




UNIVERSITY OF MARYLAND

UNIVERSITY SENATE

1100 Marie Mount Hall
College Park, Maryland 20742-4111
Tel: (301) 405-5805 Fax: (301) 405-5749
<http://www.senate.umd.edu>

SENATE LEGISLATION APPROVAL

Date:	February 6, 2014
To:	Wallace D. Loh
From:	Vincent Novara Chair, University Senate 
Subject:	PCC Proposal to Establish a Master of Science in Supply Chain Management
Senate Document #:	13-14-24

I am pleased to forward for your consideration the attached legislation entitled, "PCC Proposal to Establish a Master of Science in Supply Chain Management." Marilee Lindemann, Chair of the Programs, Curricula, and Courses (PCC) Committee, presented the proposal. The University Senate approved the proposal at its February 5, 2014 meeting.

We request that you inform the Senate Office of your decision as well as any subsequent action related to your conclusion.

Enclosure: PCC Proposal to Establish a Master of Science in Supply Chain Management
Senate Document # 13-14-24

VN/rm

- Cc: Mary Ann Rankin, Senior Vice President for Academic Affairs & Provost
Reka Montfort, Executive Secretary and Director, University Senate
Juan Uriagereka, Associate Provost for Faculty Affairs
Terry Roach, Executive Assistant to the President
Janet Turnbull, President's Legal Office
Elizabeth Beise, Associate Provost for Academic Planning & Programs
Sylvia B. Andrews, Academic Affairs
Alex Triantis, Dean, Robert H. Smith School of Business
Michael Marcellino, Assistant Dean, Robert H. Smith School of Business
Anil Gupta, Professor, Robert H. Smith School of Business

Approved: 
Wallace D. Loh
President

Date: 02-17-2014



University Senate TRANSMITTAL FORM

Senate Document #:	13-14-24
PCC ID #:	13033
Title:	Proposal to Establish a Master of Science in Supply Chain Management
Presenter:	Marilee Lindemann, Chair, Senate Programs, Curricula, and Courses Committee
Date of SEC Review:	January 31, 2014
Date of Senate Review:	February 5, 2014
Voting (highlight one):	<ol style="list-style-type: none"> 1. On resolutions or recommendations one by one, or 2. In a single vote 3. To endorse entire report
Statement of Issue:	<p>The Robert H. Smith School of Business proposes to take its existing Master of Science in Business area of concentration in Logistics and Transportation and reclassify it as its own, stand-alone degree program, the Master of Science in Supply Chain Management (as the study of logistics and transportation is now referred to in the field of business). The context of the Master of Science in Business is important for understanding this proposal. Designed to provide an alternative to the generalist approach of the Master of Business Administration, the Master of Science in Business was created in 1978 to allow students to specialize in an academic field within business and management. Consequently, the Master of Science in Business has a structure that is uncommon for campus degree programs that have areas of concentration. The Master of Science of Business does not have a set of core requirements that is shared by each area of concentration. The curriculum of each area of concentration focuses on its own content; thus, the curriculum of the Logistics and Transportation area of concentration is comprised entirely of courses in supply chain management. Last year, a proposal to convert the concentration in Finance to its own degree program was approved. This proposal is a continuation of the effort to separate some of the MS in Business concentrations into their own degree programs.</p> <p>In the past, the structure of the Master of Science in Business was sufficient for the purposes of this area of concentration. In recent years, however, it has become apparent that this structure poses</p>

	<p>unnecessary limitations for students, staff and faculty. Currently, the diploma only indicates the Master of Science in Business, not the actual focus of the curriculum. The general degree name also puts the School of Business at a competitive disadvantage when trying to attract students who are strongly interested in a degree in Supply Chain Management. Students and alumni have overwhelmingly expressed their desire for the degree name to accurately represent the focus of their coursework.</p> <p>By having a separate program as opposed to a concentration, students will now be able to pursue multiple areas in business (i.e., they will be able to pursue two business MS degrees at UM because the program names will now be different). Furthermore, the tuition rate will no longer be tied to the tuition rate of the MS in Business, and can be lowered or raised depending on market demand.</p> <p>Other than reclassifying the area of concentration as its own degree program, there are no other changes proposed. The new degree program will continue to be administered in the same manner as the area of concentration had been in the past, with the same faculty responsible for oversight. The curriculum will also remain the same. Consequently, there is no need for additional resources as a result of the proposed action.</p> <p>The Graduate PCC committee approved the proposal on January 27, 2014. The Senate PCC committee approved the proposal at its meeting on December 6, 2013.</p>
Relevant Policy # & URL:	N/A
Recommendation:	The Senate Committee on Programs, Curricula, and Courses recommends that the Senate approve this new degree program.
Committee Work:	The Committee considered the proposal at its meeting on December 6, 2013. Anil Gupta, Professor, Robert H. Smith School of Business, and Michael Marcellino, Assistant Dean, Robert H. Smith School of Business, presented the proposal. After discussion, the Committee voted unanimously to recommend the proposal.
Alternatives:	The Senate could decline to approve this new degree program.
Risks:	If the Senate does not approve reclassifying the area of concentration as a degree program, the program and the students will continue to be at a disadvantage because of the generic name of their degree program.
Financial Implications:	There are no significant financial implications with this proposal.
Further Approvals Required: <i>(*Important for PCC Items)</i>	If the Senate approves this proposal, it would still require further approval by the President, the Board of Regents, and the Maryland Higher Education Commission.

**THE UNIVERSITY OF MARYLAND, COLLEGE PARK
PROGRAM/CURRICULUM/UNIT PROPOSAL**

• Please email the rest of the proposal as an MSWord attachment to pcc-submissions@umd.edu.

PCC LOG NO.

13033

• Please submit the signed form to the Office of the Associate Provost for Academic Planning and Programs, 1119 Main Administration Building, Campus.

College/School: Robert H. Smith School of Business

Please also add College/School Unit Code-First 8 digits: 01202900

Unit Codes can be found at: https://hypprod.umd.edu/Html_Reports/units.htm

Department/Program: Robert H. Smith School of Business

Please also add Department/Program Unit Code-Last 7 digits: 1290101

Type of Action (choose one):

Curriculum change (including informal specializations)

Curriculum change for an LEP Program

Renaming of program or formal Area of Concentration

Addition/deletion of formal Area of Concentration

Suspend/delete program

New academic degree/award program

New Professional Studies award iteration

New Minor

Request to create an online version of an existing program

Italics indicate that the proposed program action must be presented to the full University Senate for consideration.

Summary of Proposed Action:

Convert Master of Science in Business and Management - Supply Chain Management Concentration to a Master of Science in Supply Chain Management

Departmental/Unit Contact Person for Proposal: _____

=====

APPROVAL SIGNATURES - Please print name, sign, and date. Use additional lines for multi-unit programs.

1. Department Committee Chair _____

2. Department Chair _____

3. College/School PCC Chair _____

4. Dean _____

5. Dean of the Graduate School (if required) _____

6. Chair, Senate PCC Manicee J. Smith 12/6/13

7. University Senate Chair (if required) _____

8. Senior Vice President and Provost _____

**THE UNIVERSITY OF MARYLAND, COLLEGE PARK
PROGRAM/CURRICULUM/UNIT PROPOSAL**

- Please email the rest of the proposal as an MS Word attachment to pcc-submissions@umd.edu.

PCC LOG NO.

13033

- Please submit the signed form to the Office of the Associate Provost for Academic Planning and Programs, 1119 Main Administration Building, Campus.

College/School:

Please also add College/School Unit Code-First 8 digits: **01202900**

Unit Codes can be found at: https://hypprod.umd.edu/Htm-l_Reports/units.htm

Department/Program:

Please also add Department/Program Unit Code-Last 7 digits: 1290701

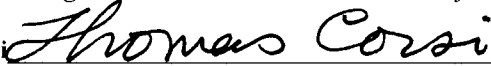
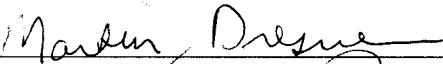
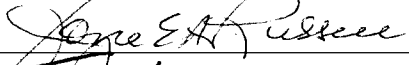

Type of Action (choose one):

- | | |
|--|---|
| <input type="checkbox"/> Curriculum change (including informal specializations) | <input type="checkbox"/> <i>New academic degree/award program</i> |
| <input checked="" type="checkbox"/> <i>Renaming of program or formal Area of Concentration</i> | <input type="checkbox"/> New Professional Studies award iteration |
| <input type="checkbox"/> <i>Addition/deletion of formal Area of Concentration</i> | <input type="checkbox"/> New Minor |
| <input type="checkbox"/> <i>Suspend/delete program</i> | <input type="checkbox"/> Other |

Italics indicate that the proposed program action must be presented to the full University Senate for consideration.

Summary of Proposed Action: The Robert H Smith School of Business (School) proposes launching a Master of Science in Supply Chain Management (MS in SCM) program designed to provide students with a rigorous understanding of and the ability to apply core principles within the field of Supply Chain Management. Our program will provide our students with a thorough knowledge of this discipline and the execution of a sound supply chain strategy that are necessary in today's global economy. The school currently offers a Master's of Science in Business and Management with a concentration in Supply Chain Management. Unfortunately, there is no distinction between the concentrations on the diplomas or transcripts and we are limited in our ability to treat the programs differently. The creation of this formal degree program will provide us with an opportunity to better reflect the degree being earned and provide us with the ability to align our administrative activities with the market demands.

APPROVAL SIGNATURES - Please print name, sign, and date. Use additional lines for multi-unit programs.

1. Department Committee Chair Thomas Corsi 
2. Department Chair Martin Dresner 
3. College/School PCC Chair Joyce Russell 
4. Dean Alexander Triantis 
5. Dean of the Graduate School (if required) _____
6. Chair, Senate PCC _____
7. University Senate Chair (if required) _____
8. Senior Vice President & Provost _____

To: Betsy Beise

From: Anil Gupta

Subject: Degree name changes for MS in Business and Management

Dear Betsy:

The Smith School currently offers multiple internationally competitive Master of Science in Business degrees, including concentrations in Accounting, Information Systems, Marketing Analytics, and Supply Chain Management. The attached proposals are being submitted to request that we change the name of our current MS degree with concentrations to individual Masters of Science degrees. Offering degrees with the specific titles will better articulate the credentials of graduating students on the diploma and make them more competitive in all markets. The adjustment of these degree names will also provide us with an opportunity to align our administrative activities with the market demands instead of treating them in a similar manner.

We are submitting these proposals as a package for administrative efficiency. We felt this might be a more convenient approach since many of the questions raised will likely be applied to all four programs. If this approach is undesirable, we are certainly prepared to discuss them individually as well.

Please let us know if you need additional information or have any questions.

Sincerely,

Dr. Anil K. Gupta

Michael D. Dingman Chair & Professor of Strategy, Globalization & Entrepreneurship
Smith School of Business, The University of Maryland

Email: agupta@rhsmith.umd.edu

Office: 301.405.2221

**PROPOSAL FOR
NEW INSTRUCTIONAL PROGRAM
UNIVERSITY OF MARYLAND AT COLLEGE PARK, MARYLAND
MASTER OF SCIENCE IN SUPPLY CHAIN MANAGEMENT (MS in
SCM)**

ROBERT H. SMITH SCHOOL OF BUSINESS

DEAN Alexander J. Triantis

**MASTER OF SCIENCE IN SUPPLY CHAIN MANAGEMENT (MS in
SCM)**

Classroom and Online tracks

Award to be offered Fall 2014

I. OVERVIEW and RATIONALE

A. Briefly describe the nature of the proposed program and explain why the institution should offer it. [You may want to refer to student demand, market demand for graduates, institutional strengths, disciplinary trends, synergy with existing programs, and/or institutional strategic priorities.]

Goal and Contribution to the Strategic Plan

The Robert H. Smith School of Business proposes launching a Master of Science in Supply Chain Management (MS in SCM) program designed to provide students with a rigorous understanding of and the ability to apply core principals within the field of Supply Chain Management. Today's supply chains are truly global. Effective supply chain management is crucial and solves many of the problems encountered by businesses today. A thorough knowledge of this discipline and the execution of a sound supply chain strategy are necessary in today's global economy to be competitive, efficient and maximize a firm's profitability. Supply chain professionals are sought after in all industries today, with new and growing opportunities in biotech, cyber-security – even disaster and famine logistics.

The Robert H. Smith School of Business houses one of the strongest academic supply chain departments in the world. *U.S. News and World Report* ranked the Smith School #8 in Supply Chain Management for the Undergraduate Program and #13 for the MBA program. The *International Journal of Physical Distribution & Logistics Management* ranked the Robert H. Smith School of Business #2 worldwide in supply chain management research. The Robert H. Smith School of Business is also home to the acclaimed Supply Chain Management Center, one of the first centers of its kind in academia. The research and experience of the faculty are particularly suited to attract some of the brightest students in the world who are seeking a more thorough understanding of supply chain management. Faculty and staff currently affiliated with the Robert H. Smith School of Business and the Supply Chain Center hold appropriate degrees in supply chain management, economics, and international business that are relevant and necessary for the Master of Science in Supply Chain Management (MS in SCM) degree.

The strategic plan of the Robert H. Smith School of Business states as its first objective the goal of “Growing future leaders to address global issues.” The University of Maryland College Park mission statement sets a goal to “continue to build a strong, university-wide culture of graduate and professional education” and to provide knowledge-based programs and services that are responsive to the needs of the citizens of the state and the nation. Faculty and students in the Master of

Science in Supply Chain Management (MS in SCM) program will collaborate with supply chain executives and corporations to address current supply chain issues challenging firms in today's competitive marketplace. Given UMCP's close proximity to the nation's capital and the resulting presence of numerous government contractors in the area, we are in a unique position to offer students opportunities unmatched by competitor institutions.

The School currently offers a Masters of Science in Business with a concentration in Supply Chain Management (MSB-SCM). This is a classroom program taught exclusively at the College Park campus. However, the diploma does not state the words "supply chain management" on it. This new degree name will strengthen the recognition of the degree and increase its attractiveness to a worldwide applicant pool. Some of our MSB-SCM graduates have informed us of difficulty in getting recognition of their degree by foreign governments and institutions because it is viewed as a degree in business and not in supply chain management.

Offering a degree with the words "Supply Chain Management" in the title will clarify the content of the knowledge our students obtain in our program. The creation of this degree will also provide greater opportunities to be flexible within our portfolio of Masters of Science degrees to uniquely address issues within each discipline rather than pooling all of them under the same Masters of Science in Business degree that is currently offered (e.g., tuition independence between programs to match market levels for each degree; Finance, Marketing Analytics, Accounting, Information Systems, Supply Chain Management). Should this proposal be approved, we would like to offer students enrolled in the program at the time of approval the opportunity to have their degree called a "Master of Science in Supply Chain Management (MS in SCM)" even though they were admitted to the MSB-SCM program.

The School currently offers a joint MBA/MSB-SCM program for students and we would also seek to offer students the opportunity to enroll in a joint MBA/MS in SCM program. Such an opportunity enables our MBA students to further distinguish themselves in the MBA marketplace and the fact that the joint program would likewise have the words "supply chain management" in it would improve our ability to market these students.

This program is also an ideal path for some of our students to pursue PhD programs in supply chain management. One graduate from our MSB-SCM program is currently enrolled in our PhD program and our graduates have also placed into other PhD programs. Having the program entitled Master of Science in

Supply Chain Management will again likely improve the marketability of our students seeking to pursue a PhD specializing in supply chain management.

Traditional and Online Delivery Tracks

This program will be offered in two learning modalities: the traditional classroom model, just as the current Masters of Science in Business with a concentration in Supply Chain Management (MSB-SCM); and a newly proposed online model that will meet all of the university requirements as detailed in Section V. B of this proposal.

Since the MS in SCM program is also an ideal choice for early to mid-career managers who have not had a formal education in supply chain management, and since this national target audience in recent years has been a constituency that prefers to work full time, the degree will also be offered in an online format, similar to those offered by Penn State and Arizona State.

Market Demand for Graduates

In light of intense global competition and the need to maximize operating efficiency, employers are looking for supply chain specialists who have a thorough understanding of supply chain concepts, best practices and the ability to rigorously apply these within organizations. In particular, as international markets become more interdependent, multi-national companies and foreign countries have significant demand for students with the skill set that our current MSB-SCM program offers. We anticipate this demand to increase due to the increased international acceptance and recognition of Master of Science in Supply Chain Management (MS in SCM) programs relative to an MSB-SCM, as well as market-based pricing of the program (not strictly tied to our MBA program levels). Appendix 1 shows that the inclusion of the word “supply chain management” in the degree name is standard for this type of degree.

Student Demand

Business schools are undergoing a significant shift in the applicant pool for Master’s degree programs. Applications for traditional MBA programs that provide a general management focus have seen a sustained decline nationwide. Coincidentally, more students are seeking Master’s degrees that specialize in various business fields, including supply chain management. In addition to the MSB-SCM program that was launched two years ago, competitor institutions such as Ohio State University, Arizona State University, Washington University, MIT,

Penn State University and Michigan State University have similarly launched Master's degree programs in supply chain management within the last five years. The programs offered by Penn State and Arizona State are online programs. Numerous institutions nationwide are planning to enter this market and launch their own Master of Science in Supply Chain Management programs, in traditional classroom and/or online distance learning formats. Such degrees are becoming an increasingly common offering at peer and aspirational institutions.

Student demand for a MS in SCM degree is extremely high. In our first year of the program, the 2011-2012 academic year, we received 113 applications. For the 2012-2013 academic year, we received 290 applications. Admitted student statistics demonstrate the quality of students demanding this offering:

	Fall 2013 (to date)	Fall 2012	Fall 2011
Average GMAT	690	673	661
Average GPA	3.60	3.40	3.37

B. How big is the program expected to be? From what other programs serving current students, or from what new populations of potential students, onsite or offsite, are you expecting to draw?

Current enrollment in the MSB-SCM program is approximately 90 newly admitted students per year. Students take 30 credits in the program. Students have the ability to complete the program within one academic year but many choose to stretch the program to one and one-half academic years. Such elongation provides students an opportunity to seek a summer internship. We anticipate that students enrolled in the MSB-SCM program will all instead enroll in the Master of Science in Supply Chain Management (MS in SCM) program. Therefore, we expect a consistent demand for our program in the coming years. There is also a nationwide demand from young, working professionals for a formal education in supply chain management and this will drive the online track for this program.

Most of the students that we have attracted to date to this program are international, primarily from East Asia. The strategic plan for this program seeks

to expand domestic enrollment, primarily by targeting students receiving Bachelor's degrees in engineering, economics and other business disciplines that are looking for an opportunity to apply their skill set to the supply chain management field. The ability to market-price our tuition will help build more domestic presence in our program in College Park.

Adding the online track will enable us to balance our population of students since we anticipate the vast majority of students enrolled in this track to be from the United States. Students will take one course at a time, with each being a 5-week module. This is the same as the Penn State model. The program can be completed in 16 months.

II. CURRICULUM

A. Provide a full catalog description of the proposed program, including educational objectives and any areas of concentration.

The Master of Science in Supply Chain Management (MS in SCM) degree is a professional degree for students wishing to pursue or advance their careers in supply chain management. This includes transportation, purchasing, distribution, inventory management, global trade, operations management, strategy and the numerous other sub-specialties in the field of supply chain management. Core courses provide excellent fundamentals in supply chain management. They will learn how to analyze and direct the supply chain decisions of an organization, and gain a fresh understanding and a deep appreciation for the theoretical foundations of supply chain management today.

As we enter into the third year of our MSB-SCM program, we have learned a great deal about our curriculum. We have evaluated results, listened to student feedback, reviewed the curriculums of competitive schools; and spoken with corporate supply chain executives who recruit our students. Based on the results of this discovery process, our oversight committee recommended a few changes to the current MSB-SCM curriculum. The current curriculum (see Appendix 3) is made up of primarily 2-credit courses and we plan to convert courses to 3-credits in core supply chain disciplines to provide students with a greater knowledge of these areas of study. There are a couple of courses that will be dropped in favor of courses that provide a deeper learning experience in supply chain best practices.

The proposed Master of Science in Supply Chain Management (MS in SCM) program offered by the Robert H Smith School of Business will provide students with:

- a) General knowledge of foundational supply chain concepts, disciplines, and best practices in the field of supply chain management.
- b) An understanding of global supply chains and their importance to the multi-national firm
- c) Foundational knowledge of supply chain risk and resilience
- d) A clear understanding of import/export management and international trade logistics
- e) Foundational understanding of Enterprise Resource Planning (ERP)
- f) A knowledge of best practices in in the areas of purchasing and inventory control, including production planning, materials requirements planning (MRP), distribution requirements planning
- g) A managerial approach to the formulation of an effective supply chain strategy
- h) Training on negotiation skills to help supply chain managers improve the effectiveness and efficiencies of their supply chains

B. List the courses (number, title, semester credit hours) that would constitute the requirements and other components of the proposed program. Provide a catalog description for any courses that will be newly developed or substantially modified for the program.

Students will enter the Master of Science in Supply Chain Management (MS in SCM) program with a minimum of a Bachelor's degree. The proposed Master of Science in Supply Chain Management (MS in SCM) program requires 30 credit hours, comprised of ten 3-credit courses. This is true for the traditional and online tracks. The curriculum is the same for both of these tracks.

For the traditional classroom program, completion of the degree is feasible within one academic year, though many students may choose to spread their coursework over one and one-half academic years to offer an opportunity to gain experience from an internship during the summer. For the online program, completion of the degree is feasible in 16 months.

Curriculum

<p>BULM XXX</p>	<p>Global Supply Chain Management</p> <p>3 Credits</p>	<p>This is a more in-depth 3-credit version of BUSI672, our existing 2-credit course. Offers a practical blueprint for understanding, building, implementing, and sustaining supply chains in today's rapidly changing global supply chain environment. Provides a survey of the evolution of supply chain strategies, business models and technologies; current best practices in demand and supply management; and methodologies for conducting supply chain-wide diagnostic assessments and formulating process improvement plans.</p>
<p>BUDT XXX</p>	<p>Operations Management</p> <p>3 Credits</p>	<p>This is a more in-depth 3-credit version of BUSI634, our existing 2-credit course. Concerned with efficient and effective design and operation of business processes for delivering products and/or services. Emphasis is given to process analysis and design, capacity management and bottlenecks, waiting lines and the impact of uncertainty in process performance, quality management, lean, six-sigma, and revenue management.</p>
<p>BULM 744</p>	<p>Global Supply Chain Risk Management</p> <p>3 Credits</p>	<p>Explores analytical methods to build enterprise resilience from the perspectives of the supply chain planner and supply chain manager. Addresses concerns assessing strategic and operational risks, day to day uncertainties in demand and supply, and ensuring business continuity after low probability but high impact events such as a terrorist attack or earthquake.</p>

BULM XXX	Global Value Chain & Trade Logistics 3 Credits	Acquaints students with managerial issues and best practices in international marketing, global sourcing & distribution, and international logistics. Provides students with an understanding of issues related to import/export management.
BULM XXX	Supply Chain Resources Planning & Analytics 3 Credits	Provides an understanding of how firms use an advanced supply chain planning (ASCP) application as an integral part of their materials management process - includes such activities as production planning, materials requirements planning, distribution requirements planning and inventory management.
BULM 730	Transportation Management 3 Credits	An overview of the transportation field with an emphasis on freight movements from the perspective of both providers of capacity and users of freight services. Examines the characteristics of the freight modes and the role of each mode as a major component of logistics and supply chain management.
BULM XXX	Strategic Sourcing & Procurement Management 3 Credits	This course will focus on the important topic of strategic sourcing and purchasing management. Topics will include: make or buy (outsourcing), selection, supplier relationships, supplier performance evaluation, strategic cost management, product design and sourcing strategy, e-sourcing (auctions vs. relationships), and compliance issues.
BULM XXX	Warehousing Design & Distribution 3 Credits	This course will focus on the important topic of optimizing the design of warehouses and utilizing analytics to identify best locations for a distribution center. Topics will include: Product storage, inbound operations, outbound operations, value-added processes and designing

		an efficient distribution network.
BULM 758B	Supply Chain Strategy 3 Credits	Students are required to undertake an assessment of the supply chain strategy of a firm. The major requirement is a documented report analyzing the various aspects of the firm's supply chain strategy, strengths and weaknesses, and recommendation for improvement.

BULM XXX	Special Topics in Supply Chain Management 3 Credits	This course will feature a specialized topic. This could include the use of technology in supply chain management, global supply chain mapping and quality control, negotiations in supply chain or another current topic in the growing field of supply chain management.
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SAMPLE Student Schedule – Traditional Classroom Model

Full-time MS in SCM - completed in 1 academic year

Fall Semester

Global Supply Chain Management (3)
Global Value Chain & Trade Logistics (3)
Supply Chain Resources Planning & Analytics (3)
Transportation Management (3)
Warehousing Design & Distribution (3)

Spring Semester

Operations Management (3)
Supply Chain Strategy (3)
Global Supply Chain Risk Management (3)
Strategic Sourcing & Procurement Management (3)
Special Topics in Supply Chain Management (3)

SAMPLE Student Schedule – Traditional Classroom Model

Full-time MS in SCM - completed in 1-1/2 academic years

Fall Semester

Global Value Chain & Trade Logistics (3)
Global Supply Chain Management (3)
Supply Chain Resources Planning & Analytics (3)

Spring Semester

Operations Management (3)
Supply Chain Strategy (3)
Global Supply Chain Risk Management (3)
Strategic Sourcing & Procurement Management (3)
Warehousing Design & Distribution (3)

Fall Semester

Transportation Management (3)
Special Topics in Supply Chain Management (3)

SAMPLE Student Schedule –Online Model for Working Professionals

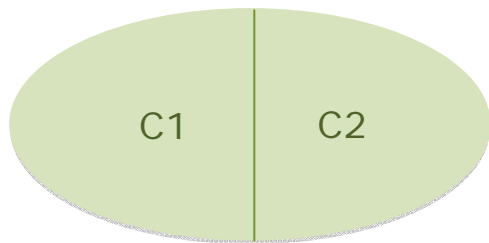
Completed in 16 months. Courses are 5-weeks each, taken one at a time. There will be 4 intakes per year where each intake begins with two foundation courses, Global Supply Chain Management & Global Value Chain & Trade Logistics. Then the other courses will be delivered in a “carousel format. The model on the following page reflects the Carousel model for this 10-course, 30-credit program.

See the model on the following page.

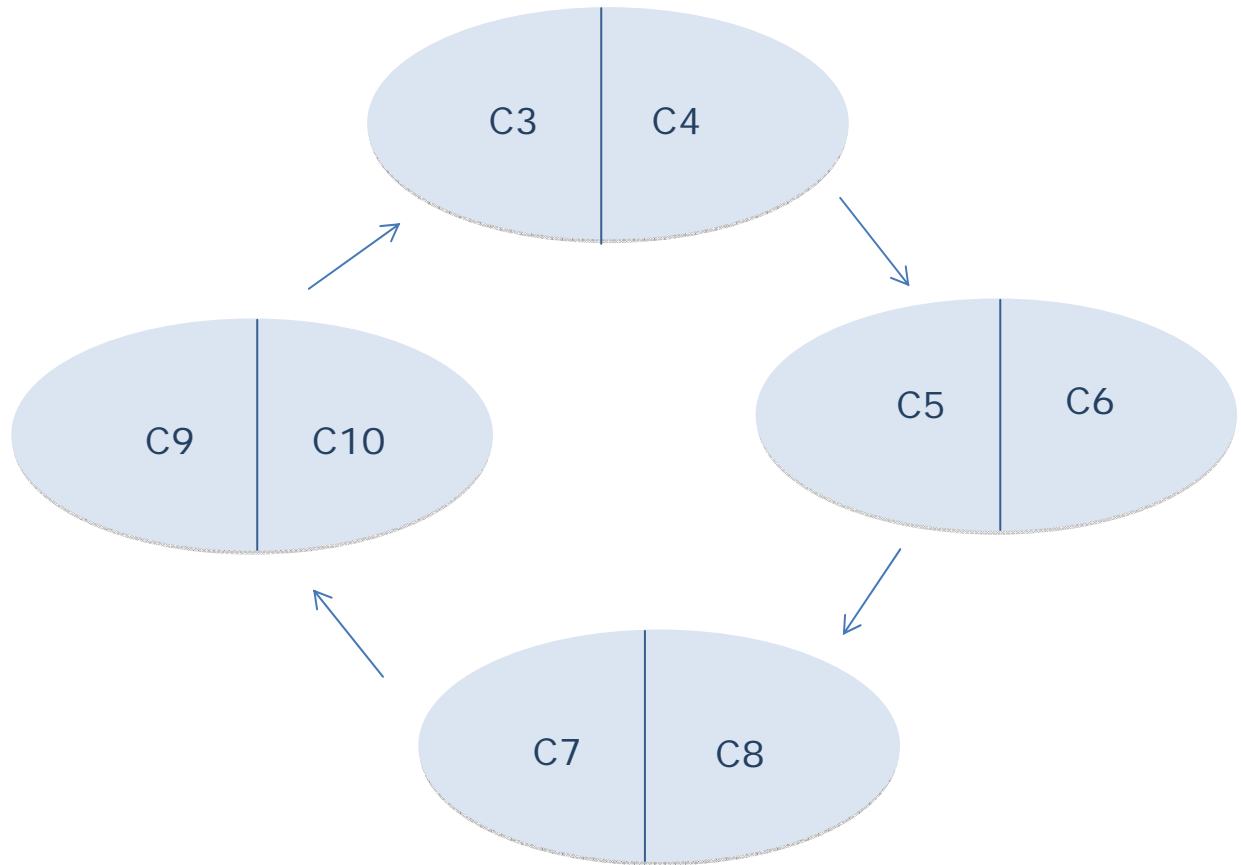
Master of Science in Supply Chain Management Carousel Model

Carousel Model of Courses: 30 credit hours

Foundation Courses



Core Courses



III. STEM CERTIFICATION

STEM is an acronym for Science, Technology, Engineering & Mathematics. The Master of Science in Supply Chain Management (MS in SCM) program is designed to prepare students for productive careers in our high-tech global economy, therefore numerous courses embrace and include the integration of one or more of these STEM areas, particularly science, technology and mathematics.

Supply chains are now optimized through the utilization of advanced technology; data analytics and the utilization of quantitative methods to maximize efficiencies in inventory management, warehousing, distribution and transportation. Knowledge and skills in science, technology and mathematics are critical for successful supply chain managers today, as they work in numerous disciplines in the field. This includes designing manufacturing systems, purchasing and inventory control, production planning, materials requirements planning (MRP), distribution requirements planning, supply chain risk analysis and assessment, data modeling, six sigma, global sourcing analysis, identifying cost efficiencies, and more. We believe the Master of Science in Supply Chain Management (MS in SCM) program should qualify as a STEM degree, serving the University of Maryland mission of growing STEM programs. The STEM certification for the Master of Science in Supply Chain Management (MS in SCM) is based on the extensive use of science, technology and mathematics in many of the core courses.

The Master of Science in Supply Chain Management (MS in SCM) should qualify to be assigned an approved STEM Classification of Instructional Programs (CIP) code of 52.1399, Management Science and Quantitative Methods.

C. Describe any selective admissions policy or special criteria for students selecting this field of study.

Applicants to the Master of Science in Supply Chain Management (MS in SCM) program must have completed all of the requirements for a baccalaureate degree prior to their acceptance into the program. All applicants must submit: Transcripts from all undergraduate and graduate institutions that have been previously attended; Graduate Record Examination (GRE) scores or the Graduate Management Admissions Test (GMAT) scores, or at least 5 years of relevant work

experience; a complete online application form that includes a written essay articulating qualifications and motivation for pursuing advanced education; two letters of recommendation from supervisors or from professors competent to judge the applicant's probability of success in graduate school.

In addition, an admissions interview may be required. After initial screening, the Admissions Office may select candidates for interviews that may be done in person or by telephone. Proof of English language proficiency (TOEFL or IELTS official scores) is also required unless the applicant has received an undergraduate or graduate degree from a select list of countries. For international student needing an F1 visa, a completed certification of finance form and supporting financial documentation are required.

In addition to Graduate School requirements, admission decisions for the Master of Science in Supply Chain Management (MS in SCM) program will be based on the quality of previous undergraduate and graduate course work (if applicable), the strength of Graduate Record Examination scores or the Graduate Management Admissions Test scores, the relevance of prior work and research experience, and the congruence of professional goals with those of the program. Students should submit application materials for the fall semester by April 1 for the College Park program and this program does not accept applications for Spring semester admission. The online program will have 4 cohort launches per year with application deadlines 120 days prior to the start of the program. Applications received after the final deadline will be reviewed on a case-by-case basis and students could be admitted to the following intake.

IV. STUDENT LEARNING OUTCOMES AND ASSESSMENT

The learning outcomes for the students in the traditional and online program will be the same as our current MSB-SCM program.

The Master of Science in Supply Chain Management (MS in SCM) degree is designed to be a strong managerial and analytical program that provides students with a sound, foundationally understanding of core supply chain disciplines. All

students are required to gain a basic understanding of each major area of Supply Chain Management through taking their core classes as detailed in Section IIB above. The department has identified five career tracks and has made suggestions for how students can best prepare for these fields. The tracks are:

- Supply Chain Strategy / Consulting
- Demand / Supply Planning
- Purchasing / Sourcing
- Distribution Methods and Practices
- Materials Management / Inventory Control
- Transportation

V. FACULTY AND ORGANIZATION

A. Who will provide academic direction and oversight for the program? [This might be a department, a departmental subgroup, a list of faculty members, or some other defined group.]

Oversight will be provided by a Director of the program along with a committee of at least three faculty members (Program Oversight Committee). The director and the committee will jointly address issues including admissions, curriculum design, academic policies, student activities, and internship / placement opportunities. The chair of the Logistics, Business & Public Policy (LBPP) department and the Dean's office will also oversee the program.

The LBPP department of the Robert H Smith School of Business currently has 24 FTE faculty (10 in the area of supply chain management). Fifteen of these are tenure/ tenure track. The vast majority of faculty members have doctoral degrees and all teaching faculty have graduate degrees in their specialized field. A few courses in the program may be taught by faculty in other departments of the Robert H Smith School of Business.

Faculty from LBPP Expected to Teach in the Proposed MS in SCM Program

Martin Dresner, PhD, Professor and Department Chair

Teaching / research focus: Supply Chain Strategy, Air Transport Management

Sandor Boyson, PhD, Research Professor and Co-chair of Supply Chain Management Center

Teaching / research focus: Global Supply Chain Management, Risk Management

Gary Cohen, Distinguished Tyser Teaching Fellow and MS in SCM Academic Director

Teaching focus: Global Trade; Value Chain Management; International Business

Thomas Corsi, PhD, Michelle E. Smith Professor and Co-chair of Supply Chain Management Center

Teaching / research focus: Global Supply Chain Management, Carrier and Safety Management

Stephanie Eckerd, PhD, Assistant Professor

Teaching / research focus: Buyer-Supplier Relationships

Philip Evers, PhD, Associate Professor

Teaching / research focus: Logistics Systems; Inventory Management; Intermodal Transportation

Curtis Grimm, PhD, Professor and Charles A. Taff Chair of Economics and Strategy

Teaching / research focus: Competition; Strategy; Deregulation & Microeconomic Reform

Lisa Harrington, Lecturer & Associate Director of Supply Chain Management Center

Teaching focus: Global Supply Chain Management Strategy

Charles Olson, PhD, Professor of the Practice & Director of Business Honors Program

Teaching focus: Economics and Strategy

Hugh Turner, PhD, Tyser Teaching Fellow

Teaching focus: Supply Chain Management; Transportation; Value Chain Management

Bennet Zelner, PhD, Associate Professor

Teaching / research focus: Global Economic Strategy

Holly Zhang, Lecturer

Teaching / research focus: Supply Chain Technology

Faculty from Decisions, Operations & Information Systems Expected to Teach in the Program

Kislaya Prasad, PhD, Research Professor & Director of CIBER

(Department of Decisions, Operations & Information Technology)

Teaching / research focus: Computability & Complexity of Decisions and Economic Equilibrium

S. Raghaven, PhD, Professor

(Department of Decisions, Operations & Information Technology)

Teaching / research focus: Quantitative Methods, Auction Design, Data Mining

Faculty from Management & Organization Expected to Teach in the Program

Gosia Langa, Lecturer

(Department of Management & Organization)

Teaching focus: Management & Organization

Martin Sullivan, Lecturer

(Department of Management & Organization)

Teaching focus: Management & Organization

B. If the program is not to be housed and administered within a single academic unit, provide details of its administrative structure. This should include at least the following:

Not applicable. All classes will be housed and administered within the Robert H Smith School of Business.

VI. OFF CAMPUS PROGRAMS

A. If the program is to be offered to students at an off-campus location, with instructors in classrooms and/or via distance education modalities, indicate how student access to the full range of services (including advising, financial aid, and career services) and facilities (including library and information facilities, and computer and laboratory facilities if needed) will be assured.

For the classroom track of the MS in SCM program, all classes will be held at the College Park campus.

For the Online MS in SCM program, all courses will be offered virtually. Student access to services will be done primarily via an online portal, telephone and email, and the Smith School will also offer scheduled chat sessions with course selection advisement and career services. UMD services (library, information facilities, etc.) will be handled via email and telephone and the Virtual Business Information Center (VBIC).

B. If the program is to be offered mostly or completely via distance education, you must describe in detail how the concerns in Principles and Guidelines for Online Programs are to be addressed.

The Master of Science in Supply Chain Management (MS in SCM) classroom program is structured to be delivered in its entirety in a traditional classroom setting as a replacement to the current MSB-SCM. The traditional classroom program is attracting predominantly international students who have just completed their undergraduate degree.

Our research confirms that there are a number of early career managers looking for a formal degree program in supply chain management. Two competitive universities with highly ranked supply chain programs are already offering an online format to attract this population (Penn State and Arizona State). This is an opportunity to diversify the population seeking this degree, ensuring greater balance.

All online courses would adhere to the policies and concerns outlined in the University of Maryland document, Principles and Guidelines for Online Programs. This includes strict maintenance of program quality and academic integrity. Our

regular faculty will teach the online program, just like the classroom format. The program will be designed with an equal amount of instructional quality and academic rigor.

Program Development, Control and Implementation: This proposal was developed as a result of the School's strengths and aligns with the School's strategic goals. Program Development, Control and Implementation would be managed by the Faculty. The faculty will have overall control over the design, development, and will have responsibility for the bulk of online academic instruction. Smith School technical support personnel would be available for technical support during classroom hours. Support will be available to faculty during course development, as well as during the offering of the program.

To assure academic quality, all online programs will adhere to the policies and concerns outlined in the University of Maryland document, Principles and Guidelines for Online Programs. Smith School technical support personnel will be available, as well as an agreement with an established third party provider for technical support 24/7/365. Technical support will be available to faculty during course development, as well as during the offering of the program.

Access to Academic Resources and Student Services for the Online Program: Student services such as admissions, registration, bill payment, advisement, and bookstore services will be facilitated through the Masters Program Office and the Office of Executive Programs. Library services will be available through Virtual Business Information Center (VBIC).

Intellectual Property Rights of the Online Program: The IP rights of the content developed for the program will be owned by the UMCP in accordance with University policies, and this will be confirmed in the Agreement with the partner designated to assist the Smith School in delivering the program.

Full Disclosure, Standards, and Evaluation: All published materials describing the program will carefully lay out instructional methods to be used, the skills and background necessary for success, academic support and resources, and available student services. Academic admission standards will be clearly described, and will be consistent with those for on-campus programs. As mentioned above, each year the faculty committee and the administration of the Smith School will evaluate the program to ensure all standards are being met.

VII. OTHER ISSUES

A. Describe any cooperative arrangements with other institutions or organizations that will be important for the success of this program.

Not applicable for the traditional classroom track. All aspects of the program including admissions, academic programming and career advising, will be provided by the Robert H Smith School of Business. While the program will reach out to local companies and institutions for guest speakers, internship opportunities, experiential learning projects, and job placement, no particular relationship is pivotal to the success of the program.

For the online distance education track, The Smith School of Business is proposing a partnership with Pearson Embanet (www.embanet.com), a company with over 20 years of experience in partnering with Higher Education institutions to deliver online learning services. The partnership with Pearson Embanet (PE) is intended to provide the following services to the Smith School of Business for the online track of the MS in SCM program:

- **Co-Funding:** PE will invest in the program, thus reducing the expense needed to launch a highly competitive offering, and sharing the risk of the program launch and success.
- **Marketing:** PE will be the primary driver of marketing the program, exclusively online using their experience in building online programs. This service will eliminate the need for Smith to invest in national advertising to attract students to our offering.
- **Recruitment:** PE will staff its operations with a team of qualified recruiters that will be dedicated to the Smith MS in SCM program, and help interested applicants through the process of applying to the program. This role will eliminate the need for UMD/Smith to hire additional recruiters.
- **Instructional design:** PE will provide full-service instructional design to Smith faculty, working to transition the content and delivery of the faculty material and approach to successful online courses. This will eliminate the need for Smith to hire instructional designers and/or contract separately.
- **Learning platform management:** PE will ensure that the LMS that is adopted for the program (Canvas) will be utilized in such a way that online

students will be able to maximize their interaction with faculty, advisors, and each other in order to fulfill their course requirements and ultimately their learning objectives. They will provide 24/7/365 support of the LMS – including walking faculty through how to upload/modify/interact on the LMS throughout their teaching in the MS in SCM program. This service eliminates the need for two additional headcount in the UMD/Smith IT department (assuming 24/7/365 would require at least 2 headcount to manage all issues over time). The partnership approach has a number of significant advantages to UMD and the Smith School of Business:

- **Speed to market:** Without the partnership, it would take the School at least two years to build the infrastructure needed to start the program, which includes building faculty and program capabilities in designing and offering an online curriculum; building capabilities of administrative teams in the new fields of online marketing, recruiting, IT and student support. With the partnership, we can start the program in eight months once it is approved. This early start will establish the Smith School as an early mover and leader in quality online education.
- **Leverage PE's financial capital:** A large upfront investment has been a barrier preventing universities from offering online programs. In the Smith School case, we estimate that it will take \$2 million investment in two years to do infrastructure building and program launching. Partnership allows unlimited initial fund as needed with investment from PE.
- **Leverage PE's knowledge capital:** In-house capability building will take time as well as trials and errors to succeed. This partnership allows the School to leverage PE two decades of tested expertise in instructional design, marketing and recruiting, IT and student support tailored to the special needs of online students.
- **Quality assurance:** Effective curriculum delivery model, best practices in teaching and operations that PE can provide will be critical for us to ensure the quality of the new Program right at the start.
- **Risk reduction:** Since PE will provide the large portion of the investment at the start of the program, financial risk is outsourced.
- **Positive externality:** Knowledge and capabilities in online teaching built through this program at the faculty level and program level can be applied

to other courses and programs at Smith benefiting all Smith graduate and undergraduate students. In addition, instructional videos produced for this program can be used to other non- competitive Smith courses/programs (e.g. certificate and MS programs), resulting in cost saving to the School.

B. Will the program require or seek accreditation? Is it intended to provide certification or licensure for its graduates? Are there academic or administrative constraints as a consequence?

The University of Maryland's Robert H. Smith School of Business is already accredited by the AACSB (American Association of Collegiate Schools of Business).

VIII. COMMITMENT TO DIVERSITY

Identify specific actions and strategies that will be utilized to recruit and retain a diverse student body.

The Robert H. Smith School of Business community is multifaceted at every level – students, staff and faculty represent a diverse blend of backgrounds, nationalities, ethnicities and experiences. About a dozen Smith School and student clubs are focused on bringing members together who have similar interests in gender, nationality, religion, and sexual orientation.

To attract the most diverse population possible for the proposed Master of Science in Supply Chain Management (MS in SCM) program, Smith School recruiting staff will focus heavily on domestic efforts. These efforts will be targeted at recruiting U.S. minorities and American women of all ethnicities.

Current efforts include:

- Representing Masters programs in U.S. MBA and Masters Fairs and Tours
- Representing Masters programs in International MBA and Masters Fairs and Tours
- Online webinars and chats
- U.S. College Visits
- International College Visits
- GMASS-based Mailings

- GRE-based Mailings
- Direct Mail
- Email Campaigns
- Outreach to College and Campus Organizations and Clubs
- Participating in Career/Graduate Study Panels or Workshops
- Presentations at Professional Conferences
- Creation of "Leap Your Career Forward" for Current UMD Students Looking At MBA and Masters Study Post-Undergraduate Studies (An Annual Event)
- Advertising in UMD Campus Newspapers
- Masters Only Education Fairs (Fall And Spring) Throughout the U.S.
- Participation in a Masters-focused Business School Alliance
- Participant in Graduate Business Education Events Targeted for Underrepresented Populations, Particularly U.S. Minorities and Women

Future efforts include:

- Including Master's Level Programming in Marketing Content Targeted to U.S. Military/Veterans
- Outreach to College Organizations in the Washington, D.C. Area
- Enhancement of Website for All Masters Programs
- Inclusion of Spotlight and Vignettes of Masters Alumni and Current Students who Reflect Diversity
- Participation in Events Targeted for Women Seeking Graduate Study (General And Non-MBA Based Events)
- Social Media and Online Advertising within U.S. Markets
- Partnerships with Academic Testing Centers and Overseas Advisors For International Graduate Study
- Marketing Targeting Young UMD Alumni and Young University Of Maryland System Alumni

VIII. REQUIRED PHYSICAL RESOURCES

The proposed Master of Science in Supply Chain Management (MS in SCM) program replaces the existing Masters of Science in Business with a concentration in Supply Chain Management (MSB-SCM) degree currently offered. The proposed program can be implemented in accordance with Section 11 206.I in which

programs developed under this provision can be implemented within existing resources of the campus. In proceeding with the submission of this program, the institution's president certifies that no new general funds will be required for the implementation of this master's-level program.

A. Additional library and other information resources required to support the proposed program. You must include a formal evaluation by Library staff.

The evaluation is attached.

B. Additional facilities, facility modifications, and equipment that will be required. This is to include faculty and staff office space, laboratories, special classrooms, computers, etc.

As this proposed program replaces a current program and we do not at this time anticipate growing the program beyond its current scale, no additional facilities or facility modification is required. The School has adequate space in Van Munching Hall to house current faculty and students in the proposed classroom program. No additional classrooms or computer laboratories are required.

C. Impact, if any, on the use of existing facilities and equipment. Examples are laboratories, computer labs, specially equipped classrooms, and access to computer servers.

See response to VIII.B above.

IX. RESOURCE NEEDS and SOURCES

Describe the resources that are required to offer this program, and the source of these resources. Project this for five years. In particular:

A. List new courses to be taught, and needed additional sections of existing courses. Describe the anticipated advising and administrative loads. Indicate the personnel resources (faculty, staff, and teaching assistants) that will be needed to cover all these responsibilities.

As this proposed program replaces a current program and we do not at this time anticipate growing the program beyond its current scale, no additional courses or changes in advising or administrative workload is required.

B. List new faculty, staff, and teaching assistants needed for the responsibilities in A, and indicate the source of the resources for hiring them.

Faculty resources of the Robert H Smith School of Business and in particular the LBPP department of the School (as described herein) are adequate to cover the size of the proposed MS in SCM program. Approval of this proposal would not alter the responsibilities of the faculty beyond those already generated by the MSB-SCM program that this proposal seeks to replace.

C. Some of these teaching, advising, and administrative duties may be covered by existing faculty and staff. Describe your expectations for this, and indicate how the current duties of these individuals will be covered, and the source of any needed resources.

As described above, teaching, advising, and administrative duties will be handled by existing faculty members (who are already teaching and conducting research on supply chain topics).

D. Identify the source to pay the for the required physical resources identified in Section VIII. above.

No additional resources are required.

E. List any other required resources and the anticipated source for them.

Not applicable.

F. Provide the information requested in [Table 1](#) and [Table 2](#) (for Academic Affairs to include in the external proposal submitted to USM and MHEC).

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Appendix 1:

Peer Comparisons – Degree Name of Supply Chain Program offered by MBA Ranked Peers

MBA Ranking (BW)	SCM Ranking (U.S. News)	University	Degree Name of Supply Chain Program
#8	#9 (tie)	University of Michigan	Master of Supply Chain Management
#23	#13	Georgia Tech	Master of Science in Supply Chain Engineering
#27	#4	Ohio State University	Master of Business Logistics Engineering
#31	-	Washington University	MS in Supply Chain Management
#35	#2	Michigan State University	MS in Supply Chain Management
#37	#6	Arizona State University **	MS in Supply Chain Management & Engineering
#38	#3	Penn State University **	Master of Prof. Studies in Supply Chain Mgmt.
#41	#9 (tie)	Purdue University	MS in Global Supply Chain Management
#46	-	Texas Christian University	MS in Supply Chain Management
#55	-	Syracuse University	MS in Supply Chain Management
#57	-	University of Buffalo	MS in Supply Chains and Operations Mgmt.

**** - Online programs**

Appendix 2:

Peer Comparisons – Curriculum Content Comparisons of Supply Chain Programs offered by MBA Ranked Peers

University Degree MBA Ranking	Core Curriculum	Comments
University of Michigan #8 MBA #9 SCM	<ul style="list-style-type: none"> - Manufacturing and Supply Chain Operations - Supply Chain Analytics - Logistics - Strategic Sourcing and Procurement Management <li style="padding-left: 20px;">Project Management - Supply Chain Management - Information Technology in Supply Chain and Logistics - Topics in Global Operations - (Special) Topics in Supply Chain Management - Manufacturing Strategies 	The University of Michigan degree is comparable to our program. Although many courses have different titles, the program content is quite similar. Like ours, this is a 30-credit program. There are an average of 22 full-time students admitted to the program each year. The program's tuition and fees total approximately \$52,000 (in-state) and \$57,000 out-of-state).

University Degree MBA Ranking	Core Curriculum	Comments
Georgia Tech #23 MBA #13 SCM	<ul style="list-style-type: none"> - Supply Chain Optimization - Supply Chain Control - Statistics – Management and Analysis of Supply Chain Data - Warehouse Operations and Inventory Control - Global Transportation and Distribution - Supply Chain Design - Supply Chain Strategy – globalization, emerging consumer markets, human and natural resources, sustainability - Supply Chain Information & Decision Technologies - visibility, demand planning, scheduling, fulfillment systems - Finance – performance measurement and capital investment analysis - Professional Practice – short courses & seminars on career development, ethics, communication & leadership 	Georgia Tech's degree is specifically designed with an engineering approach and many of their students already have an MS or BS in Engineering. There are an average of 21 full-time students admitted to the program each year. This is a 36-credit program. The program's tuition and fees total approximately \$20,000 (in-state) and \$52,000 out-of-state).

University Degree MBA Ranking	Core Curriculum	Comments
Ohio State University #27 MBA #4 SCM	<ul style="list-style-type: none"> - Strategic Logistics Management - Logistics Decisions & Control - Logistics Analytics - Transportation Management - Logistics Technology & Application - Field Problems in Logistics - Supply Chain Management - Organizational Behavior - Teams and Leadership - Linear Optimization - Operations Research and Models - Performance Modeling & Simulation - Warehouse & Facility Design - Lean Sigma Foundations - Engineering Seminars - Global Sourcing I & II 	This is very similar to the Georgia Tech program. This is a 41-credit program. There are an average of 40 full-time students admitted to the program each year. The program's tuition and fees total approximately \$25,000 (in-state) and \$41,000 out-of-state).

University Degree MBA Ranking	Core Curriculum	Comments
Washington University #31 MBA ---- SCM	<ul style="list-style-type: none"> - Foundations of Supply Chain Management - Contemporary Marketing Channels - Corporate Strategy - Strategic Quality Management - Managing the Innovation Process - Project Management - Data Analysis, Forecasting & Risk Analysis - Advanced Operations Strategy - Global Supply Chain & Logistics System Design Project Practicum - Managerial Global Business Process Outsourcing for Competitive Advantage - IT & Supply Chain Management - Leading Change - Options & Futures - Managerial Control Systems - Supply Chain Risk Management - Operations Management in the Service Industry - Marketing Elective - Operations Planning & Control - Negotiations & Conflict Management 	The Washington University degree is very similar to our program. Although most courses have different titles, the program content is quite similar to our program. One difference is that they do include a Finance and Accounting course. This is a 36-credit program. There are an average of 18 full-time and 12 part-time students admitted to the program each year. The program's tuition and fees total approximately \$52,000.

University Degree MBA Ranking	Core Curriculum	Comments
Michigan State University #35 MBA #2 SCM	<p><u>Core Courses</u></p> <ul style="list-style-type: none"> - Introduction to Logistics & Supply Chain Management - Applied Data Analysis - Distribution Fulfillment - Manufacturing Planning & Control - Strategic Sourcing - Supply Chain Management Information Technology - Total Quality Management & Lean Enterprise - Supply Chain Management Strategy & Applications - Global Supply Chain Management - Communication in Supply Chain Management - Change Management - Marketing Management <p><u>Logistics Track</u></p> <ul style="list-style-type: none"> - Logistics Operations Methods & Systems - Logistics Systems Analysis <p><u>Operations Management Track</u></p> <ul style="list-style-type: none"> - Supply Chain Integration & Strategic Agility - Manufacturing & Sourcing Strategy <p><u>Supply Management Track Track</u></p> <ul style="list-style-type: none"> - Analysis of Supply Markets & Supplies - Negotiations <p><u>Rail Management Track</u></p> <ul style="list-style-type: none"> - Railway Business Management - Railway Operations Management 	<p>The Michigan State degree is comparable to our program. One major difference is that the MSU program offers 4 different tracks to choose from, with each track consisting of two 3-credit courses. Although many courses have different titles, the content of the Supply Management track is quite similar to our program.</p> <p>One-third of the credits are offered online, making this a blended program. This is a 36-credit program can be completed in 16-24 months.</p>

University Degree MBA Ranking	Core Curriculum	Comments
Penn State University #38 MBA #3 SCM	<ul style="list-style-type: none"> - Supply Chain Management - Transportation & Distribution - Strategic Procurement - Supply Chain Analysis - Supply Chain Project Management - Supply Chain Design & Strategy - Supply Chain Transformation & Innovation - Professional Paper 	<p>The Penn State degree is an online degree program. It is designed to be a 2-year program. The courses are similar to those in our program. This program features fewer courses, but more credit hours per course, with several 4-credit courses. Our program covers a more comprehensive curriculum in terms of disciplines within the field of supply chain management. Although many courses have different titles, our also program delves into the majority of topics covered in the Penn State program. Like ours, this is a 30-credit program. The program's tuition and fees total approximately \$28,750.</p>

University Degree MBA Ranking	Core Curriculum	Comments
Purdue University #41 MBA #9 SCM	<p><u>Core Courses</u></p> <ul style="list-style-type: none"> - Operations Management - Optimization Modeling with Spreadsheets - Supply Chain Management - Experiential Learning in Operations (3-credit Summer Internship) - Logistics - Strategic Sourcing & Procurement Management - Global Supply Chain Management <p><u>SCM Electives (Choose 2)</u></p> <ul style="list-style-type: none"> - Manufacturing Planning & Control - Project Management - Management of Service Operations - Healthcare Supply Chains - Management of Healthcare Operations - Sustainability Operations - Operations: Practice & Models <p><u>SCM Relevant Electives (Choose 2)</u></p> <ul style="list-style-type: none"> - New Product Design - Spreadsheet Modeling & Simulation - Manufacturing Strategy - Data Mining <p><u>General Business Electives (4-6 credits)</u></p> <ul style="list-style-type: none"> - Choose from the following disciplines: Accounting, Communications, Economics, Finance, Marketing, Organizational Behavior 	<p>The Purdue University degree is a program conducted in collaboration with Universidad Popular Autónoma del Estado de Puebla (UPAEP) in Mexico, Indian Institute of Management Udaipur in India, and Tianjin University in China. It is comparable to our program, although there are fewer core courses and more elective courses offered in their program. Many courses are similar to those in our program, though there is an offering of electives that are not available in our program. Like ours, this is a 30-credit program. The program's tuition and fees total approximately \$22,000 (in-state) and \$42,000 out-of-state).</p>

University Degree MBA Ranking	Core Curriculum	Comments
Texas Christian University #46 MBA ----- SCM	<p><u>Business core</u></p> <ul style="list-style-type: none"> - Financial Reporting - Management of Finance I - Accounting for Managerial Planning - Marketing Management <p><u>SCM Core</u></p> <ul style="list-style-type: none"> - Supply Chain Management Concepts - Business Analytics - Global Supply Chain Management - Managing Ops and Processes - Logistics & Transportation - Supply Chain Operations Management - Strategic Sourcing & Procurement - Demand & Forecasting Management <p><u>Electives (choose 4 courses)</u></p> <ul style="list-style-type: none"> - Time Series Forecasting - SC Info Tools & Technology - Enterprise Resource Planning - Project Management - Program Management - Six Sigma Green Belt - Strategic Cost Analysis - Special Problems in SCM - Planning & Launching Successful New Products - Essentials of Negotiation - Transformational Leadership - Managing Service Excellence - Managing Customer Value - International Marketing - International Finance - Decision Models - Sustainable SC Management <p><u>Capstone Courses (Choose 2 courses)</u></p> <ul style="list-style-type: none"> - Global Supply Chain Experience - Supply and Value Chain Strategy - Integrative Field Study 	<p>Texas Christian University's degree is comparable to our program. There are a couple of differences. There are core requirements that include two Finance courses, an Accounting course and a Marketing course. Another difference is that the TCU's program has a limited number of core SCM courses and 4 electives are chosen from a list of 17 courses. This is a 30-credit program that can be completed in 16-24 months. The program's tuition and fees total approximately \$40,000.</p>

University Degree MBA Ranking	Core Curriculum	Comments
Arizona State University #37 MBA #6 SCM	<ul style="list-style-type: none"> - Operations & Supply Management - Strategic Procurement - Supply Chain Cost & Design Issues - Logistics in the Supply Chain - Applied Project - Introduction to International Logistics Systems - Applied Deterministic Operations Research - Applied Stochastic Operations Research Models - Math Tools in Industrial Engineering 	Arizona State's degree is a 100% online program. It is very similar to the Georgia Tech program in content. This is a 21-month program. The program's tuition and fees total approximately 46,500.

University Degree MBA Ranking	Core Curriculum	Comments
Syracuse University #55 MBA ---- SCM	<p><u>Core Management Foundation Courses</u></p> <ul style="list-style-type: none"> - Financial Accounting - Managerial Finance - Marketing Management <p><u>Core Supply Chain Management Courses</u></p> <ul style="list-style-type: none"> - Introduction to Operations & Supply Chain Management - Data Analysis - Supply Chain & Logistics Management - Management Science - Strategic Sourcing <p><u>Selectives (Choose 1 course)</u></p> <ul style="list-style-type: none"> - Project Management - CRM - Supply Chain Systems <p><u>Culminating Experience (Choose 1 course)</u></p> <ul style="list-style-type: none"> - Lean Six Sigma - APICS Certification - Master's Thesis 	The Syracuse University degree is a 100% online program. Ours offers a more comprehensive approach to supply chain management. The Syracuse program requires Finance, Accounting and Marketing course. Although their core courses have different titles, their content is quite similar to our courses. Like ours, this is a 30-credit program. The program's tuition and fees total approximately \$37,470.

University Degree MBA Ranking	Core Curriculum	Comments
University of Buffalo #57 MBA ----- SCM	<ul style="list-style-type: none"> - Production & Inventory Planning - Project Management - Logistics - Supply Chain Design, Modeling & Optimization - Financial Analysis & Reporting - Principles of Workforce Engagement - Strategic Quality Management - Supply Chains & Global Operations - Purchasing & Global Supply Management - Logistics & Global Distribution Management - Integrative Capstone Project 	<p>The University of Buffalo degree is similar to our program, however our curriculum offers a more comprehensive study of disciplines & best practices in supply chain management. The Buffalo program includes a Finance/Accounting course. Like ours, this is a 30-credit program. The program's tuition and fees total approximately \$12,000 (in-state) and \$20,000 out-of-state).</p>

Appendix 3:

Current MSB-SCM Curriculum

<http://www.rhsmith.umd.edu/ms/supplychain/curriculum.aspx>

Core Courses

BULM758G	Exploring the Global Value Chain (4 Credits)
BULM758T	Global Transportation Management (2 Credits)
BUSI630	Data Models & Decisions (2 Credits)
BUSI672	Global Supply Chain Management (2 credits)
BUSI683	Global Economic Environment (2 Credits)
BULM742	Global Supply Chain Resources Planning (2 credits)
BULM758B	Supply Chain Strategy (3 credits)
BULM724	Negotiations in Supply Chain Management (2 Credits)
BULM734	Assessing and Managing Supply Chain Risks (3 credits)
BUSI634	Operations Management (2 Credits)
BULM720	The Green Supply Chain (2 Credits)
BULM758Z	Technology in Supply Chain Management (1 Credit)

Electives (3 Credits)

BULM736	Executives in Supply Chain Management
BULM758R	Research in Supply Chain Management