

# OPERATIONS AND SUPPLY CHAIN PROGRAM

Transforming Business



#5

**UNDERGRADUATE  
SUPPLY CHAIN PROGRAM  
IN NORTH AMERICA**

*Gartner Top 25 Supply Chain University Programs 2020*

PRODUCT DEVELOPMENT | SUPPLY CHAIN OPTIMIZATION | OPERATIONS MANAGEMENT  
PROCESS DESIGN, ANALYSIS AND IMPROVEMENT | RESOURCE NETWORK OPTIMIZATION



**Darla Moore  
School of Business**

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UofSC students helped a food bank develop an optimization model that could generate 1.72 million additional meals per year with more efficient utilization of existing resources.



# \$66,770

**AVERAGE FIRST-YEAR COMPENSATION**

(salary + signing bonuses)  
for 2019 graduates of the Operations  
and Supply Chain Program

# Delivering Greater Levels of Success

Making products and providing services involves processes that require material, equipment, technical, information and human resources. Professionals who know how to design, manage and refine such processes are in high demand in today's business world.

*The operations and supply chain field, which requires both analytic and soft skills, often appeals to students with an aptitude for logic and creativity, and an interest for improving status quo.*

## **ENJOY AN EXCITING, GROWING PROFESSION**

Operations and supply chain processes drive the success of businesses large and small. Just as management of sourcing, production and distribution affects top-line and bottom-line performance in manufacturing firms, successful service design and delivery resonates in everything from customer satisfaction to corporate profitability.

The operations and supply chain field, which requires both analytic and soft skills, often appeals to students with an aptitude for logic and creativity, and an interest for improving status quo.

## **BROADEN YOUR CAREER HORIZON**

Operations and supply chain professionals are found globally in diverse industries and businesses from manufacturing, retail, airline, healthcare, insurance, hospitality and technology. They work in roles such as sourcing, purchasing, production floor or service delivery, quality assurance and improvement, distribution, supply chain optimization, and business process improvement among others. Some pursue work in consulting firms or choose a career in an adjacent profession such as industrial marketing and channel management, mergers and acquisition valuation, or managerial accounting.





## CAPSTONE PROJECT

# Transportation Network Optimization

## *Snider Tire*

Snider Tire, Inc. offers a variety of automobile, trucking, construction and off-road vehicle tire products to commercial and industrial customers. By 2012, the company had become one of the nation's largest commercial tire dealers and retreaders, operating seven manufacturing plants and 45 service locations. In collaboration with Snider and their supplier, Michelin, our team successfully redesigned the company's transportation network by first optimizing the plants-to-stores networks, and then reengineering the customers-to-stores truck routes. Using a Lean Six Sigma and optimization framework, the project improved key supply chain processes of plants' capacity planning and distribution route design. Enthusiastic implementation of process improvement resulted in savings of \$2 million annually or 16 percent of total transportation costs.

## POPULAR EMPLOYERS

### FOR OPERATIONS AND SUPPLY

#### CHAIN GRADUATES

##### *Leading Manufacturing Firms*

- Boeing
- BMW
- Bosch
- Collins Aerospace
- Continental Tire
- Cummins
- Intel
- Michelin
- Schneider Electric
- Siemens Industry USA

##### *Consulting Firms*

- Accenture
- Deloitte
- Ernst & Young
- Manhattan Associates

##### *Technology Firms*

- Apple
- Dell
- IBM
- Intel

##### *Retail/Services*

- Amazon
- Coca-Cola Bottling Co.
- Delta Airlines
- Nordstrom
- Target

##### *Hospitals and Healthcare*

- Atrium Health
- Johnson & Johnson
- Nephron Pharmaceuticals
- Pfizer
- Prisma Health – Midlands
- McLeod Health

##### *Financial Services and Insurance*

- Bank of America
- BlueCross BlueShield of South Carolina
- Colonial Life/Unum
- Goldman Sachs
- Wells Fargo

# Katherine Beach

ASSOCIATE, BUSINESS OPERATIONS  
TESLA

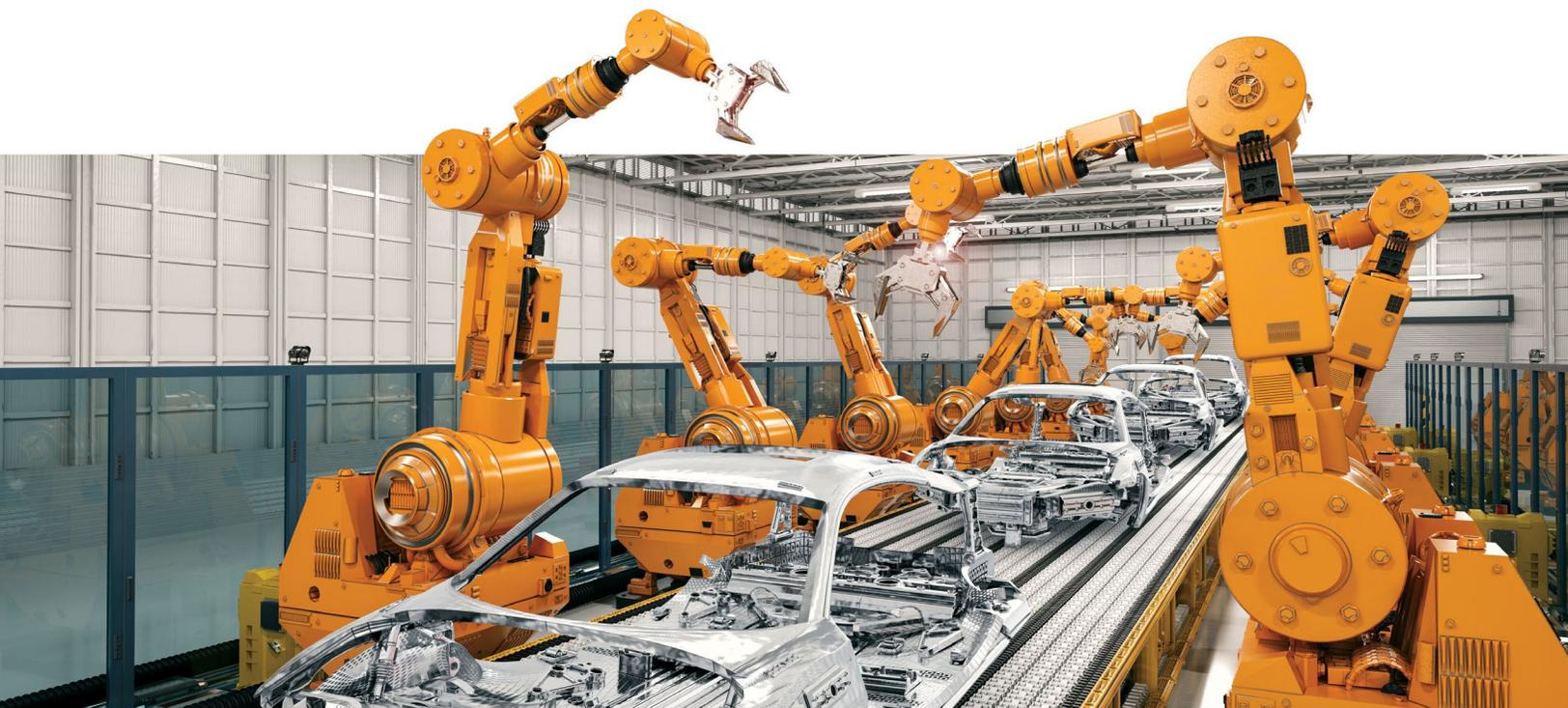


Katherine ('15, Global Supply Chain and Operations Management, International Business, and Finance) discovered operations and supply chain as a University of South Carolina freshman. With positive feedback from fellow students on course content and post-graduate careers, she knew she could look forward to a future in global supply management or as a lean consultant.

“ I quickly learned one of the greatest things about the field is the breadth of options available,” she says.

A triple major, Katherine found the capstone consulting class a uniquely career-defining experience. “You’re in a perfect blend of monitored academic, yet real world application that ultimately propels you to learn more in a shorter period of time.” That invaluable experience is one reason Katherine was invited to join the business operations of Tesla in San Francisco as they launched the Model 3. Today, she’s supporting the build of Tesla’s new Shanghai factory, the first foreign-owned automotive factory in China.

Katherine is grateful she had the opportunity to earn Sonoco-UofSC Lean Six Sigma Green Belt as a student, as the demand for data-savvy graduates grows alongside advancing automation. “By standardizing and automating routine analysis, a greater emphasis will be placed on emotional intelligence – a critical skill for accomplishing change in organizations,” she says. ■





## A Data-Driven, Experiential Program

The University of South Carolina Darla Moore School of Business is an internationally respected institution where operations and supply chain education – including the singular capstone experience – has captured the attention of international industry leaders. It's a place where students gain advanced professional skills, add salary-enhancing certifications and connect with a high-achieving professional and alumni network.

\*Source: Gartner Top 25 Supply Chain University Program 2020





## **GAIN GLOBAL OPERATIONS AND SUPPLY CHAIN PERSPECTIVE**

The Moore School delivers the global-based education today's multinational businesses appreciate. Pursue an undergraduate or master's degree in operations and supply chain or pair the degree with a complementary study such as international business, entrepreneurship, finance, marketing or human resources management. Opt for a dual or triple major or a concentration in Business Analytics, which exposes students to cutting-edge data technology that further magnifies professional capabilities.

Our students, led by a team of nationally and globally recognized professors, explore business operations, supply chain and process concepts within immersive learning experiences in varied corporate environments and classroom settings. Proven processes are pathways used to design and improve business operations as well as solve highly specific production or industry challenges.

## **LEARN FROM RESPECTED INDUSTRY LEADERS**

Collaborate with both faculty and industry experts on mission-critical projects and real-world challenges straight from the business world. Learn from award-winning operations and supply chain professors who are distinguished in teaching, research and practice qualifications. Apply theory, knowledge and intuition to find new levels of efficiency on both coursework and real-world projects – experience designed to move one resume on top of others.

## **JOIN A ONE-OF-A-KIND CAPSTONE COHORT**

There's simply no match for the Moore School's unique capstone experience. In the program, undergraduate students compete for placement and have the opportunity to earn industry-validated Sonoco-UofSC Lean Six Sigma Green Belt Certification, an extremely rare credential for a beginning professional. In fact, employers have fast-tracked the majority of capstone graduates based on the skills and professionalism gained through the experience.

During the 14-week project, each capstone team explores a specific operations or supply chain problem for a business partner in sectors ranging from health care to manufacturing. The teams use proven processes to study emerging scenarios in areas related to sourcing, logistics, business processes, network optimization or distribution, manufacturing and service operations.

The student teams build close working relationships with the partner's working professionals and work together toward specific goals, convening weekly through a mix of site visits, video conferencing, teleconferences or web presentations. The projects, which take place each fall and spring, culminate in client-facing presentations before businesses such as Adidas, BMW, Coca-Cola Bottling Co., Johnson & Johnson, UPS and leading companies. ■



## Operations and Supply Chain Center

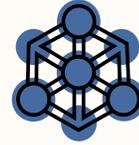
This educational hub at the Moore School real business operations and supply chain challenges head-to-head with next generation operations and process experts. Each fall and spring, center partners engage with up-and-coming talent and experienced faculty mentors in the program's signature capstone experience.

The center formed in 2005 to help companies improve performance and provide students with real-world learning experiences that tested their classroom knowledge. Since then, it has fostered more than 280 student- and faculty-led projects that have saved partner companies an estimated \$275 million. Partner companies also make education more affordable by awarding scholarships to the program's 15 highest-achieving students.



## SCOPE Student Organization

Through the Society of Supply Chain and Operations Excellence (SCOPE), students tour local manufacturing facilities to experience real-world supply chain and manufacturing in action. The group also hosts campus-based panels for discussion of operations, supply chain and emerging workforce issues and connects members with internship and employment opportunities.



## PROGRAM PARTNERS

- Adidas
- Alpek Polyester
- Atrium Health
- Avaya Telecom
- BMW
- Coca-Cola Bottling Co.
- Collins Aerospace
- Colonial Life/Unum
- Continental Tire
- Cummins
- Daimler Trucks
- Delta Airlines
- Eaton Electrical
- Electrolux
- EZGO-Textron
- FN America
- Johnson & Johnson
- Kaiser Aluminum
- McLeod Health
- MeadWestvaco
- Michelin
- Pfizer
- PriceWaterhouseCoopers
- Prisma Health – Midlands
- Schneider Electric
- Siemens
- Sonoco Products Company
- Trane/Ingersoll-Rand
- UPS
- Walmart
- Westinghouse-Nuclear Fuels

# Lauren DeLuca

**SENIOR CONSULTANT: SUPPLY CHAIN MANAGEMENT  
IBM**

When Lauren ('15, International Business and Global Supply Chain and Operations Management) arrived at UofSC, she



didn't know about the supply chain field. In fact, she wasn't sure what degree within international business she'd pursue. After talking to fellow students and becoming involved in student business clubs, it was clear. "I saw the benefits and advantages students studying supply chain had over other university students," she explains.

Lauren, who enjoyed reading process-focused books such as "The Goal" and "The Toyota Way," thrived in the capstone experience. "I liked being a part of a team and with the guidance of our professors, we were able to provide a successful solution to our client," she says.

**“ I learned not only in-depth industry knowledge by earning Lean Six Sigma Green Belt Certification, but also gained valuable soft skills such as leadership and management experience.”**

After completing the course, she had another key realization. "I knew I wanted to start a career in consulting," she says.

Three years into a senior-level supply chain management consultant role at IBM, she knows operations management is part of almost every business-to-customer transaction. From her early IBM days working on projects in Canada, Italy, Spain and France, she's become

a warehouse management specialist currently serving as a deployment lead for a five-warehouse build, test and rollout for a major consumer products client. A role, she believes, was possible thanks to the technical and managerial preparation she received as a UofSC student. "I felt largely at an advantage compared to my peers when I first started in this role," she says. ■



## NATIONALLY RECOGNIZED STUDENTS

The R. Gene Richter Scholarship is a prestigious annual national scholarship awarded to the top supply management students in the nation. Five students from the Operations and Supply Chain program have won this notable national award.

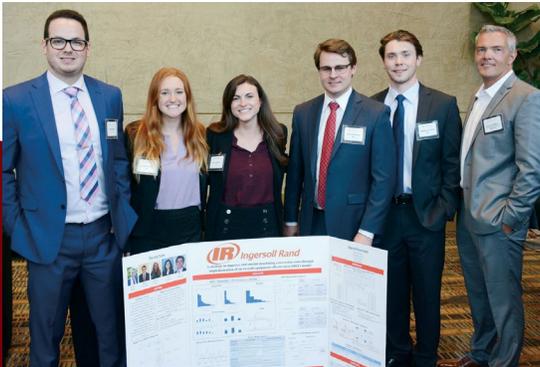


## 2019 AND 2020 FINALIST

**The Institute for Operations Research  
and the Management Sciences (INFORMS)**

**UPS George D. Smith Prize Global Competition**

The Moore School has been recognized as one of the most innovative and practical analytics academic programs. Past winners of the award include MIT, University of Michigan and Carnegie Mellon University.



### **CAPSTONE PROJECT**

## Redesign Feeder Manufacturing Operations

### *Trane/Ingersoll Rand*

Trane U.S. Inc., a brand of Ingersoll Rand, is a leading global provider of indoor air conditioning systems and services. The company turned to the Moore School program for redesign of a problematic component feeder cell to their Coil Center of Excellence, a facility dedicated to manufacturing condenser and evaporator coils. Using value stream mapping to visualize the process, the team developed an overall lean strategy then employed simulation modeling to assess the effectiveness of process changes on cell performance under a wide range of demand and processing conditions prevalent at the plant. Process improvement recommendations included a redesigned material strategy, a new cell layout and one-piece product flow. In combination, the improvements facilitated a 13 percent throughput improvement, 50 percent cycle-time reduction and higher cell efficiency that led to projected recurring savings of more than \$700,000 per year.

# Professional Grade, Career Ready

Moore School students are rigorously tested by a robust curriculum, modern tools, real-world experiences and leading industry professionals. The sustained effort and education of the program cultivates uniquely prepared professionals who are ready to make immediate impact on end-to-end operations and supply chain even in the earliest days of their career.

## **ATTAIN VALUED TRAINING AND CREDENTIALS**

Some undergraduate students opt to prepare for post-graduation APICS testing in Production and Inventory Management (CPIM) or Certified in Logistics, Transportation and Distribution (CLTD). Learn the knowledge requirements of these key manufacturing industry credentials before graduating and be an exam-ready employee.

## **EXPERIENCE INDUSTRY IMMERSION EARLY ON**

With the Moore School's global pedigree, students have unique opportunities to meet and learn from respected professionals, even in their earliest days. Operations and supply chain students can attend open learning forums including the school's annual industry summit, voice of customer presentations and educational poster sessions plus interact with members of the Operations and Supply Chain Center's advisory board.

## **PLAN AHEAD FOR GREATER SUCCESS**

A key part of our program is preparation for what happens after graduation. The Moore School integrates comprehensive career and professional development into academic coursework. Explore personal development, industry segments, skill interests and more with guidance from a team of future focused career professionals. The goal isn't just job readiness; it's that each Moore School graduate leaves with a unique competitive advantage. ■



*With the Moore School's global pedigree, students have unique opportunities to meet and learn from respected professionals.*



## COURSE PROJECT

# Budget-Resources-Yield Analysis and Optimization Strategy

*Harvest Hope Food Bank*

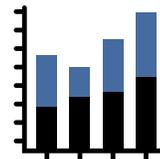
South Carolina-based Harvest Hope Food Bank serves primarily donated food to people in need in 20 counties. The nonprofit sought to efficiently utilize its budget and human and technical resources to increase food and financial donations, which it raises through promotional events. The Moore School team worked with management and staff to develop resource-capacity bills (i.e., the consumption of each resource per event), calculated the expected food and/or dollar donation yield per event, and then used the data to develop an optimization model determining the target number of events that would maximize annual donations. The team determined the food bank could add 1.72 million additional meals per year by utilizing existing resources more efficiently.

## AVERAGE SALARY

for supply chain professionals  
by job function in 2019

Warehouse Supervisor .....	\$78,000
Purchasing Manager .....	\$89,425
Operations Manager.....	\$100,370
Logistics Manager.....	\$104,105
Consultant .....	\$104,825
Transportation Manager .....	\$110,745
Distribution Manager .....	\$132,300
Supply Chain Manager.....	\$143,160

Source: 2019 Logistics Management Salary Survey



## Most Popular Industries of OSC Graduates

(in ranked order)

**CONSULTING**

**AVIATION/AEROSPACE**

**MANUFACTURING**

**TECHNOLOGY**

**FINANCE**

## CAPSTONE OUTCOMES

**280+**  
PROJECTS

**35+**  
PARTNERS

**\$275M+**  
IN SAVINGS

Apply now or learn more at [sc.edu/moore](https://sc.edu/moore)

Contact us at [supplychain@moore.sc.edu](mailto:supplychain@moore.sc.edu)

Or call 803-777-3482



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## **Operations and Supply Chain Program**

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1014 Greene Street  
Columbia, SC 29208

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