MBA 532: Operations and Technology Management

School of Business and Management

3 Credits
Effective Date (7/1/2021)

Access to the Internet is required.
All written assignments must be in Microsoft-Word-compatible formats.
See the library's APA Style Guide tutorial for a list of resources that can help you use APA style.

Faculty Information

Professional experience information for instructors is found under *Faculty Information* in the online course menu.

Contact Information

Contact information for instructors is found under *Faculty Information* in the online course menu.

Course Description

This course covers end-to-end supply chain systems at a global level, and how operations and technology management enable that system as a whole. Operations is a key function of a business organization that is responsible for planning, organizing, and controlling resources to produce goods and/or services. To achieve the highest effectiveness, the operations function needs to be considered in conjunction with the organization's global supply chains. In today's highly competitive global business environment, efficient management and integration of operations and supply chain functions play a significant role in an organization's success. The goal is not limited to cost savings but also includes leveraging these functions strategically to create value and to make decisions that promote sustainability and ethical behavior. In this course, students will evaluate opportunities to improve a real-world organization's supply chain, and propose strategies to leverage current and emerging technologies to enhance efficiency, sustainability, and scalability. Students will also create comprehensive, integrated supply chain plans that enable a real or hypothetical start-up venture to bring a product to market.

Course Resources

Operations Management, Managing Global Supply Chains, 2nd edition, Ray R. Venkataraman and Jeffrey K. Pinto, SAGE Publications.

Required and recommended resources to complete coursework and assignments are found on the course [Reading List](#). The reading list can be found under *Course Information* in Blackboard as well as from the library homepage ("Find Your Textbook" button).

Note: Required resources that must be purchased by the student are tagged "Purchase from a vendor of your choosing." Required resources with a direct link, "Available through CityU Library", are available electronically at no cost to students.

Students in Canada may purchase course resources from the [Canada Bookstore](#), and students outside the U.S. and Canada should contact their advisor or textbook coordinator for additional information.

Course Outcomes

This course will prepare students to:

- Generate and assess multiple alternative strategies to make recommendations for implementation.

- Leverage proper technologies to enhance organizational systems, responsiveness, and performance.

- Apply fundamental supply chain concepts, methods, tools, and techniques to enhance a firm's supply chain.

- Develop a comprehensive, integrated supply chain plan that enables sustainable and ethical production and distribution of a product to buyers.

- Evaluate a supply chain to identify operational areas in need of improvement or adaptation.

Grading Scale

The grades earned for the course will be calculated using City University of Seattle's decimal grading system, found in the current University Catalog (https://www.cityu.edu/catalog/).

Grading rubrics with details on how each assignment will be graded are located under *Assignments* and/or in *My Grades* in the online course menu. Students should review the rubric for each assignment prior to completing their work in order to understand how it will be assessed.

Course Assignments and Grading

Overview of Required Assignments	% of Final Grade
Leveraging Internet of Things (IoT) Technology for a Smarter Supply Chain	20%
Team Project Plan and Presentation: Planning a Startup's Supply Chain	35%
Quiz	15%
Instructor Determined Assignments and Activities	30%
TOTAL	**100%**

Leveraging the Internet of Things (IoT) Technology for a Smarter Supply Chain
(20% of Final Grade)

A supply chain is an entire system of producing and delivering a product or service, from the beginning stage of sourcing the raw materials to the final delivery of the product or service to end-users. The IoT enables more and faster information across the supply chain for enhanced decisions, planning, and execution. For this assignment, students will select a small or medium-sized organization that is not currently benefiting from an IoT system or information about its utilization of IoT is not publicly available. Students should submit their choice of the company to the instructor for approval. Upon the instructor's approval, students will conduct research to acquire information about the company's existing supply chain system or as an alternative, students can create and present a high-level supply chain network for the company using their research findings. At a minimum, the proposed supply chain should reflect steps for producing, transporting, and distributing the product or service. Next, students will identify and present targeted IoT solutions for each component/phase of the company's supply chain network to create a smarter supply chain. Students should provide a detailed description for each IoT solution and explain how it can enhance and benefit the company's supply chain. In addition to addressing how each solution might contribute to a specific supply chain component, it is critical to analyze the proposed solutions as an IoT system and explain how the collection of the interconnected IoT devices benefit the company's supply chain. Students may utilize the following suggested outline to organize their discussions:

- **Executive Summary**: Include information about the company's name, location, product(s)/service(s), key focus areas, target market, size/scale, and other critical insights. Students should also include the purpose of the assignment in this section.
- **Supply Chain Analysis**: Include a detailed description and analysis of the company's supply chain or of the presumed supply chain based on research findings. This section should begin with a graphical representation of the supply chain and its key components/phases. Describe the strengths and weaknesses in the supply chain, highlighting the most impactful opportunities for improvement.
- **Proposal**: Include a detailed description of the proposed IoT solutions and their benefits for the associated components of the company's supply chain. A second graphical representation with the IoT solutions added to corresponding supply chain phases can be helpful.
- **Benefits Analysis:** An analysis of how the interconnected IoT solutions as a whole (network/system) can benefit the company's supply chain. Emphasis should be placed on the synergy and interrelations among the proposed IoT devices.

This paper will be 5-7 pages (excluding cover page and reference page); APA writing conventions should be followed with a minimum of six (6) sources referenced and cited.

Components - % of grade:

- Use of current and emerging technologies (20%)
- Needs analysis and identification of opportunities for improvement (20%)
- Final recommendations, including the analysis of multiple possible strategies (20%)
- Application of supply chain concepts (20%)
- Technical Requirements (15%)
- Citations (5%)

Leveraging the Internet of Things (IoT) Technology for a Smarter Supply Chain Grading Rubric			
Component	**Below Standard**	**Approaching Standard**	**At Standard**	**Exceeding Standard**
	0.00-68.74%	68.75 – 86.24%	86.25 – 93.74%	93.75 - 100%
Use of current and emerging technologies	Does not identify opportunities to leverage technology. Fails to define requirements, or adequately research solutions. Implementation plan lacks definition of success or metrics.	Identifies opportunities to leverage technology. Attempts to define requirements, identify and assess possible solutions, but work may not be thorough. The connection between the proposed solution and improved operational efficiency, user experience and/or organizational performance is emerging, but requires more clarity or	Identifies opportunities to leverage technology. Defines requirements, researches, selects and implements solutions. Planning shows a clear connection between the solution and likelihood of improving operational efficiency, user experience and/or organizational performance through clearly defined success metrics.	Identifies high-impact opportunities to leverage technology. Defines requirements informed by multiple stakeholders, assesses and selects solutions using clear prioritization of factors. Implementation plan includes clear success indicators for improving operational efficiency, user experience, and/or organizational performance.

				rationale.
Needs analysis and identification of opportunities for improvement	Analyzes supply chain, but struggles to evaluate performance and misses obvious opportunities for improvement or adaptation, or sometimes misidentifies opportunities.	When evaluating a supply chain, identifies some strengths and opportunities for improvement, but misses others and needs guidance.	When evaluating a supply chain, identifies areas of strength as well as obvious areas in need of improvement and adaptation.	When evaluating a supply chain, identifies strengths and obvious areas in need of improvement, but can also identify nuanced and subtle opportunities for adapting and improving performance.
Final recommendations, including the analysis of multiple possible strategies	Is unable to use tools to generate multiple alternative strategies, or strategies are not informed by internal/external analyses. Recommendations for implementation may be lacking clear rationale.	Generates multiple alternative strategies, but connections to the internal/external analyses or use of appropriate tools are somewhat unclear. Recommendations for implementation have some rationale.	Generates multiple alternative strategies, clearly informed by the internal/external analyses and use of appropriate tools. Each possible alternative is assessed and recommendations for implementation have a strong rationale.	Generates multiple alternative strategies, each clearly informed by the internal/external analyses and use of appropriate tools. Each possible alternative is critically assessed and recommendations for implementation have a strong and persuasive rationale.
Application of supply chain concepts	Applies few supply chain concepts, methods, tools, and techniques, or applies them inappropriately, incompletely, or in limited parts of the supply chain plan.	Applies some supply chain concepts, methods, tools, and techniques in a general and appropriate way. At times the description or application may be incomplete.	Applies several supply chain concepts, methods, tools, and techniques appropriately, and sometimes in advanced or novel ways, to support the plan for supply chain improvements across multiple parts of the supply chain plan.	Applies several supply chain concepts, methods, tools, and techniques in advanced or novel ways, to support the plan for supply chain improvements. Applies concepts across all parts of the supply chain plan.
Technical Requirements	Multiple required sections, headers, diagrams, illustrations, and the like, as described in the syllabus are missing, severely impacting the reader's ability to understand the writer's main ideas. Writing clarity is severely compromised due to poor spelling, grammar, punctuation, vocabulary, structure, and/or organization. APA conventions are not followed.	One or more required sections, headers, diagrams, illustrations, and the like, as described in the syllabus are missing, with minor impact on the reader's ability to understand the writer's main ideas. Writing clarity is generally acceptable, with some errors in spelling, grammar, punctuation, vocabulary, structure, and/or organization. Errors do not impede the reader's overall understanding. APA conventions are only sometimes followed.	All required sections, headers, diagrams, illustrations, and the like, as described in the syllabus are included. Writing is clear, with minimal or no errors in spelling, grammar, punctuation, vocabulary, structure, and/or organization. APA conventions are consistently followed.	All required sections, headers, diagrams, illustrations, and the like, as described in the syllabus are included. Writing is clear, with vocabulary, structure and organization that enhances the readers ability to understand the writer's intent and purpose. The writing is almost entirely free of errors in spelling, grammar, and punctuation. APA conventions are strictly followed.
Citations	Fails to cite and reference sources to support ideas.	Attempts to cite and reference credible and	Consistently cites and references credible and	Consistently cites and references credible and

		relevant sources, appropriate to the discipline, to support ideas.	relevant sources, appropriate to the discipline, to support ideas.	relevant sources, appropriate to the discipline, to support ideas.
		The required minimum number of citations/references is not met.	The required minimum number of citations/references is met.	Exceeds the required minimum number of citations/references.

Team Project Plan and Presentation: Planning a Startup's Supply Chain (35% of Final Grade)

Students will self-select into teams to develop a supply chain plan for a startup. Suggestions for the startup will be provided by the instructor that students can choose from or teams can develop their own startup idea and utilize it for this project upon the instructor's approval. The plan should align with a supply chain system with key components including raw materials, supplier(s), manufacturer, distributor, retailer, and consumer (i.e., the steps it takes to get the product from its original state to the customer). Teams will develop five (5) types of plans that will collectively represent the overall supply chain plan for the startup: (1) Product planning, (2) production planning, (3) distribution planning, (4) sales planning, and (5) sustainability planning. The instructor will provide a detailed template that students should utilize to develop their supply chain plan. The template will help students identify the building blocks that they will need to develop for each of the five plans listed above. The final plan should reflect the network between the startup and its supplier(s) that enables the production and distribution of a specific product to the buyer. The final plan will be 15-20 pages (excluding cover page and reference page); APA writing conventions should be followed with a minimum of 12 sources referenced and cited. Each team will also present its final supply chain plan to the class. If the course is in an online format, teams will record and submit their narrated presentation. The presentation should be approximately 15 minutes in length (12-15 slides), covering the key sections of the plan (see the template). Each team member will fill out an evaluation form to indicate the level of individual performance in the team. This evaluation will contribute to the "Team Contribution" component of the associated rubric.

Components - % of grade:

- Business Analysis (15%)
- Comprehensive, Integrated Supply Chain Plan (20%)
- Application of supply chain concepts (15%)
- Team Presentation (15%)
- Team Contribution (15%)
- Technical Requirements (15%)
- Citations (5%)

Team Project Plan and Presentation: Planning a Startup's Supply Chain Grading Rubric				
Component	**Below Standard**	**Approaching Standard**	**At Standard**	**Exceeding Standard**
	0.00-68.74%	68.75 – 86.24%	86.25 – 93.74%	93.75 - 100%
Business Analysis	Needs analysis is incomplete, and missing, basic components in multiple areas of the supply chain.	Needs analysis identifies the most general requirements in each area of the supply chain. Significant opportunities to promote value, efficiency, sustainability, or ethics are missed.	Needs analysis identifies thorough requirements in each area of the supply chain, and some opportunities to promote value, efficiency, sustainability, or ethics are noted.	Needs analysis identifies thorough and detailed requirements in each area of the supply chain. Multiple novel opportunities to promote value, efficiency, sustainability, or ethics are noted.
Comprehensive, Integrated Supply Chain Plan	One or more of the five supply chain plans is missing or incomplete. Parts of the plan miss major steps to enable production or distribution. Plan relies on unethical or unsustainable supply chain practices.	Each of the five supply chain plans is sufficient to enable production and distribution. Plan may be missing some significant opportunities to leverage current or emerging technologies, and/or promote value, efficiency, sustainability, or ethics.	Each of the five supply chain plans is thorough and sufficient to enable production and distribution. Plan includes some notable opportunities to leverage current or emerging technologies, and/or promote value, efficiency, sustainability, or ethics.	Each of the five supply chain plans is detailed, thorough, and highly likely to enable production and distribution. Plan includes multiple creative, novel, or high impact opportunities to leverage current or emerging technologies, and/or promote value, efficiency, sustainability, or ethics.
Application of supply chain concepts	Applies few supply chain concepts, methods, tools, and techniques, or applies them inappropriately, incompletely, or in limited parts of the supply chain plan.	Applies some supply chain concepts, methods, tools, and techniques in a general and appropriate way. At times the description or application may be incomplete.	Applies several supply chain concepts, methods, tools, and techniques appropriately, and sometimes in advanced or novel ways, to support the plan for supply chain improvements across multiple parts of the supply chain plan.	Applies several supply chain concepts, methods, tools, and techniques in advanced or novel ways, to support the plan for supply chain improvements. Applies concepts across all parts of the supply chain plan.
Team Presentation	Presentation delivery and slides are not clear and do not address the contents of the core project.	Presentation addressed most of the core project and slides are understandable, but gaps in the delivery exist.	Presentation fully addressed the core project, slides are professional, and the presentation was engaging.	Presentation fully addressed the core project, slides are professional, and the presentation was engaging. Presentation delivery was professional quality.
Team Contribution	Does not complete all assigned tasks by deadline.	Completes all assigned tasks by deadline. Advises others of progress. Work produced advances the project.	Completes all assigned tasks by deadline. Advises others of progress regularly and seeks assistance where necessary. Work is thorough, as required, and advances the project.	Completes all assigned tasks by deadline and/or seeks advice from others if delays are anticipated. Work is creative, thorough, comprehensive, and significantly advances the project. Proactively helps

				other team members complete their assigned tasks to a similar level of excellence.
Technical Requirements	Multiple required sections, headers, diagrams, illustrations, and the like, as described in the syllabus are missing, severely impacting the reader's ability to understand the writer's main ideas. Writing clarity is severely compromised due to poor spelling, grammar, punctuation, vocabulary, structure, and/or organization. APA conventions are not followed.	One or more required sections, headers, diagrams, illustrations, and the like, as described in the syllabus are missing, with minor impact on the reader's ability to understand the writer's main ideas. Writing clarity is generally acceptable, with some errors in spelling, grammar, punctuation, vocabulary, structure, and/or organization. Errors do not impede the reader's overall understanding. APA conventions are only sometimes followed.	All required sections, headers, diagrams, illustrations, and the like, as described in the syllabus are included. Writing is clear, with minimal or no errors in spelling, grammar, punctuation, vocabulary, structure, and/or organization. APA conventions are consistently followed.	All required sections, headers, diagrams, illustrations, and the like, as described in the syllabus are included. Writing is clear, with vocabulary, structure and organization that enhances the readers ability to understand the writer's intent and purpose. The writing is almost entirely free of errors in spelling, grammar, and punctuation. APA conventions are strictly followed.
Citations	Fails to cite and reference sources to support ideas.	Attempts to cite and reference credible and relevant sources in APA format, appropriate to the discipline, to support ideas. The required minimum number of citations/references is not met.	Consistently cites and references credible and relevant sources in APA format, appropriate to the discipline, to support ideas. The required minimum number of citations/references is met.	Consistently cites and references credible and relevant sources in APA format, appropriate to the discipline, to support ideas. Exceeds the required minimum number of citations/references.

Quiz (15% of Final Grade)

The instructor will select assessment topics from the textbook chapters discussed during previous sessions. The purpose of this quiz is to allow students and the instructor to evaluate the achieved level of learning progress. This knowledge allows students to focus on those areas that need further clarification and enables the instructor to assist those students that need additional support. The questions will primarily assess students' theoretical and practical knowledge of supply chain, product and service innovation, quality management, and capacity and layout planning.

Quiz Grading Rubric				
Component	**Below Standard**	**Approaching Standard**	**At Standard**	**Exceeding Standard**
% of correct answers	0.00-68.74%	68.75 – 86.24%	86.25 – 93.74%	93.75 - 100%

Instructor Determined Assignments (30% of Final Grade)

Whether in class, online, or in a mixed mode setting, students will be graded on their participation in classroom discussions; ability to present, explain, or defend alternative viewpoints; and the degree to which they have mastered the concepts and principles inherent in the study of business management. Written work will be assessed not only on relevance to the subject presented, but also on adherence to good written form, APA style, and professional presentation. The instructor may also choose to create additional activities to support learning in the classroom or online.

Components	*% of Grade*
Quality of Responses	40%
Quantity of Responses	40%
Timeliness	20%
TOTAL	**100%**

Course Policies

Late Assignments

A critical aspect of management is to meet predefined deadlines. Therefore, all assignments are expected to be submitted when due. No late assignments are accepted. Life-situations do occur. When an issue arises coordinate with the instructor prior to the assignment's due date and the due date may be adjusted. It is in the best interest of the student to ensure that all assignments are submitted on time.

Participation

Class participation will be evaluated during class. Participation includes being prepared for class discussions and contributing meaningful content when appropriate. It also includes individual effort contributed to the team project.

Professional Writing

Assignments require error-free writing that uses standard English conventions and logical flow of organization to address topics clearly, completely, and concisely. CityU requires the use of APA style.

University Policies

Students are responsible for understanding and adhering to all of City University of Seattle's academic policies. The most current versions of these policies can be found in the University Catalog that is linked from the CityU Web site.

Antidiscrimination

City University of Seattle and its staff and faculty are committed to supporting our students. We value equity, diversity, and inclusion as a way of life as well as the educational opportunities it provides. City U will not tolerate any form of discrimination based on race, color, ethnicity, sexual orientation, gender identification, socioeconomic status, or religious values. If you have experienced any discrimination based on any of the above, we encourage you to report this to the University. Please report this to your instructor. If you do not feel safe reporting this to your instructor, please report to the Provost or to the Vice President of Student Affairs.

Non-Discrimination & Prohibition of Sexual Harassment

City University of Seattle adheres to all federal, state, and local civil rights laws prohibiting discrimination in employment and education. The University is committed to ensuring that the education environment is bounded by standards of mutual respect and safety and is free from discriminatory practices.

In the U.S., the University is required by Title IX of the Education Amendments of 1972 to ensure that all of its education programs and activities do not discriminate on the basis of sex/gender. Sex include sex, sex stereotypes, gender identity, gender expression, sexual orientation, and pregnancy or parenting status. Sexual harassment, sexual assault, dating and domestic violence, and stalking are forms of sex discrimination, which are prohibited under Title IX and by City University of Seattle policy. City University of Seattle also prohibits retaliation against any person opposing discrimination or participating in any discrimination investigation or complaint process internal or external to the institution. Questions regarding Title IX, including its application and/or concerns about noncompliance, should be directed to the Title IX Coordinator. For a complete copy of the policy or for more information, visit https://my.cityu.edu/titleix or contact the Title IX Coordinator.

In Canada, in compliance with the British Columbia Human Rights Code, the Alberta Human Rights Act, WorksafeBC, and the Workers' Compensation Board of Alberta, the University believes that its environment should at all times be supportive and respectful of the dignity and self-esteem of individuals. Discrimination, harassment and bullying conduct, whether through person to person behaviour or via electronic communications such as email or social media is not acceptable and will not be tolerated. As an educational institution, it is our responsibility to cultivate an environment of excellence, equity, mutual respect and to recognize the value and potential of every individual. The University will take all necessary steps to meet or exceed the requirements of the law to prevent discrimination, harassment and bullying. The Respectful Workplace Policy for the prevention of discrimination, harassment and bullying policy and procedure can be found at https://www.cityu.edu/discover-cityu/about-cityu/ under the Policies section or at https://www.cityuniversity.ca/about/.

Religious Accommodations

City University of Seattle has a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The University's policy, including more information about how to request an accommodation, is available in the University Catalog and on the my.cityu.edu student portal. Accommodations must be requested by the 20% mark of this course (e.g. day 14 of a ten-week course, day 7 of a 5-week course) using the Religious Accommodations Request Form found on the student dashboard in the my.cityu.edu student portal.

Academic Integrity

Academic integrity in students requires the pursuit of scholarly activity that is free from fraud, deception and unauthorized collaboration with other individuals. Students are responsible for understanding CityU's policy on academic integrity and adhering to its standards in meeting all course requirements. A complete copy of this policy can be found in the University Catalog under *Student Rights and Responsibilities* on the page titled *Academic Integrity Policy.*

Attendance

Students taking courses in any format at the University are expected to be diligent in their studies and to attend class regularly.

Regular class attendance is important in achieving learning outcomes in the course and may be a valid consideration in determining the final grade. For classes where a physical presence is required, a student has attended if they are present at any time during the class session. For online classes, a student has attended if they have posted or submitted an assignment. A complete copy of this policy can be in the University Catalog under *Student Rights and Responsibilities* on the page titled *Attendance.*

Final Assignment Due Date

Final assignments for each class at CityU must be due on or before the final date of the course as indicated in the university's course information system. Due dates that extend beyond the final date of the course may negatively impact tuition funding for students.

Support Services

Disability Services Accommodations Statement

Students with a documented disability who wish to request academic accommodations are encouraged to contact Disability Support Services to discuss accommodation requests and eligibility requirements. Please contact Disability Support Services at *disability@cityu.edu* or 206.239.4752 or visit the Disability Support Services page in the my.cityu.edu portal. Confidentiality will be observed in all inquiries. Once approved, information about academic accommodations will be shared with course instructors.

Library Services

CityU librarians are available to help students find the resources and information they need to succeed in this course. Contact a CityU librarian through the Ask a Librarian service, or access library resources and services online, 24 hours a day, seven days a week.

Smarthinking Tutoring

CityU students have access to free online tutoring offered through Smarthinking, including writing support, from certified tutors 24 hours a day, seven days a week. Contact CityU's Student Support Center at help@cityu.ed to request a user name and password.