institutional Information**

#### I) COURSE DESCRIPTION

- A) This course introduces the student of transportation and logistics to the theory and practice of how information systems align with and support freight transportation and logistics processes. Focus is placed on the strategic processes of operations control, decision support, and customer in multimodal environments. Process models for these environments are presented and discussed, as are the techniques for data collection and capture, processing, communication, and presentation. The ultimate objective of the course is to provide the student with a working development to deliver usable and effective information systems.
- B) Prerequisite(s): TMGT 6001 Orientation to Graduate Studies
- C) Corequisite(s): None
- D) Follow-On Courses: None
- E) Role in Curriculum: Core course
- F) Blended Course: blended courses use technology, in this case the ANGEL Learning Management System, to complement work in the classroom. See *Accessing ANGEL and Your Courses* (James Drogan, 2011a)

#### II) TEXT(S)

- A) Required Text(s):
  - 1) The word "Laudon" refers to the text assigned to this course; Laudon, K., & Laudon, J. (2011). *Management Information Systems, Student Value Edition* (12th ed.). Prentice Hall., ISBN 0132142562. Copies of this three-hole punched, loose-leaf text may be purchased at the SUNY Maritime Ship's Store. A copy is on reserve at the Luce Library.

The hard copy version of Laudon is also acceptable. Laudon, K., & Laudon, J. (2011). *Management Information Systems* (12th ed.). Prentice Hall., ISBN 0132576589. The book may be purchased from amazon.com. There is also a Kindle version available through amazon.com.

- 2) Lecture Notes

- (a) Links to lecture notes will be provided in the ANGEL learning management system

Lecture notes authored by me may be downloaded for your personal use. A complete set of these notes may be found on reserve in the Luce library. Ask for "Drogan Notes 2009.1."

- B) All other material will be distributed through ANGEL.
- C) Supplemental Material:
  - 1) Links will be provided in ANGEL.

#### III) STUDENT LEARNING OBJECTIVES

- A) Course Objectives

- 1) The complexity of the modern global transportation system would be impractical, if not impossible, to manage without the deployment of information technology (IT). This course takes up the issues involved in using IT-enabled management information systems.

The why, what, when, who, how, and where of IT deployment will be considered. Underpinning this examination of the issues is an understanding and application of the principles associated with ethics, critical thinking skills, and communications.

Opportunities to demonstrate leadership and team skills will be provided in the discussions and course project. An understanding and application of contemporary developments in IT and the context of the global transportation system will be an additional focus in this course.

There will be examples of the use of IT from the industry.

There will be a course project that analyzes the potential impact of major contemporary trends on global freight transportation.

IT and transportation are both fast changing areas. Staying tuned to the daily developments will be stressed. The course will be modified as these developments warrant.

- 2) You should be aiming to develop breadth of skill – about MIS as it affects transportation management; about the global marketplace, its myriad cultures, and the manner in the application of MIS is affected by these issues, and about the strategic issues to which MIS must respond.
- 3) At the conclusion of this course you should have skills and knowledge sufficient to discuss these topics at a high level with other interested parties (e.g., executives in transportation management firms).

The intent of the discussion is for the other party to see you as someone who can make valuable contributions to the management of the transportation firms of today and the future.

- 4) MIS and transportation and their management are undergoing significant, rapid change. The course will be contemporary.

#### IV) COURSE ASSESSMENTS

##### A) Assessments in the Class

On-line discussions, five project papers, team participation on class project, and a written assignment

##### B) External Assessments

None

#### V) ACCOMMODATIONS FOR STUDENTS WITH LEARNING DISABILITIES

If you believe that you need accommodations for a disability (also referred to as IEPs and 504 plans), please notify me within the first week of class and contact the Office of Accessibility Services at (718) 409-7348 or email Associate Dean Will Imbriale at [wimbriale@sunymaritime.edu](mailto:wimbriale@sunymaritime.edu) for an appointment to discuss your needs and the process for requesting accommodations. Since accommodations may require early planning and generally are not provided retroactively, please contact Accessibility Services as soon as possible.

#### VI) ACADEMIC INTEGRITY POLICY

Absolute integrity is expected of every Maritime student in all academic undertakings.

A Maritime student's submission of work for academic credit indicates that the work is the student's own. All outside assistance should be acknowledged, and the student's academic position truthfully reported at all times. In addition, Maritime students have a right to expect academic integrity from each of their peers.

Students are expected to do their own work in class, on assignments, laboratory experiments, and examinations or tests in accordance with the directions given by the instructor. It is the responsibility of all students to read and understand this statement of College policy on academic integrity. Maritime College considers the violation of academic integrity a serious matter, and one that will be treated as such.

A student who violates academic integrity may, depending on the nature of the offense, be subject to one or more of the following measures: failure of the assignment or examination, failure of the course, dismissal from the Regiment of Cadets, or dismissal from the College. Violations of academic integrity, also known as academic dishonesty, are subject to review by the Judicial Board. For details, go to [http://www.thezonelive.com/zone/02\\_SchoolStructure/NY\\_SUNYMaritimeCollege/handbook.pdf](http://www.thezonelive.com/zone/02_SchoolStructure/NY_SUNYMaritimeCollege/handbook.pdf)

ALL ACADEMIC INTEGRITY VIOLATIONS WILL BE REPORTED TO THE DEAN OF STUDENTS

## Course Information

### I) INSTRUCTOR INFORMATION

- A) Prof. James Drogan, [jdrogan@sunymaritime.edu](mailto:jdrogan@sunymaritime.edu), 718-409-7289, Fort B30, First Floor, South Bastion.
- B) Office hours: see Faculty and Staff > Faculty/Staff Contact on the Maritime website. Scroll down to Prof. James Drogan and click on the name. Scroll down to see Office Hours.

### II) CLASS MEETINGS

- A) This course meets from 510PM until 740PM on Tuesdays beginning January 15 in Fort A03.

### III) CLASS POLICIES

- A) Attendance Policy and Absences
  - 1) Attendance is mandatory. There is no extra credit or makeup work assigned in this course.
    - (a) Please notify the instructor by any available means if you expect to be absent. Arrangements will be made, if practical, to submit required work.

### IV) GRADING

- A) Composition
  - 1) On-line Discussions: 65 maximum points (13 discussions x 5 points per discussion).
  - 2) Four Interim Papers (Significant Issue Paper, Current Situation Paper, Future Situation Paper, and Transition Paper): 15 points maximum points each for a maximum of 40 points.
  - 3) Final Written Report on Class Project: 20 maximum points.
  - 4) Team Participation on Class Project: 13 maximum points.
  - 5) One Written Assignments: 13 maximum points.
- B) No makeup or extra credit work will be assigned.
- C) Final grade as assigned according the table that follows.

The initial final grade represents the points attained divided by the total points available. This

mathematical guides me in the assignment of the final grade. What this means is that the final grade I assign may be different from the mathematical grade. In assigning the final grade I take into account your consideration, respect, and encouragement of others; your desire for learning and discipline in completing the assignments; your ability to bring relevant issues to the attention of the class.

%	GPA	Grade
1.000	4	A
0.930	4	A
0.900	3.7	A-
0.871	3.3	B+
0.830	3	B
0.800	2.7	B-
0.771	2.3	C+
0.730	2	C
0.700	1.7	C-
0.000	0	F

## V) COURSE OUTLINE

### A) Overview

Modern transportation systems are dependent upon many things – smart people, financing, governmental policy, supply and demand, technology of all kinds – for success. We become so used to the performance of modern transportation systems (yes, I know there are disappointments and failures from time to time) that we rarely give much thought to the integration of the things that are essential for this success.

MIS in Transportation is about the application of what is generally called information technology to the management of transportation systems. EZ-pass, vehicle messaging systems, MetroCards, navigation systems in vehicles, RFID, and GPS are all examples of the visible side of this technology. But there is a more-or-less invisible side that needs to be understood. For example, the processes for the design, implementation, and management of technology.

We take these matters up in this course. The focus will be on the present and we will end up with looking at possible futures.

### B) Course Design

Modules 1-15 are the core learning and discussion modules and will be found in ANGEL. You will find the objectives of the module as well as reading, writing, and discussion assignments in the Module at a Glance. You will be spending most of your time in these learning modules. These core modules have the following structure:

- 1) Module at a Glance: summarizes what the module is all about, provides information as to reading, writing, and on-line discussion assignments.
- 2) Writing Assignment: detail of the assigned writing.
- 3) Discussion Assignment: detail of the assigned discussion topic.
- 4) Supplementary Material: unassigned, but relevant material.
- 5) Talk with Professor: a public place anyone can ask questions about the material in the module.

The Culminating Activity module requests your feedback on the course.

C) The Modules

1) Introduction to the Course and to Management Information Systems in Transportation

(a) Description

This module first addresses three questions:

1. What is meant when we say "Management Information Systems in Transportation?"
2. How will we study this topic?
3. How will student performance be assessed?

The readings include slides from a presentation on global transportation intended to set a base line for the course. Also included is a note on ethics, critical thinking, and communications, a reminder of what should underpin all that we do.

(b) Readings

Information Systems in Global Business Today (Laudon & Laudon, 2011, Chapter 1)

1. Introduction to the Course and to Management Information Systems in Transportation (James Drogan, 2007a).

Barriers and Catalysts in Global Transportation (James Drogan, 2003a).

Ethics, Critical Thinking, and Communications (James Drogan, 2009a).

(c) Written Assignment

This assignment asks you about significant business issues in transportation and how technology might deal with these issues.

2) Four Principles

(a) Description

Management information systems are not wholly, or even most importantly, about technology. This module takes up four fundamental principles for investing in MIS that have emerged from the teacher's long experience in the information industry.

(b) Readings

Global E-Business and Collaboration (Laudon & Laudon, 2011, Chapter 2).

Principles for Applying Information Technology (James Drogan, 2005a).

(c) Discussion Assignment

Ignoring the Principles

(d) Deliverable Due

Significant Issue Paper

3) Business Drivers

(a) Description

Management information systems are shaped by the configuration of the business. This configuration is, in turn, shaped by business drivers. This module takes up the notion of business drivers.

(b) Readings

Information Systems, Organizations, and Strategy (Laudon & Laudon, 2011, Chapter 3).

A Note on Business Drivers, Business Configuration, and Information Technology Strategy (James Drogan, 2005b).

Forces (James Drogan, 2003b).

(c) Discussion Assignment

Business Drivers of Global Intermodal Freight Transportation

4) Business Configuration

(a) Description

Module 3 introduced you to the business configuration, how it is shaped by the business drivers, and how an understanding of the business configuration is essential if one is to make proper decisions on the deployment of management information systems.

The only legitimate uses of information systems are to improve the performance of the enterprise (the First Principle). To do this one must understand how the business works. The business configuration is a tool that helps.

In this module we examined the components of the business configuration in more detail and consider how changes in the business drivers impact the configuration. The lecture note is based upon a real company in the transportation sector.

(b) Readings

Thinking About the Business Configuration (James Drogan, 2007b).

(c) Discussion Assignment

Business Impact

(d) Deliverable Due

Current Situation Paper

5) MIS Strategy

(a) Description

The MIS strategy is the process that links the business wants and needs to information technology capabilities.

(b) Readings

Building Information Systems (Laudon & Laudon, 2011, Chapter 13).

Managing Global Systems (Laudon & Laudon, 2011, Chapter 15).

A Note on Strategy and Its Descendants (James Drogan, 2009b).

(c) Discussion Assignment

Factors that have Made MIS Strategy Development Increasingly Difficult over the Past Decade

6) Information Economics

(a) Description

Information Economics (M.M. Parker, Trainor, & Benson, 1989) is an investment model that specifies how the IT investment decisions can be made.

Factors inherent in the decision-making process (other than cost) are not easily measured, and are expressions of the management strategy for the enterprise. These factors weigh heavily in the decision-making process and may reflect added value, e.g., enhanced economic impact, strategic match, competitive advantage, management information, competitive response, customer satisfaction, and strategic IS architecture. Or they may reflect risk and uncertainty surrounding the project, such as organizational risk, IS infrastructure risk, definitional uncertainty, and technology uncertainty.

Without a systematic approach to assessing these additional factors, investment decisions will be less than optimal. The purpose of Information Economics is to develop this systematic approach to the decision-making process that accurately reflects the strategy of the enterprise.

Information Economics considers a number of factors which, when included in the investment framework, provide a basis for decisions understood by both Business and Technology.

(b) Readings

Information Economics (Summary) (Marilyn M. Parker & Benson, 1990).

Value Analysis (J. Drogan, 2005a).

(c) Discussion Assignment

Impact of Information Economics Factors

(d) Deliverable Due

Future Situation Paper

7) Business Management System

(a) Description

A management system is a collection of people, processes, and information that allows an organization to achieve its goals and objectives.

A technology system is a subset of the management system and represents the application of technology to selected processes, information, and people such that positive business benefit is attained.

In making the selection decisions what one chooses not to automate can be as important as what one chooses to automate.

(b) Readings

Note: This is a module with extensive reading. The recommendation is to get an early start.

Achieving Operation Excellence and Customer Intimacy; Enterprise Applications (Laudon & Laudon, 2011, Chapter 9).

E-Commerce, Digital Markets, Digital Goods (Laudon & Laudon, 2011, Chapter 10).

Managing Knowledge (Laudon & Laudon, 2011, Chapter 11).

Enhanced Decision Making (Laudon & Laudon, 2011, Chapter 12).

Note on Building a Management System (James Drogan, 2005c).

(c) Discussion Assignment

Selecting the Information Technology Initiatives for the Global Intermodal Transportation Management System

8) Management Information System Components

(a) Description

The technology system suggests that technology (e.g., computers) is involved. In this module we take up the issue of technology, what it is and how it may be managed.

(b) Readings

IT Infrastructure and Emerging Technologies (Laudon & Laudon, 2011, Chapter 5).

Telecommunications, the Internet, and Wireless Technology (Laudon & Laudon, 2011, Chapter 7).

Information System Fundamentals (J. Drogan, 2005b).

(c) Discussion Assignment

Critical Information Technology Components for the Global Intermodal Transportation Management System

(d) Deliverable Due

Transition Paper

9) The Management of Data

(a) Description

The essence of management information system is to provide the information needed by manager to make the necessary decisions. That is, all of our technology distributed as widely as we might like, is of little use unless it allows us to provide the right information to the right person at the right time to make the necessary decision.

Information, then, is about acquisition, categorization, relevance, accessibility, and usefulness. We take these matters up in this module.

(b) Readings

Foundations of Business Intelligence: Databases and Information Management (Laudon & Laudon, 2011, Chapter 6).



Data, Information, and Knowledge - Relevance and Understanding (James Drogan, 2009c).

How Do You Talk to Big Data? (James Drogan, 2011b).

(c) Discussion Assignment

Data Management in Global Transportation

10) Deriving the Information System

(a) Description

In this module we take up the matter of the knowledge, skills, and experiences of the personnel required by the systems life cycle, an idea introduced in the previous module.

(b) Readings

Proposal for an Information Technology Strategy and Planning Project (James Drogan, n.d.).

(c) Discussion Assignment

Knowledge, Skills, and Experiences Required for the Information Technology Strategy and Planning Project

11) Information System Process Management

(a) Description

Investment in MIS demands a set of management processes to secure an adequate return that are no less comprehensive and robust than traditional management processes. These processes are the focus of this module.

(b) Readings

Managing Information Technology in a New Age (IBM, 2000).

(c) Discussion Assignment

Keeping Current

12) Cultural and Ethical Issues

(a) Description

There is little doubt that information technology has brought significant performance improvements to global intermodal freight transportation. Indeed, it's difficult to remember how the business was conducted before the advent of technology.

But is the advancement enabled by technology always for the good? Is always "on" and always being "connected" always a good thing?

There is the Law of Unintended Consequences.

'The law of unintended consequences, often cited but rarely defined, is that actions of people and especially of government always have effects that are unanticipated or "unintended." Economists and other social scientists have heeded its power for centuries; for just as long, politicians and popular opinion have largely ignored it" (Norton, 2008).

What are the "unintended consequences" to which we must give some attention?

We take up this issue in this module.

(b) Readings

Ethical and Social Issues in Information Systems (Laudon & Laudon, 2011, Chapter 4).

Cultural Acumen for the Global Manager - Lessons from Project GLOBE (Javidan & House, 2001).

(c) Discussion Assignment

Ethical and Societal Issues

13) When Technology Fails

(a) Description

We have become critically dependent upon technology. One might even argue that this dependency has become an obsession.

We have also, by and large, become enamored with the availability of the technology (anytime, anywhere), the information it provides (what I want the way I want it), and its responsiveness I want it now).

When technology fails, we're often at a loss and lost, not knowing what to do and, even if we did, how to do it.

This module examines the alternatives available to us when technology fails.

(b) Readings

Securing Information Systems (Laudon & Laudon, 2011, Chapter 8).

When Technology Fails (James Drogan, 2008)

(c) Discussion Assignment

Managing the Failure of a Critical Component

(d) Deliverable Due

Final Paper

14) The Future

(a) Description

"The future ain't what it used to be." Yogi Berra (American professional Baseball Player and Manager. b.1925)

"As for the future, your task is not to foresee it, but to enable it." Antoine de Saint-Exupery (French Pilot, Writer and Author of 'The Little Prince', 1900-1944)

"When it comes to the future, there are three kinds of people: those who let it happen, those who make it happen, and those who wonder what happened." John M. Richardson, Jr.

"For tomorrow belongs to the people who prepare for it today" African Proverb

"My interest is in the future because I am going to spend the rest of my life there"  
Charles F. Kettering (American engineer, inventor of the electric starter, 1876-1958)

In this module we look ahead to what might be in the world of management information systems and wonder how we might be affected.

(b) Readings

The Future (James Drogan, 2007c).

A Small View of a Possible World (J. Drogan, 2004).

The Coming Merging of Mind and Machine (Kurzweil, 2001a).

Foreword to 'The Eternal E-Customer' (Kurzweil, 2001b).

Notes from the IT Frontline (James Drogan, 2003c).

(c) Discussion

Future Risks

D) Schedule

Module	Start T	Stop M	Topic
1	1/15/2013	1/21/2013	Introduction to the Course and to Management Information Systems in Transportation
	1/22/2013	1/28/2013	HOLD MONDAY CLASSES ON TUESDAY
2	1/29/2013	2/4/2013	Four Principles
3	2/5/2013	2/11/2013	Business Drivers
4	2/12/2013	2/18/2013	Business Configuration
5	2/19/2013	2/25/2013	MIS Strategy
6	2/26/2013	3/4/2013	Information Economics
7	3/5/2013	3/11/2013	Business Management System
8	3/12/2013	3/18/2013	Management Information System Components
9	3/19/2013	3/25/2013	The Management of Data
10	3/26/2013	4/1/2013	Deriving the Information System
11	4/2/2013	4/8/2013	Information System Process Management
12	4/9/2013	4/15/2013	Cultural and Ethical Issues
13	4/16/2013	4/22/2013	When Technology Fails
14	4/23/2013	4/29/2013	The Future
15	4/30/2013	4/30/2013	Bringing It All Together, the Course Project

E) The Course Project

I) Background

This course exists within the larger framework of the Master of Science in International Transportation Management program. The first part – Master of Science – suggests a quality of critical thinking and communication that is more complete, connected, and compelling than that associated with an undergraduate degree. In a continuum of levels of education comprising bachelor, master, and doctoral, the master is likely to be closer to the doctoral than to the bachelor.

The second part – International Transportation Management – defines, in a general sense, the subject matter of focus. Inasmuch as SUNY Maritime College is home for the Global Business and Transportation department, granter of the Master of Science in International Transportation Management, the focus is centered on the maritime and affiliated industries.

The space in which we learn is thus defined. This doesn't mean that we are forever

constrained by these two borders. Indeed, I would argue that if our critical thinking takes beyond these borders, then we should follow the data and the analysis.

“There is no substitute for paying attention to the empirical facts of life, and no substitute for systematic reasoning about them.” Paul Samuelson

## 2) Issues

The word "issues" takes on a very specific meaning in the critical thinking process we will be using. The word does not imply the negative connotation as is so often the case in common language (i.e., I have an issue with you. He has a lot of issues.), but rather is used to connote something of major significance ( i.e., a new and large market opportunity, the aftermath of a tsunami) that needs to be resolved.

## 3) Tasks and Deliverables

- (a) The first task in the project is to identify a significant issue within international transportation management that may be resolved through the application of management information systems.

It is important that you justify the significance of the issue. By that I mean that should someone ask you why the issue is significant, you can support our decision on the basis of facts and rational argument.

The deliverable from this task is a paper of no more than two pages that identifies the issue and addresses the matter of significance.

- (b) The existence of the issue is caused by a set of conditions. For example, demand for certain services; shortage of critical assets. The current situation is much like the origin point of a trip. It describes where one is and is critical if one is going to move to the destination.

The second task is to describe the current situation (aka the as-is).

The deliverable from this task is a paper of no more than five pages that describes the current situation. Work in describing systems is often best presented in pictures, graphics, and diagrams. The reading in this course will introduce you to many of these kinds of images. You are encouraged to make use of this form of communication in this deliverable. Don't worry about being "picture perfect" and don't worry if you think you "can't draw." Get your ideas down in as clear manner as you can. Be sure to provide additional narrative to support the images.

- (c) The third task is to describe the future situation (aka the to-be).

During the course and the project your analysis will suggest to you a system that may resolve the situation. This task is to describe the future situation. Use the same approach to description that you used on the current situation paper. This allows the reader to easily compare the current with the future situation and note the differences.

This deliverable should be no more than five pages.

- (d) The fourth task is to describe the actions necessary to move or transition from the current to the future situation.

This paper, no longer than five pages in length, lays out in a logical sequence the steps that need to be made to move from the current to the future situation (i.e., from the as-is to the to-be). This paper should include a statement of the risks associated with the transition.

- (e) The fifth and final task is to integrate the four papers into a coherent final report.

The table of contents should look like this:

- Introduction
- The Issue
- The Current Situation
- The Future Situation
- The Transition
- Conclusion

These contents should be bracketed by an abstract on the front and a bibliography on the back.

Don't simply put the four papers into a single document, but make sure there is a clear transition from one paper to another. The final report should appear as seamless as possible.

4) Schedule of Deliverables

Stop M	Project Deliverable Due
1/21/2013	
1/28/2013	
2/4/2013	Significant Issue Paper
2/11/2013	
2/18/2013	Current Situation Paper
2/25/2013	
3/4/2013	Future Situation Paper
3/11/2013	
3/18/2013	Transition Paper
3/25/2013	
4/1/2013	
4/8/2013	
4/15/2013	
4/22/2013	Final Paper
4/29/2013	
4/30/2013	

5) Collaboration

- (a) You may choose to collaborate with up to four other students in the course and produce the papers as a team.
- If you choose to work as a team, all members of the team will receive the same grade for the papers.
  - After the final paper is submitted I will ask each team member to assess the performance of their teammates. This assessment may cause the final grade on the paper for a particular student to be changed in either direction.
  - You must notify me no later than the second class meeting of your decision to work on a team or to prepare the papers individually. Your decision is final and may not change during the term.
- (b) There will be no team assessment if you choose to prepare the papers individually.

## 6) Writing Guide

- (a) All papers must conform to acceptable academic styles. APA is the preferred style ("The Purdue OWL: APA Style," 2012).
- (b) Papers should be submitted as Word documents (.doc or .docx) or .rtf files.
- (c) Papers should be single spaced on letter size paper (8.5 inches x 11 inches) with one inch margins. Pages should be numbered.
- (d) The file naming convention is lastname\_firstname\_papername.

## References

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