

TMGT 8530-01 Information Management Spring 2019

Syllabus

James Drogan
12/30/2018

Institutional Information

COURSE DESCRIPTION

This course examines how information technology may help achieve current and future opportunities for business improvement in the maritime and related industries. Methods for analyzing a business leading to the discovery of opportunity are examined. Techniques for the application of technology to these opportunities and assessing the resulting benefits are used. Consideration is given to methods for managing the technology investment. Examples are worked using contemporary and emerging opportunities and technologies. A middle and upper level management perspective is taken. Guest speakers from the industry will be featured ("Graduate Course Descriptions 2017-18," 2017).

- A) Prerequisite(s): TMGT 7100, 7300, 7500
- B) Corequisite(s): None
- C) Follow-On Courses: None
- D) Role in Curriculum: Elective course; required course in the supply chain track
- E) This is an online course using Blackboard for the distribution of material and assignments, and for the submission of assignments and participation in discussions.

TEXT(S)

- A) Required Text(s):
 - 1) All required reading material is identified and accessible through Blackboard.
 - 2) All other material will be distributed through Blackboard.

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 and communications technology (ICT). This course takes up the issues involved in ICT-enabled organizations.

The why, what, when, who, how, and where of ICT 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.

This is not a technology (i.e., "speeds and feeds") or communications (i.e., connectivity and network design) course. ICT changes too rapidly, in the context of what this course aims to do, to gain value from spending much time at these levels. The question we address is, no matter the "speeds and feeds" or connectivity and network design, how do we maximize the

value of ICT to the enterprise?

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

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

There will be a course project that analyzes the potential impact of major contemporary trends on the maritime and maritime-centric supply chain industries. Teams are developed to work this project.

- 2) ICT and the industries of interest are both fast changing areas. Staying tuned to the daily developments will be stressed. The course will be modified as these developments warrant.
- 3) You should be aiming to develop breadth of skill – about ICT as it affects the industries of interest, about the global marketplace, its myriad cultures, and the manner in the application of ICT is affected by these issues, and about the strategic issues to which ICT must respond.
- 4) 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., industry executives) such that you will be seen as someone who can make valuable contributions to maritime organizations today and the future.
- 5) ICT, transportation and the management of each are undergoing significant, rapid change. The course will be contemporary (James Drogan, 2009c, revised 6/18/17).

COURSE ASSESSMENTS

A) Assessments in the Class

Seven on-line discussions, five written deliverables, and team participation.

B) External Assessments

None

ACCOMMODATIONS FOR STUDENTS WITH LEARNING DISABILITIES

Students with a documented disability and seeking to utilize services should contact Dr. Sherill Anderson, Assistant Dean of Student Affairs at sanderson@sunymaritime.edu or by visiting Student Affairs on the first floor of Baylis Hall. All academic accommodations are assessed and provided on an individual basis and must be grounded in documentation. Accommodations will be made during the academic year for KUP's (knowledge, understanding, and proficiency) tested as part of a written exam. No accommodations will be made for practical assessments outlined in the STCW guidelines. All student disability information is confidential. Students must meet with Accommodation Services **EACH SEMESTER** in which they wish to receive accommodations. Faculty cannot provide accommodations without official notification from Accommodation Services (Student Affairs).

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 and instructors.

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

ALL ACADEMIC INTEGRITY VIOLATIONS WILL BE REPORTED TO THE DEAN OF STUDENT AFFAIRS

Course Information

INSTRUCTOR INFORMATION

- A) Prof. James Droган, jdrogan@sunymaritime.edu, 718-409-7289, MAC 228.
- B) Office hours: 9AM – 3PM Monday through Thursday. Appointments are recommended.

CLASS MEETINGS

- A) Mondays, 510PM – 745PM, MAC 210

CLASS POLICIES

- A) Attendance Policy and Absences
 - 1) Attendance is mandatory.
- B) GRADING
 - 1) Composition (215 points)
 - (a) Attendance: 60 points (15 meetings x 4 points per meeting)
 - (b) On-line Discussions: 35 points (7 discussions x 5 per discussion).
 - (c) Written Deliverables: 100 points (5 deliverables x 20 per report).
 - (d) Team Assessment: 20 points.
 - 2) No makeup or extra credit work will be assigned.
 - 3) Final grade as assigned according to the following table.

%	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

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.

Approach



Figure 1 The Learning Process

The learning process is conceived of as an integration of streams of knowledge and effort within the constraints of time, space, and other exogenous forces, the effective management of which leads to successful students. The successful student is seen as one whose capabilities in dealing with the subject matter have developed the most over the length of the course.

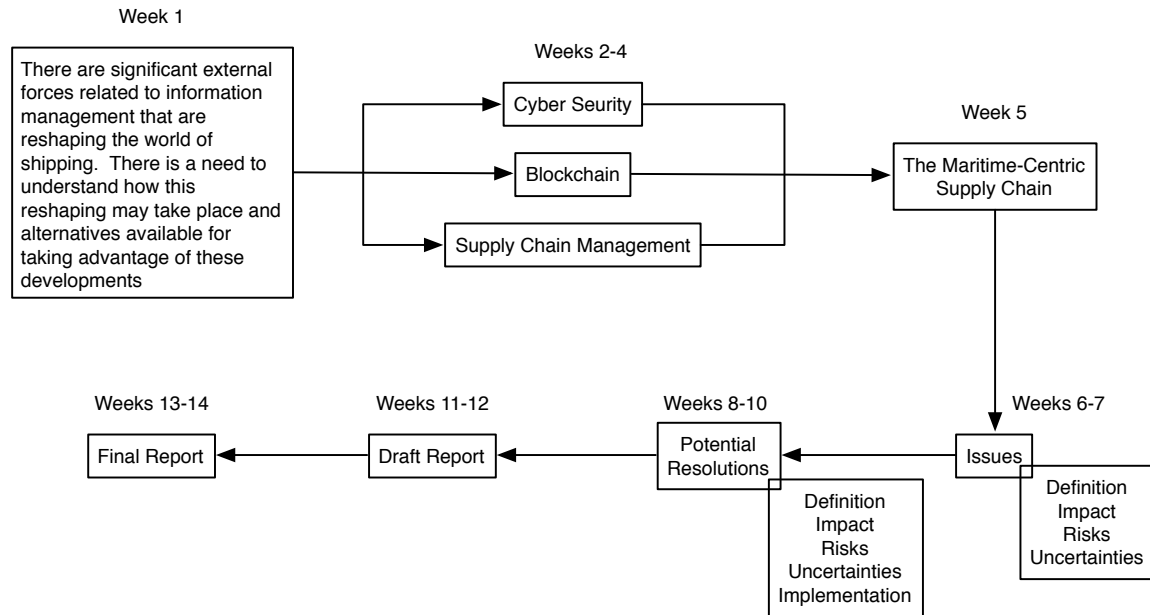
Philosophy of the Course

"The best teachers are those who show you where to look, but don't tell you what to see." Alexandra K.Trenfor

A further elaboration of my teaching strategy in be found at *A Philosophy of Teaching* (James Drogan, 2018a).

In short, however, my aim is to help the students develop a set of capabilities (knowledge, skill, experience, attitude, behavior) that will enable them to survive, thrive, and make a difference in the current and emerging world.

Structural Overview



Modules

1. Introduction to the Course; Setting the Context
 - a. Purpose
 - i. There are significant external forces related to information management that are reshaping the world of shipping. These forces include:
 - Cyber Security
 - Block Chain
 - Supply Chain Management
 - Note: These are my selections. I am open to recommendations from the students as to the focus.**
 - ii. This course aims to improve your understanding of how this reshaping may take place and alternatives available for responding to these developments.
 - iii. Introduces the course; learning objectives, modules, discussions, course project(s), assessments, and relevant background information.
- b. Reading (Foundation Documents)
 - i. *TMGT 8530-01 Sp19 Information Management Syllabus* (this document)
 - ii. *Ethics, Critical Thinking, and Communications* (James Droган, 2009b)
 - iii. *Information System Fundamentals* (J. Droган, 2005)
 - iv. *Principles for Applying Information Technology* (James Droган, 2005c)
 - v. *The Aim of Information Management* (James Droган, 2018g)
 - vi. *An Introduction to Cybernetics* (Ashby, 1963, Chapter 1)

- vii. *2016 Future Supply Chain* (Global Commerce Initiative & Capgemini, 2008, sec. Forward, Executive Summary)
- viii. *ACTIVE Ethics: An Information Systems Ethics for the Internet Age* (McBride, 2014)

Special note: Sections 1, 2, 4, 5 (the introduction and the first paragraph of each of the six subsections), and 6 are assigned. You may, of course, read the entire paper and follow your curiosity as you see fit.

c. Discussion

2016 Future Supply Chain strongly focuses on change towards the consumer end of the supply chain.

How might these changes ripple upstream and affect the maritime-centric supply chain industries? Which change may be the most significant? What's the likelihood that this effect will happen? What do we do about it?



A maritime-centric supply chain comprises a group of organizations involved in the movement of goods wherein the maritime portion is indispensable to the success of the supply chain. That is, removing the maritime portion causes the supply chain to fail. By failure we mean that there is no reasonable substitute for the maritime portion. Examples of such supply chains include bulk commodities such as oil and grain, containerized traffic such as furniture and electrical machinery.

2. Cyber Security

a. Purpose

- i. Cyber security is perhaps the most pervasive and significant trend, accompanied by a changing set of issues, affecting international business.¹
- ii. This module aims to provide you with the necessary background to participate in the discussion coming up in module 5, The Maritime-Centric Supply Chain.

b. Reading

- i. *Cyber Security* (James Drogan, 2017a)
- ii. *A Framework for Improving Cybersecurity Discussions Within Organizations* (Choi, Kaplan, & Lung, 2017)

c. Discussion

- i. Consider your knowledge of and experience in the maritime industry. What aspects of the industry represent the most significant risk to cyber security breaches? I use breaches here to represent chance failures as well as deliberate attacks. How do you decide significance? What action do you recommend to close the breach?

¹ One could well argue that geopolitical dynamics are of equal or greater significance. However, these are a bit out-of-bounds for this course.

3. Blockchain

a. Purpose

- i. Blockchain is a means of recording transactions as a series of blocks linked together in a chain. The contents of the blocks cannot be changed, only amended by a subsequent transaction nor can the sequence of the block be changed. These blockchains represent a ledger of events made available to all the parties participating in the transaction. The participants in the transaction agree upon amendments according to an established protocol.

b. Reading

- i. *Blockchain: What It Is, and How It Works* ("Blockchain," 2018).
- ii. *Some Comments and Questions Regarding Blockchain* (James Drogan, 2017b)
- iii. *Improving Performance in the Supply Chain with Blockchain* (James Drogan, 2018b)
- iv. *Blockchain Beyond the Hype: What Is the Strategic Business Value?* (Carson, Romanelli, Walsh, & Zhumaev, 2018)

c. Discussion

- i. In *What Does the Blockchain Look Like?* (James Drogan, 2018c) I describe a transaction from initiation to fulfillment. Please complete the description of the blockchain using the approach shown in the reference.²
- ii. There is a regime whereby the participants in the blockchain approve changes to the transaction. Background on this can be found in *Blockchain for Dummies: IBM Limited Edition* (Gupta, 2017, Chapter 2).

Should the blockchain be permissioned or permissionless? Why?

Who are the participants and what are their roles?

How are these roles likely to change after the implementation of blockchain?

4. Supply Chain Management

a. Purpose

- i. Supply chains are essential to the way the world works. They surround us; for services, products, money, entertainment, data and information of all kinds. The danger in something becoming commonplace is that we forget to think about it; what it is, what it does, how it does it, and why.

This module is intended to refresh and, in some respects, expand your understanding of supply chains prior to taking up in module five a specific type of supply chain – the maritime centric.

b. Reading

- i. *An Introduction to the Supply Chain* (James Drogan, 2008a)
- ii. *Rounding Out the Supply Chain* (James Drogan, 2008c)
- iii. *Where is Technology Taking the Economy* (Arthur, 2017)

² I'm always interested in new and better ideas. If you have a better way to describe the evolution of the blockchain I would like to hear it.

- iv. *Digital Globalization: The New Era of Global Flows* (Dobbs, Manyika, & Woetzel, 2016, sec. Executive Summary)

c. Discussion

- i. Supply chains are marked by, amongst other characteristics, critical success factors, risks, and uncertainties.

Please discuss these three characteristics. Pick those that you think have most impact on supply chain performance. Describe the impact. Consider what needs to be done to assure the positive impacts and mitigate the negative impacts. Your perspective should be that of global trade.

5. The Maritime-Centric Supply Chain

a. Purpose

- i. A maritime-centric supply chain comprises a group of organizations involved in the movement of goods wherein the maritime portion is indispensable to the success of the supply chain. That is, removing the maritime portion causes the supply chain to fail. By failure we mean that there is no reasonable substitute for the maritime portion. Examples of such supply chains include bulk commodities such as oil and grain, containerized traffic such as furniture and electrical machinery.
- ii. In this module we define a specific maritime-centric supply chain, **selected by students**, at a level of detail sufficient to reveal the associated issues, risks, and uncertainties. It is the subsequent analysis of these issues, risks, and uncertainties that will lead us to recommendations for improving the performance of this supply chain.
- iii. This is a critical module in that it focuses on systems analysis. One's ability to understand how a system works, or should work, and subsequently turn that understanding into meaningful recommendations for action resulting in actual performance improvement is what enables one to add value.

b. Reading

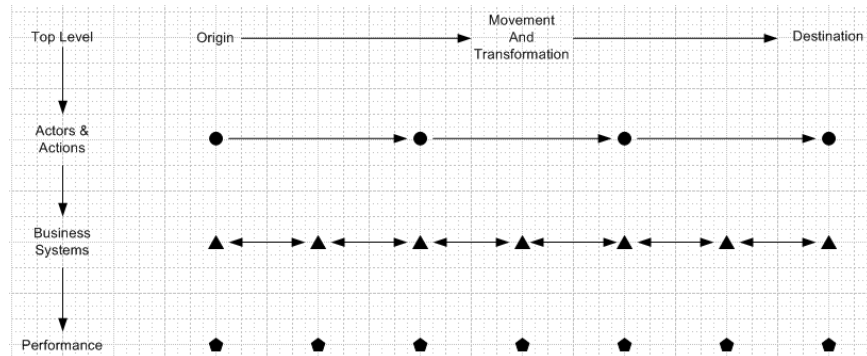
- i. *An Introduction to System Design and Control* (James Drogan, 2018d)
- ii. *A Note on Business Drivers, Business Configuration, and Information Technology Strategy* (James Drogan, 2005a)
- iii. *Thinking About the Business Configuration* (James Drogan, 2007)
- iv. *Where Machines Could Replace Humans—and Where They Can't (Yet)* (Chui, Manyika, & Miremadi, 2016)

c. Discussion

- i. Maritime-centric supply chains have been with us for some time. This discussion is intended to result in a sufficiently detailed description of a maritime-centric supply chain that will allow one to make recommendations for improving its performance.

This description forms the foundation for the remainder of the course.

- ii. I suggest you start your description at an abstract (top) level.



- The top level sets the overall context. Think in terms of an international shipment.
- Actors & Actions define the essential actions that take place and the party responsible. The circles represent places (e.g., port) where actions (e.g., transfer between truck and ship) are taken by a party (e.g., terminal operator). The arrows represent the movement between places. Actors (e.g., shipping company) are associated with these actions.
- The black triangles represents business systems (i.e., users, processes, data) used by the actors to control their actions. The lines with double arrowheads represent the exchange of information between actors.
- The black pentagons represent the measurement of performance by the actors. Note the lack of connection between these measurements.

d. Written Assignment

- i. Capture the description of the maritime-centric supply chain in a document that will guide you through the remainder of the course and serve as the base upon which the final report will be built.

The document should be written using APA style except that single-space is to be used in lieu of double-space (Neyhart & Karper, 2009).

The document is to be in Word (.doc or .docx).

The file name should be *Team n Maritime-centric Supply Chain Description* where *n* is your team number.

- ii. Suggested Table of Contents

- 1) Description of the Maritime-Centric Supply Chain (include some words describing why you picked this supply chain)
- 2) Actors and Actions

- 3) Business Systems
- 4) Performance Measurement
- 5) Observations and Conclusions
- 6) References

6. Issues

a. Purpose

- i. During your discovery and definition of the maritime-centric supply chain you likely observed opportunities that could be exploited to increase the value (good) delivered by the MCSC (maritime-centric supply chain) and concerns about aspects of the MCSC that keep it from delivering the value (bad) inherent in the existing system.

These – the good and bad – comprise issues.

- ii. The purpose of this module is to identify 3-5 major issues. This identification includes a.) a definition that ties into the description of the MCSC from module 6, b.) an estimate of the impact of the issue, c.) a statement of the risks associated with resolving the issue, and d.) identification of the uncertainties associated with the foregoing.

These must be issues amenable to being resolved through the use of information management.

- iii. Another purpose of this module is to rank the issues from the most to least significant. You must create a methodology for making this ranking then apply it to the 3-5 issues you identified.

b. Reading

- i. *When Technology Fails* (James Drogan, 2008b)
- ii. *Information Economics (Summary)* (Parker & Benson, 1990)
- iii. *What is the Balanced Scorecard?* (“What is the Balanced Scorecard?,” 2010)

c. Discussion

- i. The Purpose above should elicit questions and comments as fodder for a discussion. For example, how would one decide whether an issue is amenable to resolution using information management? What are factors to consider when deciding impact? On what basis would the issue be resolved without intervention?

Note that this is a two week long discussion and each week is assessed.

d. Written Assignment

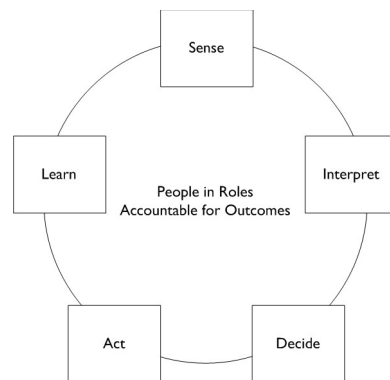
- i. In the previous module you wrote chapter one of the final report for this course.
 - The Maritime-Centric Supply Chain
- ii. To this you now add the second chapter.
 - Issues
- iii. Suggested table of contents for the new chapter
 - Issues (for each issue)

- Definition
- Impact
- Risks
- Uncertainties
- Deciding Significance
- Ranked Order of Issues
- iv. The document submitted includes both chapters.
 - Please keep the references current
 - Change the name of the report to *Team n Final Report month, day, year*. The *month, day, year* represent the date submitted.

7. Potential Resolutions

a. Purpose

- i. Issues require resolution. The resolution to the issues identified in this course lies in an information management system that improves the ability to improve the decision process. This process is represented by the SIDAL loop.



- ii. The aim is to describe a resolution for the most significant issue identified in module 6. You are, in a sense, defining a business system (see *Note on Building a Management System* in the readings for this module).
- iii. If you have completed all your work on the most significant issue you may wish to consider the second most significant issue. It's generally useful to check your work by looking at another example.

b. Reading

- i. *Note on Building a Management System* (James Droган, 2005b).
- ii. *Data, Information, and Knowledge - Relevance and Understanding* (James Droган, 2009a)
- iii. *Forces* (James Droган, 2003)
- iv. *A Small View of a Possible World* (J. Droган, 2004)

c. Discussion

- i. This module may well have taken many of you to places where you have not heretofore been. Please, please, please understand the context of the assigned

reading. People have been in this part of the jungle before and have some proven ideas about surviving and thriving.

- ii. Please, please, please ask and answer questions in the assigned discussion area.

Because of the nature of this module I think it inappropriate to grade this discussion.

One the other hand, the quality of your questions and answers, and the insight you bring to this discussion will be considered when deciding your final grade.

d. Written Assignment

- i. Define your solution in terms of what it does and who is affected. Consider the elements of the business system as identified in the assigned reading. Identify the risks and uncertainties. Discuss how you would go about implementing the solution.
- ii. Add the third chapter to your report.
 - Issue Being Resolved
 - Solution Definition
 - Impact
 - Risks
 - Uncertainties
 - Approach to Implementation

8. Draft Report

a. Purpose

- i. The draft report brings together all your work into a coherent whole telling the story of what you set out to do, what you did, what you found along the way, and your conclusions and recommendations.
- ii. It is a means of checking your work against the assignment.
- iii. It solicits feedback from your principal (me) to be incorporated in your final report. You may think you've done quite well, but it is the verdict of the principal (me again) that counts.

b. Reading

- i. None

c. Discussion

- i. Please, please, please ask and answer questions in the assigned discussion area.

Because of the nature of this module I think it inappropriate to grade this discussion.

One the other hand, the quality of your questions and answers, and the insight you bring to this discussion will be considered when deciding your final grade.

d. Written Assignment: Draft Report

- i. While this is a draft, focus on it as if it is your final report. Resist the temptation to say, “We’ll fix this on the final.” You would rather, I think, get feedback on the draft suggesting you have little to do to complete the final report than you would feedback that suggests you have a long way to go and a short time to get there.
- ii. Time is the most precious nonrenewable resource we have. Don’t squander this resource. It’s more prudent to work hard now and get to the end with time to spare than it is to get towards the end and find that you need more time than is available.
- iii. The table of contents for the body of the report has been completed by this point. You need to add:
 - An Abstract: see (“The Purdue University Online Writing Lab (OWL),” 2011, sec. The Report Abstract and Executive Summary)
 - A Conclusion: see (“The Purdue University Online Writing Lab (OWL),” 2011, sec. 2.3: Conclusions)

Make sure the references are current. All in-text citations must have a reference and all references must have an in-text citation. See (“The Purdue University Online Writing Lab (OWL),” 2011, sec. APA Style)

9. Final Report

a. Purpose

- i. You will have received feedback from me on your draft report. One purpose of this module is for you to process this feedback and make such amendments to your draft report as conclude need to be made. See *Feedback: Importance and Processing* (James Drogan, 2018e) for additional information.
- ii. A second purpose if for you to make a final pass making such other amendments as you think necessary.

b. Reading

- i. Instructor feedback on the draft report.

c. Discussion

- i. Please, please, please ask and answer questions in the assigned discussion area.

Because of the nature of this module I think it inappropriate to grade this discussion.

One the other hand, the quality of your questions and answers, and the insight you bring to this discussion will be considered when deciding your final grade.

d. Written Assignment: Final Report

Schedule

Week	Monday Class Discussion Start	Discussion Stop	Topic	Discussion Points	Issue Report Points
1	1/7/19	1/13/19	1. Introduction to the Course; Setting the Context	5	
2	1/14/19	1/20/19	2. Cyber Security	5	
3	1/21/19	1/27/19	3. Blockchain	5	
4	1/28/19	2/3/19	4. Supply Chain Management	5	
5	2/4/19	2/10/19	5. The Maritime-Centric Supply Chain	5	20
6	2/11/19	2/17/19	6. Issues	5	
7	2/18/19	2/24/19		5	20
8	2/25/19	3/3/19	7. Potential Resolutions		
9	3/4/19	3/10/19			
10	3/11/19	3/17/19			
11	3/18/19	3/24/19			20
12	3/25/19	3/31/19	8. Draft Report		
13	4/1/19	4/7/19			20
14	4/8/19	4/14/19	9. Final Report		
15	4/15/19	4/21/19			20
16	4/22/19	4/28/19	Finals Week (Team Assessment and Student Course Evaluations)		

Attendance	60	28%
Discussion Points	35	16%
Issue Report Points	100	47%
Team Assessment	20	9%
Total	215	72%

Collaboration

You will be placed on a team with three or four other members depending upon the number of students registered for the course. The composition of the teams will be one that aims at mixing cultures as much as possible. I will decide the composition of the teams.

All members of the team will receive the same grade for the papers.

At the conclusion of the course I will ask each team member to assess the performance of his or her teammates. This assessment may cause the final grade on the paper for a particular student to be changed in either direction.

This assessment is made by answering the following question for each of your teammates.

Would you like to be on a team with this person in the future? Available answers are; definitely yes, probably yes, probably no, definitely no.

Students not making assessments will receive no points in this area (James Droган, 2018f, sec. Team Performance).

Discussions

The grading of discussions in all my courses is similar except for the length of the discussion. In a 14-week course such as this seven days are allotted for discussion of a topic. Penalties meted out for being late with a thread starter. Here is the table that applies in this course (James Droган, 2018f, sec. Discussions).

Day Posted	Penalty
1-2	0.00
3-4	0.50
5-6	0.75
7	1.00



References

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