SCLM - Supply Chain, Logistics, and Maritime Operations

SCLM 201 Introduction to Spreadsheet Applications (1 Credit Hour)
The spreadsheet has become one of the most widely used analytical tools in the modern world. This course introduces students to the use of spreadsheet (e.g., MS Excel). Topics include: formulas, functions, sorting and filtering, and pivot tables. Besides the spreadsheet capabilities, the course will cover spreadsheet applications in the supply chain, logistics and maritime industry.

SCLM 202 Data-Driven Decision Making in Supply Chain and Maritime Operations (3 Credit Hours)
An introductory study of analytics applications in supply chain, logistics and the maritime industry using MS Excel and Tableau. Generic topics include understanding the problem-solving process, data visualization, descriptive and predictive analytics applications in supply chains. Spreadsheet applications in maritime transportation/logistics, sourcing, and scheduling offer an introductory overview of forecasting and optimization techniques

SCLM 204 Fundamentals of Global Supply Chain Management (3 Credit Hours)
An introductory course in supply chain and logistics. Topics cover strategic, tactical and operational issues in planning, implementing, and controlling end-to-end fulfilment of globally produced goods and/or services using the SCOR model. The pedagogy also superimposes analytics with strategic outcomes to facilitate prudent, data-driven decision making across supply chains.

SCLM 301 Supply Chain Analytics (3 Credit Hours)
A survey of analytics applications in supply chain and logistics, emphasizing the use of data to inform business decision-making. Students work in teams to analyze data using the five broad areas of analytics, namely data mining, statistical inference, forecasting, simulation and optimization using a wide array of examples from scheduling, location modeling, transportation, transshipment, and process improvement. Students also gain experience with effective communication of results to decision-makers.
Prerequisites: SCLM 201

SCLM 303T Maritime Leadership, Technology, and Society (3 Credit Hours)
This course introduces students to the intersections between maritime leadership, technology, and society. It will explain the important elements of the marine transportation and technological systems, which consist of waterways and ports that allow for various modes of transportation to move people and goods to, from, and on the water. Specific topics include an introduction to different types of cargo, how cargo is moved, ship types, ship equipment, ship routes, basic navigation and ship stability, emerging industries including offshore wind and autonomous systems, maritime law, maritime safety, and leadership.
Prerequisites: ENGL 110C

SCLM 304 Operations in a Global Environment (3 Credit Hours)
This course examines strategic, tactical and operational issues in the planning and control of manufacturing and service delivery operations in an increasingly globalized world. This course examines such topics as process design, capacity, materials planning and control, inventory decisions, location and layout, quality and scheduling.
Prerequisites: STAT 130M

SCLM 311 Project Management in Supply Chain & Logistics Operations (3 Credit Hours)
This course will examine the intersection of project/program management and supply chain operations with an introduction to key project management concepts including scope, schedule, and budget. Students will gain a deeper understanding of how improving logistical processes can enhance products, processes and services while providing value to supply chain stakeholders. The course will emphasize team building, leadership and negotiation skills for successful project execution.
Prerequisites: SCLM 204

SCLM 368 Internship in Supply Chain, Logistics, and Maritime Operations (3 Credit Hours)
Practical field experience in a Supply Chain, Logistics and Maritime Operations related project through a supervised internship.
Prerequisites: Permission for enrollment and allowable credit by the School's Director in the semester prior to enrollment

SCLM 370 Global Logistics (3 Credit Hours)
The course examines international logistics and terms for movement of goods and analyzes how companies enter into foreign markets and participate in international trade. It discusses processes and concepts involved in domestic and international multimodal transportation. It also covers operational issues such as payment, commercial documents, insurance, and customs.
Prerequisites: Junior standing

SCLM 380 Multimodal Freight Transportation (3 Credit Hours)
The course includes an overview of the key elements of multimodal freight transportation. It examines modes of transportation, transportation economics, and transportation technology, as well as costing and pricing for transportation. The relationships between intermediaries (including third party-logistics companies), carriers, and shippers are discussed. It also provides an overview for transportation risk, transportation software as well as issues on global logistics.
Prerequisites: SCLM 370

SCLM 410 International Maritime and Transportation Law and Policy (3 Credit Hours)
The logistics activities are increasingly global and are influenced by a system of national and international laws. This complex industry requires an understanding of the regulations and legislation for freight transportation flows. This course will cover domestic and international supply contracts for freight cargo, Incoterms, international law of the sea, maritime jurisdiction, regulation of shipping, carriage of goods, cargo and marine insurance, salvage, marine environmental law, safety at sea, along with other relevant transportation laws.
Prerequisites: Junior standing

SCLM 414 Maritime Operations (3 Credit Hours)
This course covers the operation of assets related to maritime transportation, including seaports, vessels fleets in the movement of cargo domestic and international cargo. It presents concepts related to organization and operation of ports. It discusses issues involved in planning, investment, communication systems, congestion, pollution, safety, security; intermodal transportation; water and land accessibility; and port competition and cooperation. Examines freight shipping organizations operations. Topics include vessel fleet, shipping markets, operations, costs, insurance, and regulations; and ship types, safety, role of the flag state, pollution, chartering and purchase, and understanding of the shipbuilding and ship repair market.
Prerequisites: SCLM 370

SCLM 415/515 Maritime and Supply Chain Safety and Security (3 Credit Hours)
This course examines methods to anticipate threats and mitigation strategies for securing the supply chain and increasing its resilience. It provides an overview of international and U.S initiatives to ensure the security of logistics assets, cargo, people, and infrastructure within the maritime and supply chain domain. The course also addresses threats to the international trade (including maritime piracy, terrorism, cyber threats), and state-of-the-art techniques and tools for protecting the industry against cyberattacks, as well as roles and responsibilities of the supply chain actors.
Prerequisites: Junior standing

SCLM 419/519 Maritime and Supply Chain Risk and Insurance (3 Credit Hours)
This course examines the risks associated with supply chain operations, including aspects of identification, analysis, assessment, response, and control of the risks associated with the transportation and storage of goods. It covers risk assessment as a function of threats, vulnerabilities, and consequences for operational performance for all modes of transportation. Topics include Lloyd's and the London Insurance Market, principles of insurance and law, international liability conventions, institute clauses, exclusions, cargo policies, particular and general average, and salvage insurance.
Prerequisites: SCLM 370

SCLM 430 Global Sourcing and Supply Market Analysis (3 Credit Hours)
This course offers a strategic overview of sourcing materials and services within the supply chain, covering the evolution from purchasing to supply management. Topics include sourcing analytics, supplier evaluation, global risk, and ethical sourcing. Students will develop negotiation, analytical, and communication skills through experiential learning, including consulting projects, case studies and role-playing exercises, to master both conceptual and practical aspects of global sourcing.
Prerequisites: SCLM 204

SCLM 442/542 Supply Chain and Maritime Intelligence (3 Credit Hours)
This course examines the performance metrics of the supply chain, including item tracking and visibility of the whole chain, including control tower approaches. It covers the importance of supply chain information collection, real-time data sharing and basic analytics tools to evaluate and improve the degree of execution of the supply chain and generating insights. Topics include monitoring supply chain processes, end-to-end visibility, collaborative supply chain networks, data integration, and data visualization.
Prerequisites: SCLM 301

SCLM 443 Building Sustainable Supply Chains (3 Credit Hours)
This course examines the environmental impact of supply chain activities, including environmental measurements and strategies to achieve carbon neutrality. Topics include green network distribution, sustainable sourcing operations, and circular supply chains.
Prerequisites: Junior standing

SCLM 450/550 Supply Chain 4.0 Technologies and Innovations (3 Credit Hours)
This course examines the role of technology within the supply chain and how these technologies can be used to improve supply chain performance. Topics include AI, blockchain and smart contracts, IoT and digital twins, Large Language models (LLM), automation and robotics, digital supply chain transformation, machine learning in supply chain, anti-hacking technologies, autonomous vehicles, and additive manufacturing, among others.
Prerequisites: SCLM 202 and SCLM 204

SCLM 461/561 Warehousing, Distribution and Material Management (3 Credit Hours)
This course is designed to investigate the strategic role of warehouses, distribution centers and material management in domestic and global supply chains. Course content includes the analysis of distribution center operations through the study of warehouse design and layout, material handling systems and equipment, distribution network design, warehouse processes, order-picking strategies, inventory control, and safety.
Prerequisites: SCLM 370

SCLM 471 Port and Terminal Operations (3 Credit Hours)
Examines the role of seaports in the movement of cargo throughput. It presents concepts related to design, organization, administration, and operation of ports. It discusses issues involved in planning, investment, communication systems, congestion, pollution, safety, security, technology; intermodal transportation; water and land accessibility; and port competition and cooperation to improve customer service.
Prerequisites: SCLM 370

SCLM 472/572 Vessel Fleet Operations (3 Credit Hours)
Examines the operations of freight shipping organizations involved in the transport of cargo by ship. Key topics are vessel fleets and ship space; shipping markets, operations, costs, investment, insurance, claims, and regulation; and ship types, cargoes, safety, flagging, pollution, and chartering, purchase and scrapping.
Prerequisites: SCLM 370

SCLM 473/573 Inland Waterways and Dredging Operations (3 Credit Hours)
This course is designed to explore and analyze the current condition of inland waterways and the maintenance of the navigational channels. It will include topics such as: the importance of marine highways, current waterways infrastructure (dams, locks and canals), barge types, the environmental benefits as well as its current legislation and policy. Also, it will cover dredging processes, types of equipment and stages of dredging projects with emphasis on the maintenance of navigation channels, disposal sites, and beneficial use of dredge materials.
Prerequisites: SCLM 370

SCLM 474/574 Shipbuilding & Ship Repair Logistics (3 Credit Hours)
Examines the shipbuilding and ship repair industry from the perspective of industry economics, technology, project management and supply and procurement processes. It covers principal ship dimensions, typical types of ship repairs, the preparation for a routine docking period with emphasis on the materials logistics, and the shipbuilding logistics process.
Prerequisites: SCLM 370

SCLM 481/581 Freight Brokerage and 3PL Services (3 Credit Hours)
This course covers the basics of Freight Brokering including types of freight and the types of niche markets available, import/export compliance and regulations, Broker-Carrier and Broker-Shipper Agreements, determination of freight shipment rates, load tracking, and carrier relations. Also, it covers the role of the 3PLs in freight brokerage plus inventory management, consolidation, order fulfillment and warehousing.
Prerequisites: SCLM 370 or SCLM 204

SCLM 486/586 Cruise Ship Operations (3 Credit Hours)
Overview cruise ship markets and tourism, and cruise ship types and cruise ship lines. Basic cruise operations including sales, supplies, safety and security, itineraries and ports of call, terminal operations and personnel management. Detailed understanding of the relevant issues surrounding the cruise ship terminal operations and sustainability of cruise line services.
Prerequisites: SCLM 370

SCLM 495 Selected Topics in Supply Chain, Logistics and Maritime Operations (3 Credit Hours)
A study of selected topics within Supply Chain, Logistics and Maritime Operations designed to provide an in-depth exploration of current issues.
Prerequisites: SCLM 204 and permission of the instructor; or permission of the Director of the School of Supply Chain, Logistics and Maritime Operations

SCLM 497 Independent Study (3 Credit Hours)
Independent study in Supply Chain, Logistics and Maritime Operations under the direction of a faculty member.
Prerequisites: senior standing and permission of the instructor; or permission of the Director of the School of Supply Chain, Logistics and Maritime Operations

SCLM 515 Maritime and Supply Chain Safety and Security (3 Credit Hours)
This course examines methods to anticipate threats and mitigation strategies for securing the supply chain and increasing its resilience. It provides an overview of international and U.S initiatives to ensure the security of logistics assets, cargo, people, and infrastructure within the maritime and supply chain domain. The course also addresses threats to the international trade (including maritime piracy, terrorism, cyber threats), and state-of-the-art techniques and tools for protecting the industry against cyberattacks, as well as roles and responsibilities of the supply chain actors.

SCLM 519 Maritime and Supply Chain Risk and Insurance (3 Credit Hours)
This course examines the risks associated with supply chain operations, including aspects of identification, analysis, assessment, response, and control of the risks associated with the transportation and storage of goods. It covers risk assessment as a function of threats, vulnerabilities, and consequences for operational performance for all modes of transportation. Topics include Lloyd's and the London Insurance Market, principles of insurance and law, international liability conventions, institute clauses, exclusions, cargo policies, particular and general average, and salvage insurance.

SCLM 542 Supply Chain and Maritime Intelligence (3 Credit Hours)
This course examines the performance metrics of the supply chain, including item tracking and visibility of the whole chain, including control tower approaches. It covers the importance of supply chain information collection, real-time data sharing and basic analytics tools to evaluate and improve the degree of execution of the supply chain and generating insights. Topics include monitoring supply chain processes, end-to-end visibility, collaborative supply chain networks, data integration, and data visualization.

SCLM 550 Supply Chain 4.0 Technologies and Innovations (3 Credit Hours)
This course examines the role of technology within the supply chain and how these technologies can be used to improve supply chain performance. Topics include AI, blockchain and smart contracts, IoT and digital twins, Large Language models (LLM), automation and robotics, digital supply chain transformation, machine learning in supply chain, anti-hacking technologies, autonomous vehicles, and additive manufacturing, among others.

SCLM 561 Warehousing, Distribution and Material Management (3 Credit Hours)
This course is designed to investigate the strategic role of warehouses, distribution centers and material management in domestic and global supply chains. Course content includes the analysis of distribution center operations through the study of warehouse design and layout, material handling systems and equipment, distribution network design, warehouse processes, order-picking strategies, inventory control, and safety.

SCLM 572 Vessel Fleet Operations (3 Credit Hours)
Examines the operations of freight shipping organizations involved in the transport of cargo by ship. Key topics are vessel fleets and ship space; shipping markets, operations, costs, investment, insurance, claims, and regulation; and ship types, cargoes, safety, flagging, pollution, and chartering, purchase and scrapping.
Prerequisites: SCLM 370

SCLM 573 Inland Waterways and Dredging Operations (3 Credit Hours)
This course is designed to explore and analyze the current condition of inland waterways and the maintenance of the navigational channels. It will include topics such as: the importance of marine highways, current waterways infrastructure (dams, locks and canals), barge types, the environmental benefits as well as its current legislation and policy. Also, it will cover dredging processes, types of equipment and stages of dredging projects with emphasis on the maintenance of navigation channels, disposal sites, and beneficial use of dredge materials.

SCLM 574 Shipbuilding and Ship Repair Logistics (3 Credit Hours)
Examines the shipbuilding and ship repair industry from the perspective of industry economics, technology, project management and supply and procurement processes. It covers principal ship dimensions, typical types of ship repairs, the preparation for a routine docking period with emphasis on the materials logistics, and the shipbuilding logistics process.

SCLM 581 Freight Brokerage and 3PL Services (3 Credit Hours)
This course covers the basics of Freight Brokering including types of freight and the types of niche markets available, import/export compliance and regulations, Broker-Carrier and Broker-Shipper Agreements, determination of freight shipment rates, load tracking, and carrier relations. Also, it covers the role of the 3PLs in freight brokerage plus inventory management, consolidation, order fulfillment and warehousing.

SCLM 586 Cruise Ship Operations (3 Credit Hours)
Overview cruise ship markets and tourism, and cruise ship types and cruise ship lines. Basic cruise operations including sales, supplies, safety and security, itineraries and ports of call, terminal operations and personnel management. Detailed understanding of the relevant issues surrounding the cruise ship terminal operations and sustainability of cruise line services.

SCLM 630 Strategic Sourcing and Procurement (3 Credit Hours)
An overview of the strategic sourcing of materials and services in the organization and its role in the supply chain. Topics include supply management, sourcing analytics, price/cost analysis, quality issues, supplier evaluation and selection, global supply risk and ethical and sustainable dimensions of global sourcing. This course also covers supply and procurement negotiations. It examines conceptual and practical skills in negotiations.

SCLM 641 Supply Chain Management and Logistics (3 Credit Hours)
This course explores strategic, tactical, and operational aspects of global supply chain and logistics management. Topics include end-to-end planning, international logistics, SCOR model application, and multimodal transportation processes. Emphasis is on analytics-driven, data-informed decision-making across global supply chains. The course also covers international trade entry strategies, payment, documentation, insurance, and customs processes.

SCLM 690 Supply Chain, Logistics, and Maritime Capstone (3 Credit Hours)
This capstone course covers best practices in global supply chain management, focusing on models, methods, and tools for effective planning, organization, and governance. Students examine end-to-end fulfillment strategies in a global environment with attention to environmental, ethical, and cultural factors. Topics include a semester-long project incorporating aspects of logistics, maritime operations, and the impact of Industry 4.0 on supply chains.