



SCM541-01W

Model-Based Intelligence: Designing Effective Supply Chain Networks FALL 2024

SCM Capstone Course

August 26, 2024 – December 6, 2024

Professor Information

Adjunct Professor: Kassie Sheets

Office Hours: By Appointment- Zoom- 6:30- 8:30 PM CST Tuesday- Thursday

Office Phone: Stacy Roberts- Department Admin- 903-886-5703

University Email Address: kassie.sheets@tamuc.edu

Course Information

Materials – Textbooks:

- (1) **Designing and Managing the Supply Chain**, by Simchi-Levi, Kaminsky & Simchi-Levy; McGraw-Hill; ISBN: 4 2022-9781264566204
- (2) **Value Stream Mapping: How to Visualize Work and Align Leadership for Organizational Transformation**, Martin Osterling , 1st Edition; McGraw ISBN: 0071828915/9780071828918
- (3) Additional readings to include Journal articles and essays are included in the Course Content section of this course.
- (4) Software Required: MSEXcel, MSPower Point, MSWord
- (5) Optional Texts and/or Materials: none

Course Description

SCM541 – Model-Based Intelligence: Designing Effective Supply Chain Networks

As companies grow, managing the company's supply base, the need to plan and forecast astutely, control inventory, reduce costs, and respond to customer demands can become a daunting task. This course explores the use of mathematical optimization modeling, enterprise resource planning systems and the introduction of value-stream analysis to determine appropriate supply chain network design decisions. Ultimately, the goal is to create the most efficient and effective network possible, enabling the company to serve their internal and external stakeholders in an efficient and timely manner.

Course Requirements

Minimal Technical Skills Needed

Using the D2L learning management system, using Microsoft Word, Excel, and PowerPoint and SAP R3 software.

Instructional Methods

Section 01W – Online:

This course is delivered in an online format for independent study. You will find most of the information and materials that you will need to successfully complete the course in this syllabus and on the D2L course management website. Live lessons may be held periodically to allow students to OPTIONALLY log in and be involved in live discussion. These sessions will be recorded and available to all students.

Course Objectives and Measurements

1. Students will demonstrate proficiency in spoken communications by delivering clear and well-structured business presentations.
2. Students will demonstrate proficiency in written communications by creating clear and well-structured business documents.
3. Students will identify and evaluate ethical and sustainable business issues.
4. Students will identify and evaluate global business challenges relative to sustainability in the
5. Students will be analytical problem solvers in business environments

Student Learning Outcomes (SLOs)	Objectives - After successfully completing this course, students will be able to:	Measurements (Outcome Assessments) Objectives will be measured as follows:
2, 3, 4 and 5	Understand Value-Stream Analysis as it relates and is applied in the firms' supply chain from a strategic, systems viewpoint and integrate continuous improvement as a part of the strategic management of their respective operations.	Evaluation of: Discussion 1 – Value Stream Mapping ABA Orientation Video Discussion 2 – Designing and Managing a Supply Chain Network ABA – Inventory Management Final Project
2, 3, and 5	Recognize emerging concepts in Value Stream Mapping and Supply Chain Management Network Design, relevant to supply chain management including closed loop supply chain management, Inventory Management, Supply Chain Risk Management, to include logistics network planning, centralized and decentralized distribution strategies and supply chain management product design.	Evaluation of: ABA – Center of Gravity Case# 1 The Great Inventory Discussion 3 – Value Stream and the Supply Chain ABA – Supply Chain Management Outsourcing and Insourcing Final Project
2, 3, 4 and 5	How to design, measure and incentivize the supply chain network/supply base including financial impacts of strategic alliances in a supply chain/supply base, lifecycle assessment as well as managing and monitoring the supply chain/supply base.	Evaluation of: Discussion 3 – Value Stream and the Supply Chain Case# 2 The Smith Group ABA – Supply Chain Management Logistics and Supply Chain Management Final Project

Student Responsibilities or Tips for Success in the Course

There are individual tasks required for this course. In addition, there are several graded assignments that will require you to log in regularly into D2L. Participation is expected.

Students are required to meet the expectations listed below:

Professional Behavior: It is important that you always maintain a professional demeanor during verbal or within electronic communication. Texas A&M-Commerce expects this from you, as do current and future employers. Take special care when posting and responding to discussion board questions.

Regular and Timely Attendance and Participation: You are expected to log onto MyLeoOnline regularly. It is the responsibility of each student to keep up with the scheduled readings, discussions, and

assignments/exams.

Changes to Schedule: While I plan to stick to the class schedule, there might be occasions to modify the schedule. In these cases, all changes will be announced via the university D2L system and e-mail. It is your responsibility to become aware of any such changes.

E-mail: Routinely check your **Texas A&M University-Commerce** email account. This is my primary mechanism for communicating outside of the class and D2L. Additionally, I check my e-mail several times a day, so this is the best way to reach me. I strive to respond to any email within 24 hours (even if it just to acknowledge receipt of the email while I continue to work on the request).

Grading & Assignments Chart

Assignments	Value
Discussion Forums	20%
Application Based Activities (ABA)	15%
Comprehensive Final Exam	35%
Project Proposal & Executive Briefing	30%
Total	100%

Comprehensive Exam

The Supply Chain Management (SCM) Comprehensive Exam will test your knowledge of operations management, supply chain management, quality management, business ethics, social responsibility, as well as Supply Chain/Supply Base Sustainability. This is the Supply Chain Management (SCM) Capstone Comprehensive Exam. You must attain a **70 or higher** grade on this Exam to graduate with the Supply Chain Management Master's degree.

Assessments and Assignments

1. Assignments will be submitted in MS Word, Excel or PowerPoint only. Assignments submitted in any other software will not be reviewed, and a "0" will be recorded in the course gradebook.
2. Submitted assignments must be correctly formatted and free of grammatical and stylistic errors. Students should have some skill with software for word processing, spreadsheets, databases, graphics, and presentations as well as with web browsers and search engines. Spelling and grammatical errors will negatively impact your grade.
3. Assignments must be submitted on time. Assignments are due at the date and time listed. All work and assignments for the entire course will be available on the first day of class. While the syllabus designates specific dates for which work is assigned, you do not have to wait until the assigned date to submit it. You can work at your own pace as long as you submit assignments on or ahead of assignment due dates.

You will have until **11:59 p.m. CST** on the assignment due date to submit work.
NOTE: Late submissions will not be reviewed and a "0" will be recorded in the course gradebook.

4. **Format & Naming Convention:** Put your "LastnameFirstname" in the file name of all submitted documents. Example: "SheetsKassie_Assignment_1.docx."
5. ***Make-up Exams or Late Assignments are only accepted if you obtain university approved documentation for your excuse. There are no make-up assignments for poor performance.***

COURSE SCHEDULE:

A course schedule is included at the end of this syllabus

Technology Requirements

Browser Support

D2L is committed to performing key application testing when new browser versions are released. New and updated functionality is also tested against the latest version of supported browsers. However, due to the frequency of some browser releases, D2L cannot guarantee that each browser version will perform as expected. If you encounter any issues with any of the browser versions listed in the tables below, contact D2L Support, who will determine the best course of action for resolution. Reported issues are prioritized by supported browsers and then maintenance browsers.

Supported browsers are the latest or most recent browser versions that are tested against new versions of D2L products. Customers can report problems and receive support for issues. For an optimal experience, D2L recommends using supported browsers with D2L products.

Maintenance browsers are older browser versions that are not tested extensively against new versions of D2L products. Customers can still report problems and receive support for critical issues; however, D2L does not guarantee all issues will be addressed. A maintenance browser becomes officially unsupported after one year.

Note the following:

- Ensure that your browser has JavaScript and Cookies enabled.
- For desktop systems, you must have Adobe Flash Player 10.1 or greater.
- The Brightspace Support features are now optimized for production environments when using the Google Chrome browser, Apple Safari browser, Microsoft Edge browser, Microsoft Internet Explorer browser, and Mozilla Firefox browsers.

Desktop Support

Browser	Supported Browser Version(s)	Maintenance Browser Version(s)
Microsoft® Edge	Latest	N/A
Microsoft® Internet Explorer®	N/A	11
Mozilla® Firefox®	Latest, ESR	N/A
Google® Chrome™	Latest	N/A
Apple® Safari®	Latest	N/A

Tablet and Mobile Support

Device	Operating System	Browser	Supported Browser Version(s)
Android™	Android 4.4+	Chrome	Latest
Apple	iOS®	Safari, Chrome	The current major version of iOS (the latest minor or point release of that major version) and the previous major version of iOS (the latest minor or point release of that major version). For example, as of June 7, 2017, D2L supports iOS 10.3.2 and iOS 9.3.5, but not iOS 10.2.1, 9.0.2, or any other version. Chrome: Latest version for the iOS browser.
Windows	Windows 10	Edge, Chrome, Firefox	Latest of all browsers, and Firefox ESR.

You will need regular access to a computer with a broadband Internet connection. The minimum computer requirements are:

- 512 MB of RAM, 1 GB or more preferred

- Broadband connection required courses are heavily video intensive
- Video display capable of high-color 16-bit display 1024 x 768 or higher resolution

You must have a:

- Sound card, which is usually integrated into your desktop or laptop computer
- Speakers or headphones.
- *For courses utilizing video-conferencing tools and/or an online proctoring solution, a webcam and microphone are required.

Both versions of Java (32 bit and 64 bit) must be installed and up to date on your machine. At a minimum Java 7, update 51, is required to support the learning management system. The most current version of Java can be downloaded at: [JAVA web site http://www.java.com/en/download/manual.jsp](http://www.java.com/en/download/manual.jsp)

Current anti-virus software must be installed and kept up to date.

Running the browser check will ensure your internet browser is supported.

Pop-ups are allowed.

JavaScript is enabled.

Cookies are enabled.

You will need some additional free software (plug-ins) for enhanced web browsing.

Ensure that you download the free versions of the following software:

- [Adobe Reader https://get.adobe.com/reader/](https://get.adobe.com/reader/)
- [Adobe Flash Player \(version 17 or later\) https://get.adobe.com/flashplayer/](https://get.adobe.com/flashplayer/)
- [Adobe Shockwave Player https://get.adobe.com/shockwave/](https://get.adobe.com/shockwave/)
- [Apple Quick Time http://www.apple.com/quicktime/download/](http://www.apple.com/quicktime/download/)

At a minimum, you must have Microsoft Office 2013, 2010, 2007 or Open Office.

Microsoft Office is the standard office productivity software utilized by faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is the standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required. If you do not have Microsoft Office, you can check with the bookstore to see if they have any student copies.

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

COMMUNICATION AND SUPPORT

Brightspace Support

Need Help?

Student Support

If you have any questions or are having difficulties with the course material, please contact your professor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778 or click on the [or click on the words "click here"](#) to submit an issue via email.



System Maintenance

Please note that on the 4th Sunday of each month there will be System Maintenance which means the system will not be available 12 pm-6 am CST.

Interaction with Professor Statement

I will make every effort to return your weekly assignments in a few days if all are submitted when due. The remaining assignments usually take about a week to return since they are so extensive.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

You are expected to be an active participant in the simulation decisions. Your participation will be evaluated, so please make an effort to learn the material. There will be no Extra Credit opportunities, so do your best every time.

Syllabus Change Policy

The syllabus, found on the last page of this document is a guide. Circumstances and events, such as student progress, may make it necessary for the professor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](#).

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: [Netiquette](#)

<http://www.albion.com/netiquette/corerules.html>

TAMUC Attendance

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedure 13.99.99.R0.01](#).

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

Academic Integrity

Academic honesty is the foundation of the university community. Cheating, plagiarism, or other acts of academic dishonesty compromise the integrity of the academic process and community and are subject to disciplinary action. For this class, plagiarism will result in automatic failure (final course grade of F).

Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

References:

13.99.99.R0.03 Undergraduate Academic Dishonesty

13.99.99.R0.10 Graduate Student Academic Dishonesty

An academic honesty policy has been posted under the Assignments Tab in D2L. You should read this document, sign it and submit by the due date in the syllabus.

ADA Statement

Students with Disabilities

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services:

Texas A&M University-Commerce Waters Library- Room 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: studentdisabilityservices@tamuc.edu

Website: [Office of Student Disability Resources and Services](#)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University- Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M- Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to: (<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAnd Students/34.06.02.R1.pdf>) and/or consult your event organizer). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M- Commerce campuses. Report violations to the University Police Department at 903- 886-5868 or 9-1-1.

Tenets of Common Behavior Statement

All students enrolled at the university shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment (See current Student Handbook).

DATE (MONDAY)	WORK ASSIGNED: READINGS, ASSIGNMENTS, & EXAM	WORK DUE 11:59 PM CST on the Date Below	Knowledge Assessment
26-Aug	Class Introduction	1-Sep	About You-Submit a PPT or Canva slide
	Academic Honesty Statement		Academic Honesty Statement

2-Sep	Textbook: Value Stream Mapping Chapter 1		
9-Sep	Textbook: Value Stream Mapping Chapter 2	15-Sep	Discussion Question 1
16-Sep	Textbook: Value Stream Mapping Chapter 3	22-Sep	ABA- Application Based Activity Orientation video due
23-Sep	Textbook: Value Stream Mapping Chapter 4	29-Sep	Discussion Question 2
30-Sep	Textbook: Value Stream Mapping Chapter 5 & 6	6-Oct	Discussion Question 3
7-Oct	Textbook: Designing & Managing Supply Chain	13-Oct	ABA- Inventory Management- Inventory Costs
	Chapter 1 Introduction to Supply Chain		
	Chapter 2 Introduction to Risk		
14-Oct	Chapter 3 Network Planning	20-Oct	ABA - Center of Gravity/Centroid Method, Factor Rating Method and Distance Measurement
21-Oct	Chapter 4 Supply Contracts	27-Oct	Team Initial Proposal Due
	Chapter 5 Supply Chain Integration		
28-Oct	Chapter 7 Distribution Strategies	3-Nov	ABA - Lean Supply Chain Management- Kanban Pull System
	Chapter 8 Strategic Alliance		
4-Nov	Chapter 9 Procurement & Outsourcing	10-Nov	ABA – Supply Chain Management- Outsource vs Insource
	Chapter 10 Coordinated Product & Supply Chain Design		
11-Nov	Chapter 11 Flexibility	17-Nov	ABA- Supply Chain Management- Logistics & Supply

	Chapter 12 Customer Value		Chain Management Terms
18-Nov	Chapter 13 Risk Management	24-Nov	Hold a team meeting in relation to the proposal & have the team lead submit a brief summary of the meeting
	Chapter 14 Sustainable Supply Chains		
25-Nov	Thanksgiving Break		Nothing due this week
2-Dec	Value Stream Project & Executive Briefing	4-Dec	Final Group Proposal
		5-Dec	Final Group Presentations
7-Dec (Saturday)	Comprehensive Final Exam	11-Dec	Exam Opens 12/7 @ 8AM & Closes 12/11 @ 11:59PM CST