



4-5-2018

## Curriculum Committee Report - April 5, 2018

Graduate Council

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**Graduate Curriculum Committee Meeting Report  
405 Student Services Building  
Thursday, April 5, 2018**

Members present: Robert Fuller (Chair), Kivanc Ekici, Rachel Fleming-May, Jamie Greig, Jacob Latham, Sibyl Marshall

Also in attendance: Bruce Behn, Haslam College of Business, Mary Albrecht, Dixie Thompson (Dean of the Graduate School), Catherine Cox

Robert Fuller called the meeting to order at 3:45 p.m.

We have one submission from the Haslam College of Business to review.

- a) Course changes: added 7 courses, revised 3 courses.
- b) Program changes:
  - Add Graduate Certificate: Supply Chain Management.
  - Revise Supply Chain Management Major, MS – to add an online option.
  - Two informational changes/edits to the Graduate Catalog

**Course changes:**

An error was discovered with two course adds: SCM 545 and SCM 548. When the proposal was originally submitted, the numbers were 553 and 554. However, 553 and 554 are current active numbers; therefore, two new numbers had to be selected (545 and 548). When the proposal was resubmitted with the new numbers, not all of the previous numbers (553 and 554) were revised in the document to the correct numbers of 545 and 548. Therefore, where number SCM 553 is listed, the number should be replaced with SCM 545. And, where number SCM 554 is listed, the number should be replaced with SCM 548.

**After the above corrections, the Curriculum Committee voted and approved the course changes and recommended course changes be approved by Graduate Council.**

**Program changes:**

- Add Certificate: Supply Chain Management.

The question was asked if the Supply Chain Management certificate will be a 1) stand-alone certificate, 2) add-on certificate, or 3) both. Also, the question was asked if the new certificate is in alignment with the certificate policy?

The department needs to review and discuss the above questions before answers can be provided.  
**Therefore, the proposal to add the certificate was tabled.**

- Revise Supply Chain Management major, MS to add an on-line program option.

The following questions were asked:

1. Why the difference of hours for the same degree?

The 39 hour existing MS is designed for traditional students who desire to further their education in both supply chain management and international business. It is delivered as a cohort and requires two years of full-time student residence; including two mandatory semesters abroad at partner universities (Germany and China).

The proposed Online MS is designed for working professionals who desire to continue their education in supply chain management while working full-time jobs.

2. Would the department prefer to show the two different options as concentrations to where they will appear on the student's transcript? If yes, what names of concentrations would they want?

The department will discuss how they prefer the two options be listed in the Graduate Catalog and the proposal will come forward again in the fall.

**The proposal was tabled and will come forward again in the fall, along with the certificate.**

**Informational Items / edits to the Graduate Catalog:**

- Department of Finance: for the Finance concentration (MBA), requested to edit outdated course numbers listed in their catalog text.
- Department of Marketing and Supply Chain Management: for the Supply Chain Management Major (MS), under the "Retention Standards" heading, requested to edit first bullet to indicate "Academic standing is defined as designated by the Graduate School."

It was noted today's meeting is the last Curriculum Committee Meeting for this academic year.

The meeting adjourned at 5:00.

Respectfully submitted,

Catherine Cox  
Graduate Curriculum Coordinator

<b>Thursday April 5, 2018 3:45 PM – 5:00 PM</b>	<b>Graduate Curriculum Committee Meeting</b>	<b>405 Student Services Building</b>
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## **AGENDA**

**Haslam College of Business**

# HASLAM COLLEGE OF BUSINESS

All changes effective Fall 2019

## I. COURSE CHANGES

### DEPARTMENT OF MARKETING AND SUPPLY CHAIN MANAGEMENT

Learning Goals and Objectives for the Master of Science in Supply Chain Management (both tracks):

1. Demonstrate an understanding of the concepts and principles that are essential for managing and controlling the five main supply chain processes: planning, sourcing, making, delivering, and returning;
2. Demonstrate the ability to assess and solve a real business problem through their capstone project;
3. Demonstrate the ability to articulate how supply chain management processes create value for the businesses they serve.

### (SCM) SUPPLY CHAIN MANAGEMENT

#### ADD

**SCM 545 Supply Chain Strategy (3)** Defines the principles and practice of end-to-end integrated supply chain management with particular emphasis on how supply chains create organizational value. Covers foundational concepts on integrating business activities through improved processes and relationships to achieve and maintain competitive advantage through supply chain management.

*Registration Restriction(s): Master of science – Supply Chain Management major or permission of the instructor.*

SUPPORTING INFORMATION Rationale: **New course** to be **required** for students enrolled **in the online track** of the MS in Supply Chain Management. Impact on other units: None expected. Financial Impact: Cost of instruction included in cost of MS-SCM degree program to be offset by tuition revenue generated by that program. Additional documentation: None required.

LEARNING OBJECTIVES SUPPORTED: This course will support Learning Objective 3.

**SCM 548 Global Supply Chain Management (3)** Explores the complexities of managing supply chains in a global context and provides frameworks and foundations to help SCM professionals successfully work in international environments. Issues relating to the drivers of globalization and managing the supply and demand fulfillment processes across an extended and global organization will be addressed. Topics include cross-cultural relationships, overviews of important global business regions, regional trading blocs, global operations, offshoring, infrastructure, security and risk, sustainability, market entry, and other related issues.

*(RE) Corequisite(s): SCM 553 or requires permission of the instructor.*

SUPPORTING INFORMATION Rationale: **New course** to be **required** for students enrolled **in the online track** of the MS in Supply Chain Management. Impact on other units: None expected. Financial Impact: Cost of instruction included in cost of MS-SCM degree program to be offset by tuition revenue generated by that program. Additional documentation: None required.

LEARNING OBJECTIVES SUPPORTED: This course will support Learning Objectives 1 & 3.

**SCM 555 Supply Chain Finance (3)** Explores the impact that supply chain management has on the financial performance of the organization. Coverage includes the impact of supply chain management on financial statements, budgeting, allocation strategies, and related concepts.

*(RE) Corequisite(s): SCM 553 or requires permission of the instructor.*

SUPPORTING INFORMATION Rationale: **New course** to be **required** for students enrolled **in the online track** of the MS in Supply Chain Management. Impact on other units: None expected. Financial Impact: Cost of instruction included in cost of MS-SCM degree program to be offset by tuition revenue generated by that program. Additional documentation: None required.

LEARNING OBJECTIVES SUPPORTED: This course will support Learning Objective 3.

**SCM 563 Supply Chain Operations (3)** Covers the concepts, methods and tools that are useful in understanding the management of a firm's operations in manufacturing and service firms. Includes coverage of systematic planning, design, and operation of all processes required for the production and delivery of goods and services. Highlights process improvement and operational excellence tools required to operate high quality operations.

*(RE) Corequisite(s): SCM 553 or requires permission of the instructor.*

SUPPORTING INFORMATION Rationale: **New course** to be **required** for students enrolled **in the online track** of the MS in Supply Chain Management. Impact on other units: None expected. Financial Impact: Cost of instruction included in cost of MS-SCM degree program to be offset by tuition revenue generated by that program. Additional documentation: None required.

LEARNING OBJECTIVES SUPPORTED: This course will support Learning Objective 1.

**SCM 564 Supply Chain Data Modeling and Analysis (3)** Explores the key issues associated with the design, modeling, and analysis of dynamic, flexible, and responsive supply chain systems. Emphasis will be on the application and development of advanced modeling techniques for the analysis of strategic, tactical, and operational supply chain problems including supply chain network design, inventory management, transportation management, purchasing, demand management, and coordination among supply chain partners.

*(RE) Corequisite(s): SCM 553 or requires permission of the instructor.*

SUPPORTING INFORMATION Rationale: **New course** to be **required** for students enrolled **in the online track** of the MS in Supply Chain Management. Impact on other units: None expected. Financial Impact: Cost of instruction included in cost of MS-SCM degree program to be offset by tuition revenue generated by that program. Additional documentation: None required.

LEARNING OBJECTIVES SUPPORTED: This course will support Learning Objective 3.

**SCM 565 Supply Chain Information Management (3)** Introduces students to information management strategies and tools to manage integrated supply chains. Coverage includes information technology systems used to support modern supply chains and exposure to the supply chain digitalization transition. Course aims to develop and produce supply professionals who can take a critical view of how information and technology can best support effective supply chain management.

*(RE) Corequisite(s): SCM 553 or requires permission of the instructor.*

SUPPORTING INFORMATION Rationale: **New course** to be **required** for students enrolled **in the online track** of the MS in Supply Chain Management. Impact on other units: None expected. Financial Impact: Cost of instruction included in cost of MS-SCM degree program to be offset by tuition revenue generated by that program. Additional documentation: None required.

LEARNING OBJECTIVES SUPPORTED: This course will support Learning Objectives 1 & 3.

**SCM 580 Integrated Supply Chain Management Capstone (3)** A capstone course, enabling students to synthesize their learning from program coursework. The global context within which firms operate will provide the foundation for understanding global supply chain strategy, from market entry through to the integration of demand management and supply management processes to meet corporate objectives. Course will utilize exercises and a simulation to allow students to analyze and synthesize program coursework. Course will help students understand how to best use program knowledge to maximize value creation for employers and in their own career. This course may require a one-week residency on the University of Tennessee campus or another location.

*(RE) Corequisite(s): SCM 547, SCM 553, SCM 554, SCM 555, SCM 563, SCM 564, SCM 565, SCM 571 and SCM 573 or requires permission of the instructor.*

SUPPORTING INFORMATION Rationale: **New course** to be **required** for students enrolled **in the online track** of the MS in Supply Chain Management. This course may be taught in a hybrid online/traditional manner. Impact on other units: None expected. Financial Impact: Cost of instruction included in cost of MS-SCM degree program to be offset by tuition revenue generated by that program. Additional documentation: None required.

LEARNING OBJECTIVES SUPPORTED: This course will support Learning Objective 2.

## REVISE (RE) PREREQUISITES TO (RE) COREQUISITES

**SCM 547 Supply Chain Planning and Analysis (3)** Development of plans for executing supply chain processes to support integration of the supply chain across major functional areas of the business including logistics, marketing, manufacturing, and procurement. To facilitate achievement of these objectives, the course introduces analytical tools and techniques that provide a cause and effect understanding linking operational plans with corporate objectives.

*(RE) Corequisite(s): SCM 553 or BAUD 518 or requires permission of the instructor.*

Formerly: (RE) Prerequisite(s): Business Administration 518 and Supply Chain Management 505.

SUPPORTING INFORMATION Rationale: **New online section(s) to be added for students enrolled in the online track** of the MS in Supply Chain Management. Impact on other units: None expected. Financial Impact: Cost of instruction included in cost of MS-SCM degree program to be offset by tuition revenue generated by that program. Additional documentation: None required.

LEARNING OBJECTIVES SUPPORTED: This course supports Learning Objective 1.

## REVISE TO DROP REGISTRATION RESTRICTION AND ADD (RE) COREQUISITE

**SCM 571 Strategic Supply and Cost Management (3)** Course will address the processes that facilitate the structure, creation, and management of value added transactions and relationships between supplier and customer organizations in a channel, supply chain, and integrated value system context with a particular focus on financial techniques to better manage supply chain costs. Course will help you to learn to apply financial measures to supply chain decision-making problems and also to become an effective and efficient supply chain manager. This is a highly interactive class using cases, simulations and in-class exercises to better align “real-world” thinking while focusing on foundations of the supply chain and the interactive role of supply management within an organization and as a boundary spanner.

*(RE) Corequisite(s): SCM 553 or SCM 551 or requires permission of the instructor.*

Formerly: Registration Restriction(s): Master of Science, supply chain management major or requires permission of the instructor.

SUPPORTING INFORMATION Rationale: New **online section(s) to be added for students enrolled in the online track** of the MS in Supply Chain Management. Impact on other units: None expected. Financial Impact: Cost of instruction included in cost of MS-SCM degree program to be offset by tuition revenue generated by that program. Additional documentation: None required.

LEARNING OBJECTIVES SUPPORTED: This course supports Learning Objective 1.

**SCM 573 Distribution, Logistics and Network Management (3)** Addresses strategic decision making related to the physical network design and operation of the supply chain, including the location and capacity of suppliers, plants and warehouses in a logistics network that delivers products and services to end customers. Course content will explore the tradeoffs inherent to physical network decision making with special emphasis on managing demand and lead time variability, matching capacity to demand, centralization and pooling of inventory, and achieving a total value solution. Will apply analytic methods learned in other courses to the problems of supply chain network design and strategic inventory positioning, in order to explore theoretical relationships and to provide students with decision making skills needed in practice.

*(RE) Corequisite(s): SCM 553 or SCM 551 or requires permission of the instructor.*

Formerly: Registration Restriction(s): Master of Science, supply chain management major or requires permission of the instructor.

SUPPORTING INFORMATION Rationale: New **online section(s) to be added for students enrolled in the online track** of the MS in Supply Chain Management. Impact on other units: None expected. Financial Impact: Cost of instruction included in cost of MS-SCM degree program to be offset by tuition revenue generated by that program. Additional documentation: None required.

LEARNING OBJECTIVES SUPPORTED: This course supports Learning Objective 1.

## II. PROGRAM CHANGES

### DEPARTMENT OF FINANCE

Learning Goals and Objectives for the Full-time MBA Program:

1. Application of Business Knowledge and Skills: Apply functional knowledge and skills developed in the first year MBA curriculum to address critical, real-world business issues
2. Ethical Decision Making in a Global Context: Identify and effectively evaluate business problems and opportunities in a global market environment.
3. Presentation Skills Development: Demonstrate the acquisition and utilization of fundamental presentation, data analysis, and communication skills necessary to successfully influence the consideration of new business ideas in an organizational setting.
4. Collaboration: Perform effectively as a team member.

### REVISE REQUIREMENTS – BUSINESS ADMINISTRATION MAJOR, MBA, FINANCE CONCENTRATION

In the 2019-2020 Graduate Catalog, delete current catalog text and replace with the following:

Minimum course requirements are three courses from the following – FINC 520, FINC 525, FINC 535, FINC 571, FINC 581, and FINC 595 (torch fund only).

Formerly: minimum course requirements are three courses from the following – FINC 512, FINC 525, FINC 532, FINC 571, FINC 581, and FINC 599 (torch fund only).

Rationale: the current description is outdated; new description reflects course deletions of FINC 512, FINC 532, and FINC 599, and, in their place, additions of FINC 520, FINC 535, and FINC 595. Financial impact: there is no additional financial obligation for the execution of this change. Impact on other units: none.

### DEPARTMENT OF MARKETING AND SUPPLY CHAIN MANAGEMENT

Learning Goals and Objectives for the Master of Science in Supply Chain Management (both tracks):

1. Demonstrate an understanding of the concepts and principles that are essential for managing and controlling the five main supply chain processes: planning, sourcing, making, delivering, and returning;
2. Demonstrate the ability to assess and solve a real business problem through their capstone project;
3. Demonstrate the ability to articulate how supply chain management processes create value for the businesses they serve.

## **ADD GRADUATE CERTIFICATE**

### Supply Chain Management

In the 2019-2020 Graduate Catalog, add heading, text, and requirements for new graduate certificate.

#### **Supply Chain Management Graduate Certificate**

The Haslam College of Business offers a graduate certificate in Supply Chain Management that is designed to help supply chain working professionals build their competency in this rapidly growing field. Preference is given to students with undergraduate degrees in business, engineering, or related fields, and those with experience in Supply Chain Management. This certificate requires the completion of 12 credit hours of coursework, which would also be required should the student choose to apply for acceptance into the Master of Science in Supply Chain Management program.

#### **Requirements**

Course requirements are SCM 553 (required to take in the first semester of study) and three courses from the following list: SCM 547, SCM 554, SCM 555, SCM 563, SCM 564, SCM 565, SCM 573.

**SUPPORTING INFORMATION: Rationale:** Supply chain management has quickly become recognized as an important field of study in business over the past decade. The pace of change means that many professionals who graduated even 10 years ago did not have the opportunity to formally study in the field. This situation has created a sizable demand for high-quality educational offerings in the field. This proposed certificate would provide an option for those students who desire to build competency in the area but are unable or unwilling to complete a graduate degree. Similar to the online track proposed below, certificate programs in supply chain management have become an accepted means for top-tier schools to impact the populations they serve. Both of the other two schools in the top three currently offer similar certificate programs.

**NOTE: reminder... for graduate certificates at least 3 credit hours for the certificate must be earned outside of the requirements of the degree(s) and other certificates. Is the new certificate in alignment with the policy?**

## **REVISE REQUIREMENTS, SUPPLY CHAIN MANAGEMENT MAJOR, MS**

In the 2019-2020 Graduate Catalog, revise the Supply Chain Management Major to add an on-line program option to our current MS program.

Two tracks are available for the MSSCM program—the Tri-Continent MSSCM and the online MSSCM.

Tri-Continent Master of Science in Supply Chain Management (MSSCM\_T)

After the program information regarding the Master of Science in Supply Chain Management (MSSCM\_T), at the end, add the following text:

#### **Online Master of Science in Supply Chain Management (MSSCM\_O)**

The Haslam College of Business (HCB) offers the online Master of Science in Supply Chain Management (MSSCM\_O) to prepare working supply chain professionals that do not have the flexibility to attend a traditional full-time residential program. Integrated supply chain management has emerged as a critical strategic priority for many firms over the past decade, but the talent pool that can properly conceptualize and drive supply chain from this new strategic perspective is currently lacking. This program provides the strategic, integrative, and analytical skills that businesses desire. The program takes a truly integrative approach that encompasses sales, procurement, operations, logistics, customer service, and other functions of the overall process, in order to develop talent that can effect change across an integrated supply chain and, ultimately, the entire organization.

Completion of SCM 580 may require students to participate in a short residence period, typically one week, on the University of Tennessee campus or at another announced location. This will be noted with each offered section of SCM580.

#### **Admission Requirements**

The Graduate Programs organization at HCB will perform reviews of student files along with the faculty director from the department of Marketing and Supply Chain Management. The following admission standards will guide the process for admission to the program. The minimum admissions requirements are the same for both programs.

- Meet requirements for admission to the UT Graduate School.
- Applicants who hold an undergraduate degree in business, engineering, or related fields will be given preference for admission, as will those with supply chain management work experience.
- Grade point average and recommendation letters are required, additional evaluation material may be required.
- All students must adhere to all UTK ethical and professional standards (see Hilltopics).



**Retention Standard**

- A minimum grade of C in all HCB courses and a 3.00 cumulative GPA is required for continuation in the program; and
- Students must adhere to ethical and professional standards.

**Graduation Standards**

To be eligible for graduation, students must:

- Complete the entire curriculum plan per UTK Graduate School policies as specified by the University of Tennessee.

**Procedure for Application to Program**

- Complete online application through the UTK Graduate School.
- Adhere to application deadlines and other requirements as posted on the Haslam College of Business website; and
- Students will be admitted for start in a particular semester. Students can defer admission by up to one calendar year before needing to reapply through the UTK Graduate School.

**Course Requirements for the MSSCM\_O**

Core and Sub-core Requirements (30 credit hours). The proposed MSSCM\_O program track requires completion of 30 Semester Credit Hours (SCH) distributed as follows (for a draft semester by semester schedule see Curriculum for One Program Cycle below):

<u>Course Number</u>	<u>Course Title</u>	<u>Credit Hours</u>
SCM 553	Supply Chain Strategy	3
SCM 554	Global Supply Chain Management	3
SCM 555	Supply Chain Finance	3
SCM 564	Supply Chain Data Modeling and Analysis	3
SCM 565	Supply Chain Information Management	3
SCM 547	Supply Chain Planning and Analysis	3
SCM 571	Strategic Supply & Cost Management	3
SCM 563	Supply Chain Operations	3
SCM 573	Distribution, Logistics & Network Management	3
SCM 580	Integrated Supply Chain Management Capstone	3
<b>Total credit hours</b>		<b>30</b>

**Sub-major Requirements**

There are no sub-major requirements

**Electives**

No formal course electives are offered in this program track. This program track does not strictly utilize a cohort system, so students can complete the program as their schedule and finances allow. This flexibility would allow students to complete the program in as little as 18 months or more slowly based upon individual situations. The program track will always offer a minimum of one Fall intake per year, but will expand up to three intakes per year based upon enrollment demand. An introductory course and a capstone course do dictate some order to program progression; otherwise, students can take coursework in a manner that best fits with their schedule.

**Sample Curriculum for a Three Semester Program Cycle**

The MSSCM\_O track requires completion of 30 Semester Credit Hours (SCH) which could be completed as follows:

<u>Course Number</u>	<u>Course Title</u>	<u>Credit Hours</u>
<b>Fall Term</b>		
SCM 553*	Supply Chain Strategy	3
SCM 555	Supply Chain Finance	3
SCM 564	Supply Chain Data Modeling and Analysis	3
<b>Spring Term</b>		
SCM 565	Supply Chain Information Management	3
SCM 547	Supply Chain Planning and Analysis	3
SCM 571	Strategic Supply & Cost Management	3
<b>Fall Term</b>		
SCM 554	Global Supply Chain Management	3
SCM 563	Supply Chain Operations	3
SCM 573	Distribution, Logistics & Network Management	3
SCM 580**	Integrated Supply Chain Management Capstone	3
<b>Total Credit Hours</b>		<b>30</b>

\*SCM 553 must be taken in the first semester of study

\*\*SCM 580 must be taken in the final semester of study

SUPPORTING INFORMATION: Rationale: The existing MS-SCM program is a program designed for traditional students who desire to further their education in both supply chain management and international business. It is delivered as a cohort program and requires two years of full-time student residency including two mandatory semesters abroad at partner universities in Germany and China. The typical student demographic for this program is 0-3 years of professional experience.

The proposed MS-SCM online track is designed for working professionals who desire to continue their education in supply chain management. Given the growing popularity of supply chain management, significant demand exists for further education in this field. UTK is regularly recognized as one of the top three programs nationally in this field, and both of the other peer schools have successful online graduate programs in SCM. This program would significantly increase the impact of UT supply chain programs, and it is currently viewed as a significant negative that UTK does not currently offer this degree option.

The difference in credit hours between the programs (39 hours for the Tri-Continent track and 30 hours for the online track) should not be construed as a quality difference. The 39-hour Tri-Continent program includes a heavy focus on international business in addition to supply chain management and was jointly developed in conjunction with international partner universities. Both of these factors drove the increase in required credit hours to 39 SCH. If a residential MS-SCM program was proposed, it would be a 30-hour program which is typical for programs of this type.

SACS Compliance (Per Mary Albrecht, email June 30, 2017)

UTK is authorized to offer distance education, so our understanding is that we no longer have to notify SACSCOC of each new on-line program offering of a previously approved academic program.

THEC Compliance (Per India Lane, email July 14, 2017)

The addition of an online program track and the modification of degree requirements only requires notification to THEC, once approved on campus by the HCB faculty and the campus Graduate Council.

Therefore, once this new program gets approved by HCB faculty and the campus Graduate Council, we will notify THEC.

Additional Information about Program Need.

Academic/Institutional Need. The MSSCM\_O program track is consistent with the goals and priorities of UTK. In addition, as far as we are aware, the UTK program is the only online MS in supply chain management program offered in the State of Tennessee, and it will be offered by one of the highest rated programs in the country. This proposed MSSCM\_O track will be an online degree focused on developing deep expertise in SCM for students who already have basic preparation via either an undergraduate in business or engineering. SCM has rapidly evolved into a broad and complex field, and employers are demanding graduates who are well prepared across the discipline. This degree would offer 30 hours of credit dedicated to SCM and key adjacencies.

Student Demand. HCB's graduate programs in SCM are ranked in the Top 10 by various ranking entities including Gartner, SCM World, and US News. The Gartner VP who leads their talent and education practice regularly refers to the "Big 3" programs as including Michigan State University, Penn State University, and the University of Tennessee. Penn State University has a large online program in SCM (approximately 400 active students) through its World Campus arm. We believe the large alumni base of SCM professionals produced by this program to be one of the primary reasons that Penn State University is perennially ranked as the #1 SCM program. Michigan State University converted its MS-SCM to a fully online program approximately two years ago. They use an external provider (University Alliance/Bisk) to perform recruiting and program management functions and have seen dramatic success with their program that now enrolls 80-100 students per year. A number of other schools, including Rutgers University, Arizona State University, and Indiana University also offer successful online Masters programs in SCM. Based upon the forecasted trends, the introduction of an online graduate program is increasingly important if UTK is to maintain top-tier status in this field. Several online program management firms have forecast that we could get to a steady state of up to 150 graduate students per year (after three years).

Employer Need. According to the Bureau of Labor Statistics, supply chain management will continue to be one of the fastest growing industries for jobs over the next decade. In fact, supply chain jobs are expected to grow by 22% through 2020, compared to just 11% for all occupations. Yet despite this demand, the supply of skilled, formally trained supply chain professionals possessing the combination of technical know-how, management training and a global mindset remains low. As previously stated, 43% of supply chain executives believe that it is more difficult to find supply chain talent than it was two years ago, and 26% of those executives describe the situation as "extremely challenging." The situation is likely to get worse.

In a 2014 article in Supply Chain Management Review, Christopher Craighead and Kusumal Ruamsook suggest that the industry is in the midst of a talent "perfect storm" based on current and emerging trends in the supply chain talent pool. Their analysis focuses on four factors creating this crisis:

- \* Industry Demand for New Supply Chain Talent – Demand for talent is estimated to exceed supply by a ratio of 6 to 1.
- \* Supply Chain Talent Gaps – Talent shortages resulting from Baby Boomers' retirement will be more pronounced for supply chain given industry demand, especially at the mid-management level.
- \* Supply Chain Profession Dynamics – A growing skills gap exists with the transition from an industrial economy to an information/services economy.
- \* Potential Business Faculty Shortages – Full-time business faculty in supply chain management comprise 1.5% of overall business faculty, thereby limiting formal supply chain course offerings.

This crisis is not limited to North America or Europe, but is global in nature. A recent Deloitte survey of 400 executives of multinational firms found that 71% reported difficulty in recruiting supply chain leadership worldwide. As supply chain management continues to develop in emerging markets, this trend will become even more pronounced. Clearly, something must be done to reverse this trend.

The proposed MSSCM\_O is well positioned to partially address this talent shortage. While other institutions are recognizing the need and offering expanded programming in supply chain management at both the undergraduate and graduate level, the market is far from saturated. In the State of Tennessee, there are currently no specific Master of Science in Supply Chain Management programs other than UTK's current traditional offering.

Based on this information, the knowledge with which the students will be equipped includes: strategic sourcing and purchasing; manufacturing, including capacity planning, technology solution, production scheduling, and materials planning; inventory management and inbound and outbound transportation; the linkage with the customer service, sales, promotion, and marketing activities; information technology for efficient supply chain and logistics management; and managing the information flow to support efficient trade and customer-supplier relationship by taking advantage of various electronic commerce enabling technologies. The program will also prepare students for the ongoing digitization of supply chain management, including coverage of the Internet of Things, Advanced Robotics, and 3D/additive manufacturing.

With this approach, the MSSCM\_O will translate to real job market value for graduates of the program and position them for continued career advancement. A master's degree in supply chain is one of the few specialty master's offerings where compensation is equivalent to, or in some cases higher, than MBA compensation. In a 2015 study, Poets & Quants found that students graduating with a Master of Science in Supply Chain Management commanded a slightly higher salary than MBA graduates with a supply chain concentration did. With demand growing, this degree is being introduced at the right time to produce world-class supply chain management professionals who can meet the complex supply chain needs of global companies.

**Staffing Impact:** Early in the first development year we will hire a non-tenure track (NTT) faculty in Supply Chain Management to assist us in course development and preparation. Later in the first development year or early in the second year we will hire a program manager to manage the program under the direction of the faculty director. Also later in this second year we will add a second NTT faculty. While the faculty hired will likely be primarily assigned to teach in the MSSCM\_O program, they may also be assigned other teaching duties to free other faculty to teach in the MSSCM\_O program. The medium range plan is to add an additional tenure-track faculty in year three of the program delivery to help accommodate additional sections.

#### **REVISE SUPPLY CHAIN MANAGEMENT MAJOR, MS**

In the 2019-2020 Graduate Catalog, under the heading "Retention Standards" revise the first bullet for the MSSCM-T as follows:

- A minimum grade of C in all HCB courses and a 3.00 cumulative GPA is required for continuation in the program; and

Formerly: A minimum grade of B in all HCB courses and a 3.00 cumulative GPA is required for continuation in the program; and

SUPPORTING INFORMATION: Rationale: To properly correct the grade requirements, matching college and university requirements for retention in graduate programs. . Impact on other units: None expected. Financial Impact: None.