MGMT-549 Supply Chain Management Technology

Spring 2016 Course Syllabus
Moravian College (1/18/16 – 3/7/16)
Campus: Bethlehem, PA

Instructor	Amit Kar	**Course Code**	MGMT-549 HA
Office	Benigna Hall 211	**Office Hours**	By appointment
Class Room, Time	PPHAC 338 Saturdays 9:00 am -12:00 noon	**Course Name**	Supply Chain Management Technology
Phone	610-861-1400	**Fax**	610-861-1466
Email	Meank01@moravian.edu, mamrin2001@yahoo.com	**Credits**	3
Blackboard	http://blackboard.moravian.edu		

Course Description:

This course examines the use of various individual technologies and technology systems to enhance the performance of the supply chain function in organizations. Technologies discussed include barcode systems, RFID, auto-dispensing devices, and others. Systems such as enterprise resource planning systems (ERP), work management, purchasing, inventory, scheduling and accounts payable/receivable, as well as e-commerce and e-marketing, are assessed for their strategic value to organizations. Technology implementation design and management is also examined with a focus on performance measurement.

General Description:

The course explores the changing business paradigm in the context of supply chain management (SCM), both globally and locally. The role of information technology as a key enabler is emphasized in servicing of both inbound and outbound supply chain around design, production, distribution and consumption of goods. The uses of various computational algorithms, appropriate implementation technologies or systems to enhance supply chain execution in organizations are discussed. Value of Business Intelligence (BI) is examined and peripheral functions/technologies with potential to impact SCM are introduced, as applicable.

Student Learning Objectives (SLOs):

After completing this course, students will be able to

1. To develop a broad understanding of how the rationale of Supply Chain dynamics drives technology choices.
2. To appreciate that wealth creation in businesses will require organizations to shift focus from a paradigm of pure manufacturing excellence to one that also includes best practices in inbound and outbound supply chains.
3. To build a foundation for understanding choice of the right ‘steroids’ to suit the size and nature of a business for sustained competitive advantage.
4. To view the business organization as both producer and consumer of goods or services, participating in an extended network.
5. To see the contributions of various kinds of enterprise information systems in enabling businesses in general and supply chain management in particular.
6. To see the synergies between Supply Chain Management (SCM), Product Data Management (PDM), Product Lifecycle Management (PLM), Product Realization Process Management (PRPM) and Customer Relationship Management (CRM).

Program Learning Objectives Related to This Course:

Students may expect to gain knowledge and skills in the following Bloom Category SLOs, as defined for the Moravian MBA:

{1, 3, 4, 18, 19, 20, 21, 22, 23, 25, 26, 27, 28}

Text and Articles:

Title	Author	Publisher	ISBN	Year
Supply Chain Logistics Management, 4th Edition	Bowersox, Class, Cooper	McGraw-Hill, Irwin	ISBN: 978-0-07-802405-4	2013

Optional Information Sources:

Reference Texts:

Title	Author(s)	Publisher	ISBN	Year
RFID Sourcebook	Sandip Lahiri	IBM Press, Pearson plc	0-13-185137-3	2006
Supply Chain Management 3rd Edition – Strategy, Planning & Operation	Sunil Chopra, Peter Meindl	Pearson – Prentice Hall	0-13-173042-8	2007
Designing and Managing the Supply Chain - 3rd Edition Concepts, Strategies & Case Studies	David Simchi-Levi, Philip Kaminsky, Edith Simchi-Levi	McGraw-Hill Irwin	13:978-0-07298239-8	2008
Operations Now: Supply Chain Profitability and Performance	Byron J. Finch`	McGraw-Hill Irwin	13:978-0-07-312449-0	2008
Globality: Competing with Everyone from Everywhere for Everything	Hal Sirkin, James Hemerling, Arindam Bhattacharyya	Business Plus	13:978-0-446-17829-7	2008
E-Business and ERP – Rapid Implementation and Project Planning	Murrell G. Shields	Wiley	ISBN 0-471-40677-5	2001
Business Driven Technology	Paige Baltzan, Amy Phillips, Stephen Haag	McGraw-Hill Irwin	ISBN 978-0-07-337674-5	2008

Recommended Readings:

Being a topic that impacts a vast area spanning procurement, sourcing, MRP, forecasting, scheduling, aggregate planning, distribution, receiving, communications, etc. no single text can do justice to it all. Students are encouraged to consult any other available literature. Following are good reference texts:

1. Business Logistics/Supply Chain Management, - Ballou, R. 2003 5th edition (or later), Prentice Hall
2. Business Driven Information Systems– Baltzan, Phillips, 2009 2nd Edition, McGraw Hill – Irwin
3. Principles of Operations Management – Heizer, Render, 7th edition, Pearson – Prentice Hall

4. Competing in the 21st century supply chain through supply chain management and enterprise resource planning integration. By: Koh, S. C. Lenny; Saad, S.; Arunachalam, S**.. International Journal of Physical Distribution & Logistics Management**, 2006, Vol. 36 Issue 6, p455-465.
5. BUILDING A COLLABORATIVE SUPPLY CHAIN. Chain Store Age, Jul2006 Supplement, Vol. 82, p38A-38A
6. Technical and management perceptions of enterprise information system importance, implementation and benefits. By: Hsin Hsin Chang. **Information Systems Journal**, Jul2006, Vol. 16 Issue 3, p263-292
7. Measuring Supply Chain Performance: http://www.log.wi.tum.de/fileadmin/w00bkn/www/GlobalSCS2012/Measuring_supply_chain_performance.pdf: By Beamon, Benita M., University of Cincinatti, Cincinatti, OH, USA.

All these texts may not be available in the Reeves library. However, librarians may be able to put in a request to obtain them over inter-library loan. In any case, there is no expectation for students to have these texts in their possession.

Various references will be cited, to provide background understanding of the lectures. Online resource in the Reeves library is also available to the students at: http://home.moravian.edu/public/reeves/articles/index.htm. However, in some cases only an abstract, instead of the entire text, may be available for viewing. Students may, however, be able to request to obtain an article of interest through the library.

Following readings are recommended to frame class discussions, or as a supplement to lectures:

1. Made in America, Again – Why Manufacturing Will Return to the US. By Sirkin, Harold L.; Zinser, Michael; Hohner, Douglas, The Boston Consulting Group, August 2011
2. Realizing the Promise of E-Business: DEVELOPING AND LEVERAGING ELECTRONIC PARTNERING OPTIONS. By: Chatterjee, Debabroto; Segars, Albert H.; Watson, Richard T.. ***California Management Review***, Summer2006, Vol. 48 Issue 4, p60-83, 24p.
3. http://ocw.mit.edu/OcwWeb/Engineering-Systems-Division/ESD-260JFall2003/CourseHome/index.htm
4. Competing in the 21st century supply chain through supply chain management and enterprise resource planning integration. By: Koh, S. C. Lenny; Saad, S.; Arunachalam, S.. International ***Journal of Physical Distribution & Logistics Management***, 2006, Vol. 36 Issue 6, p455-465,
5. IMPROVE OUT-OF-STOCK METHODS AT THE SHELF. By: Gruen, Tom; Corsten, Daniel. ***Chain Store Age***, Jul2006 Supplement, Vol. 82, p35A-35A

The Recommended Readings and Reference Texts, noted above, are suggestions. These are not all inclusive – particularly considering the dynamics of this field. Students are encouraged to identify and share with the class any additional material that is relevant and would enhance the learning.

Course Outline (tentative):

Date	Topic	Required Text Reading
1/23/16	Introductions, Orientation, Overview; SCM perspectives, globalization – multi-national to trans-national; changing paradigms- market vs. customer, interaction around transaction, increasing influence of retail and effect on SCM; Team Project problem statement. Homeworks assigned.	Text: Ch 1,
1/30/16	Technology governance as businesses transform; decomposition of vertical monoliths co-existing in a horizontal eco-system. Team Project problem refinement and clarifications, as needed. *Individual project presentations.*	Text: Ch 5 Rec: 4, 5, 6,7
2/6/16	Customer Accommodation. The z-dimensional adaptive corporation, core vs. common. Is information inventory or capital? Metcalfe's law of the network; using internet, intranet and extranet; Product/Service vs Enterprise integration, PLM or PDM vs ERP. **Team Project Ph I – Individual Proposal Presentations, vote, agree on unified approach.**	Text: Ch 3

2/13/16	Supply Chain execution in different production models; production scheduling, job sequencing and coordination of in-bound supply chain with/without MPS, finite capacity scheduling, S&OP, Forecasting, Aggregate Planning, CPFR. *Individual project, HW presentations.*	Text: Ch 6
2/20/16	Supplier score card. Supplier managed inventory, EOQ, POQ or MOQ, 3rd party logistics, Manage material & time buffers Steroids needed: Kanban, RFID, Digital, Personal, Virtual, EDI to XML. *Individual project, HW presentations.*	Rec: 1,2
2/27/16	Supply Chain Nirvana: Supplier Relationship Management, postponement, Change, BOM Management & control. *Individual project, HW presentations.*	Text: Ch 14 Rec: 3, 7, 8
3/5/16	Supply Chain Collaboration, Performance assessment. *Individual project, HW presentations*	Text: Ch 14, 15, 16 Rec: 3, 8
3/12/16	**Final Team Project Presentations**	

Assignments

Homework:

Each pair (or sub-group of 2 or more) of students is given a case study, with questions at the end. Students may have the option to choose the case study to work on and split the questions to answer. Answers are submitted in writing and also presented to the class as scheduled. Collaboration within a sub-group is permitted.

Individual Project:

The individual project will be on technology use in any area of SCM. It can be any one of the following:

1. Explanation of a problem, possible solution approaches considered and choice – with justification – on the best solution.
2. A research or white paper.
3. Engaging the class in determining – at a high level - solution approaches to a problem.

All of the above will require a 15-20 min presentation in class. Options 1 or 2 will additionally require a written paper. The written paper shall be 7-10 pages of double-spaced, 10-12 size font type. Hard and soft copies of the paper and the presentation documents are required to be submitted. See below for format and style guidelines.

Option 3 will first require a written description of the problem and its attendant issues. This document will be distributed to the class in advance to allow sufficient time so people may come prepared with questions, comments or ideas for a meaningful class discussion. The distribution of this problem description may be accompanied by a class presentation. The observations and inferences from the class discussion are reported in class at the final presentation and documented in a paper. Hard and soft copies of the paper and the presentation documents are required to be submitted.

Work on each individual project is expected to enhance the collective learning experience of the class. The purpose is to stimulate class discussion around a student's chosen topic. About 5-10 minutes time will be set aside for Q&A, after each presentation. Another student will serve as scribe noting class comments/responses. These notes are handed over to the presenter, who may use that information to prepare the final write-up. Active participation in Q&A is important. A small portion of the grade on this project will depend on this. That means the rest of the class will be assessed on the kind of questions, comments they make on the material presented.

All written papers are to be handed over to the instructor by the last class meeting in hard copy and electronic form. Thus, earlier a student makes the presentation the longer the available time to produce the final document. Preferably the presentations are evenly distributed between the 2nd and 5th class meetings.

Written Paper – Style Guide:

All written papers, submitted for a grade, must meet the following guidelines:

- Individual Project paper Options 1 or 2, Length: 7-10 pages of double-spaced, size font type.
- Individual Project paper Option 3, Length: not to exceed 2 pages.
- Font size: 10-12; Font Type: Times New Roman, or similar.
- Content must have Introduction, Body and Conclusion sections.
- All sections must have numbered headings and levels, as appropriate.
- Table of Contents must specify page numbers at least at the Level 1 Heading of the Section numbers.
- Individual Project paper Option 1, e.g. White or Research Paper must carry an Abstract that precedes the entire document. The Abstract summarizes the content of the paper in no more than two paragraphs.
- The White or Research Paper must state current status of the situation/problem investigation/research, etc., and cite references in literature, e.g. professional journals, conference publications, etc.
    - ✓ References in body of document will call out numbers, of the particular document refered
    - ✓ All references, are numbered and listed in a "Bibliography" section at the end of the document
    - ✓ The format of the annotated reference is thus: "<Name of article>, <Author(s) name(s) by Last name, first, middle name initials>,<Name, Year, Month, etc. of Publication (or ISBN in case of book)>, <Page numbers>

Guidelines will be elaborated further in class. Authoring of documents using MS-Word is strongly recommended for convenience in maintaining the style formats, suggested.

Hard and soft copies of the papers and the presentation documents are required to be submitted.

Late submissions will be penalized @ 10% for each day late. The instructor reserves the right not to accept work submitted more than a week late.

Team Project:

Please see accompanying document about The Moravian Engine Company. This will require research, analysis with individual and team-coordinated presentations on the 3rd and last class meetings. Do feel free to ask questions for clarifications or, to help understand the scope of the problem to be addressed. The kind of questions you get clarification on will help develop your individual proposals that would provide the solution approach to be discussed and agreed on at the 2nd class meeting.

Grading Summary:

Grade Allotment		**Grade Distribution**			
Class Participation	10%	**Range**	**Grade**	**Range**	**Grade**
Homework	10%				
Individual Project	30%	93-100%	A	76-79%	C+
Team Project		90-92%	A-	70-75%	C
Phase I	20%	86-89%	B+	65-69%	D
Final	30%	80-85%	B	64% or below	F

Other Important Information

Academic Honesty:

Moravian College's policy as stated in the Academic Policy Manual holds. Except for the team project, all individual work must indeed be just that. Plagiarism is strongly discouraged, and should not be attempted. In written submissions, students are required to provide references to published material wherever appropriate. Reference material can be texts, journals, conference proceedings or documents found on the internet.

Please be sure to follow all copyright laws in using any material for this course.

Attendance:

This is a graduate level class that will be especially intense due to its compressed duration. Students are encouraged not to miss any class. The class meets once a week, with a significant amount of material being covered at each meeting, and building on itself. A student that misses two classes in a row should talk to the instructor as soon as possible. There will be two excused absences for business or personal reasons.

Blackboard:

The course will be set up in Blackboard. After the course is made available, the students will register themselves with their name, preferred email address, etc.

Students are requested to visit http://home.moravian.edu/public/cit/_help/blackboard/index.htm to familiarize themselves on how the Blackboard may be used for communications during the term of the course. Instructor announcements, course documents will be posted on the Blackboard from time to time. Students will be expected to use the Blackboard's "Discussion Board" and "Virtual Class Room" features for communicating and planning for the Team Project.

A prerequisite for using the Blackboard is a login ID. Students should get college computer network account logins at the earliest opportunity at the Comenius Center. For any questions on using the Blackboard, please email bbadmin@moravian.edu, or call Ron Szabo at 610-625-7986.

Students are expected to actively participate in class and weekly Blackboard discussions and other assignments. Participation is defined as working actively within the assigned group(s), adding to the discussion of in-class activities whether role play debriefing, case analysis, or learning opportunities in the classroom, and posting responses to and questions for discussion threads assigned in Blackboard, as appropriate.

It is critical to note that participation in Blackboard discussion threads means posting at least four days per week. A post must be substantial in nature. That is, posting "I agree" as a response to another's posting does not count as participation. Posted comments must be substantive so as to further the discussion being conducted. Posting questions that raise important issues in the thread or ask for clarification of a posting are equally valid.

Canceled Classes

Class maybe cancelled due to weather or for some other reason. In the case of cancellation, the instructor will post an announcement on Blackboard to inform students of the cancellation. It is the student's responsibility to check Blackboard prior to each class to determine if class is canceled.

Copyrights

Only the copyright holder has the right to make copies of books, articles, cases, software, and other copyrighted material. Anyone else (you, the reader) must have the copyright holder's permission to make copies unless the item being copied falls

under the fair use proviso or is a work in the public domain. You must get permission from the copyright holder to make any copies legally of any copyrighted material.

Disabilities:

If you wish to request accommodations in this class for a disability contact Elaine Mara, assistant director of academic and disability support in the lower level of Monocacy Hall, or by calling 610-861-1401 (1401 on campus). Accommodations cannot be provided until authorization is received from the Academic & Disability Support Office.

e2Campus

In the event of an emergency the system called e2Campus allows Moravian College to send text messages to the cell phones of registered members of the campus community with information about what is happening and/or what precautions should be taken. Up to two cell phone numbers and two e-mail addresses per user may be registered. This service is an integral part of the College's emergency response system. If you are not already registered on the system, please do so as soon as possible. To register for e2Campus visit http://intranet.moravian.edu/e2campus/index.asp from a computer on Moravian's campus.

Expectation of Students:

Normal classroom decorum and professional behavior conducive to learning are expected of students whether physically in the classroom, in (project) team meetings or online communication via Blackboard, Email, etc. Participation in class discussions is encouraged. However, engaging in side conversations or using cell phones, pagers or other communication devices when class is in session, is to be avoided unless related to the topic at hand.

Grading Judgment:

It is within the purview of the instructor to apply qualitative judgment in determining grades for an assignment or for a course.

Inclement Weather

In the case of inclement weather, the instructor will post a message on Blackboard to inform students if the class is canceled. It is the student's responsibility to check Blackboard prior to each class period for cancellations due to inclement weather.

Inclusion

Moravian College is a welcoming community that embraces and values the diversity of all members of the campus community. We acknowledge the uniqueness of all individuals, and we seek to cultivate an environment that respects, affirms, and defends the dignity of each member of the community. Moravian College complies with all federal and state laws regarding nondiscrimination in recruitment, admission, and employment of students, faculty, and staff.

You may wonder what that statement means. For the purposes of this class, the statement means that all persons, regardless of actual or perceived race, color, sex, religion, ancestry, genetic information, national origin, sexual orientation, gender identity or expression, familial status, marital status, age, mental or physical disability, use of guide or support animals and/or mechanical aids have an equal opportunity to participate and learn in this class and are to be treated equally in an inclusive and supportive manner.

In other words, in this class we all promote a culture of inclusion that welcomes and supports people of varying backgrounds, different viewpoints, experiences, talents, and ideas. By respecting and valuing these differences we can make problem solving and decision making multi-dimensional leading to more learning and better outcomes for all, including project clients.

Behaviors such as those listed in the table below will lead to an inclusive classroom culture.

Behavior	Description
Listening to understand	Listening with an open mind to fully understand all aspects of a situation
Seeing multiple points of view	Understanding that our perspective is not the only one when looking at a situation, issue, or person
Giving and receiving feedback	Inviting and giving feedback
Enhancing inclusion	Helping others feel included and involved
Addressing inappropriate behavior	Acknowledging inappropriate behavior; communicating expectations and consequences for repeated behavior.

Source: MIT Human Resources, Diversity & Inclusion, http://hrweb.mit.edu/diversity/affirmative-action-plan-admins/resources

Syllabus Status:

This syllabus and the course contents are subject to change at the discretion of the instructor. Changes will be made, however, only after discussion with students in the class.

Workload:

Students can expect to work at least 2.5 hours on average outside of class in reading, preparation and project activities for each hour of class time.