Global Supply Chain Management

Degree Offered

• Bachelor of Science in Business Administration

Supply chain management (SCM) is a challenging and rewarding professional field that will continue to grow in importance, offering a broad range of career opportunities across a wide range of industries. The U.S. Bureau of Labor Statistics' Occupational Outlook Handbook indicates that positions in supply chain management are expected to grow more than 25 percent from 2010 to 2020, more than 10 percent faster than the average growth of all occupations. This program will provide undergraduate students with the opportunity to learn and advance knowledge, technical skills and competencies pertaining to supply chain processes through a high-quality set of courses, in order to pursue entry-level opportunities across a broad range of organizations. The curriculum will provide a strong global perspective, systems orientation, and information technology training. The program in Global Supply Chain Management consists of a 27 semester-hour sequence.

ADMINISTRATION

GLOBAL SUPPLY CHAIN MANAGEMENT PROGRAM COORDINATOR

• Ednilson Bernardes - Ph.D.
  University Minnesota

FACULTY

CHAIR

• Virginia Franke Kleist - Ph.D. (University of Pittsburgh)
  Management Information Systems

GSCM PROGRAM COORDINATOR, PROFESSOR

• Ednilson Bernardes - Ph.D. (University of Minnesota)
  Supply Chain Management

ASSOCIATE PROFESSOR

• John Saldanha - Ph.D. (Penn State University)
  Supply Chain Management

Admission Requirements

Students who are direct admitted to the major as first-time freshmen must possess an overall GPA of at least 2.5 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work. Students who are not direct admitted to the major (i.e. Business) will declare the major at the beginning of the semester in which they satisfy the course prerequisites listed below. Applicants also must possess an overall GPA of at least 2.5 to be considered for admission to the major.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ACCT 201 &amp; ACCT 202</td>
<td>Principles of Accounting and Principles of Accounting</td>
<td>6</td>
</tr>
<tr>
<td>CS 101</td>
<td>Intro to Computer Applications</td>
<td>4</td>
</tr>
<tr>
<td>ECON 201 &amp; ECON 202</td>
<td>Principles of Microeconomics and Principles of Macroeconomics</td>
<td>6</td>
</tr>
<tr>
<td>ECON 225 or STAT 211</td>
<td>Elementary Business and Economics Statistics and Elementary Statistical Inference</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101 &amp; ENGL 102 or ENGL 103</td>
<td>Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing</td>
<td>3-6</td>
</tr>
<tr>
<td>Choose one of the Following:</td>
<td>3-4</td>
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<tr>
<td>MATH 126A</td>
<td>College Algebra 5-Day</td>
<td></td>
</tr>
<tr>
<td>MATH 126B</td>
<td>College Algebra 4-Day</td>
<td></td>
</tr>
<tr>
<td>MATH 129</td>
<td>Pre-Calculus Mathematics</td>
<td></td>
</tr>
<tr>
<td>MATH 153</td>
<td>Calculus 1a with Precalculus</td>
<td></td>
</tr>
</tbody>
</table>
Choose one of the Following: 3-4

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>MATH 150</td>
<td>Applied Calculus</td>
</tr>
<tr>
<td>MATH 154</td>
<td>Calculus 1b with Precalculus</td>
</tr>
<tr>
<td>MATH 155</td>
<td>Calculus 1</td>
</tr>
<tr>
<td>MATH 156</td>
<td>Calculus 2</td>
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</table>

Total Hours 28-33

* A minimum grade of B- in MATH 150 is required for admission to the program. A grade of C- in MATH 154 or a higher college calculus course satisfies the calculus requirement.

Students who are directly admitted to the major and meet the requirements listed above are guaranteed permission to enroll in upper-division coursework. The College will accommodate as many majors as resources are available. Students who are denied admission to the major may apply for admission in a future application period or accept admission to an alternative major in the College.

Click here to view the Suggested Plan of Study (p. 3)

Global Supply Chain Management Program Requirements

General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. (http://registrar.wvu.edu/gef)

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

General Education Foundations

F1 - Composition & Rhetoric 3-6
- ENGL 101 Introduction to Composition and Rhetoric
- ENGL 102 Composition, Rhetoric, and Research
  or ENGL 103 Accelerated Academic Writing

F2A/F2B - Science & Technology 4-6

F3 - Math & Quantitative Skills 3-4

F4 - Society & Connections 3

F5 - Human Inquiry & the Past 3

F6 - The Arts & Creativity 3

F7 - Global Studies & Diversity 3

F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) 9

Total Hours 31-37

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

Curriculum Requirements

Overall GPA of 2.0 required

Possess a minimum GPA of 2.0 for all major courses (i.e. ACCT, GSCM) calculated using all attempted GPA hours unless excluded by the D/F repeat policy.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ACCT 201</td>
<td>Principles of Accounting (Minimum grade of C-)</td>
<td>3</td>
</tr>
<tr>
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<td>Principles of Accounting (Minimum grade of C-)</td>
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<tr>
<td>CS 101</td>
<td>Intro to Computer Applications (Minimum grade of C-)</td>
<td>4</td>
</tr>
<tr>
<td>ECON 201</td>
<td>Principles of Microeconomics (Minimum grade of C;)</td>
<td>3</td>
</tr>
<tr>
<td>ECON 202</td>
<td>Principles of Macroeconomics (Minimum grade of C;)</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following (Minimum grade of C; may fulfill GEF 8): 3
- ECON 225 Elementary Business and Economics Statistics
- STAT 211 Elementary Statistical Inference

Select one of the following (Minimum grade of C; may fulfill GEF 1): 3-6
- ENGL 101 Introduction to Composition and Rhetoric
  & ENGL 102 Composition, Rhetoric, and Research
ENGL 103  Accelerated Academic Writing  3  
GEF 2A, Science and Technology  3  
GEF 5, Human Inquiry & the Past  3  
GEF 6, The Arts & Creativity  3  
GEF 7, Global Studies & Diversity  3  
Select one of the following; minimum grade of B- in MATH 150 or C- in MATH 154 or higher; (may fulfill GEF 3):  3-8  
MATH 124  Algebra with Applications  
& MATH 150  and Applied Calculus  
MATH 129  Pre-Calculus Mathematics  
& MATH 155  and Calculus 1  
MATH 150  Applied Calculus  
MATH 153  Calculus 1a with Precalculus  
& MATH 154  and Calculus 1b with Precalculus  
MATH 155  Calculus 1  
PSYC 101  Introduction to Psychology  3  
SOCA 101  Introduction to Sociology (May fulfill GEF 4)  3  
BCOR 191  First-Year Seminar  1  
BCOR 199  Introduction to Business  3  
BCOR 299  Business Communication  3  
BCOR 320  Legal Environment of Business  3  
BCOR 330  Information Systems and Technology  3  
BCOR 340  Business Finance  3  
BCOR 350  Principles of Marketing  3  
BCOR 360  Supply Chain Management  3  
BCOR 370  Managing Individuals and Teams  3  
BCOR 380  Business Ethics  3  
BCOR 460  Contemporary Business Strategy  3  
ACCT 331  Managerial Accounting  3  
GSCM 350  Sourcing and Supply Management  3  
GSCM 355  Logistics and Distribution Management  3  
GSCM 360  Supply Chain Analytics  3  
GSCM 370  Transportation Management  3  
GSCM 425  Supply Chain Network Design  3  
GSCM 430  Supply Chain Technology  3  
GSCM 450  Supply Chain Quality Management  3  
GSCM 455  Project Management  3  
GSCM 470  Global Supply Chain Systems  3  
Unrestricted Electives (needed to reach 120 hours)  13  
Total Hours  120  

Suggested Plan of Study  

First Year  

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<tr>
<th></th>
<th>Hours</th>
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<th>Spring</th>
<th>Hours</th>
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<tr>
<td>Fall</td>
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<tr>
<td>BCOR 199</td>
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<td>ACCT 201</td>
<td>3</td>
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<tr>
<td>BCOR 191</td>
<td>1</td>
<td>ECON 201 (GEF 8)</td>
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<tr>
<td>CS 101 (GEF 2A)</td>
<td>4</td>
<td>ENGL 101 (GEF 1)</td>
<td>3</td>
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<tr>
<td>Select one of the following (GEF 3):</td>
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<tr>
<td>MATH 124</td>
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<td>MATH 150</td>
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<tr>
<td>MATH 129</td>
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<td>MATH 154</td>
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<tr>
<td>MATH 150</td>
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<td>MATH 155</td>
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<tr>
<td>MATH 153</td>
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<td>MATH 156</td>
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<tr>
<td>MATH 155</td>
<td></td>
<td>GEF (Choose from F2A, F5, F6 or F7)</td>
<td>3</td>
<td></td>
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</tbody>
</table>
## Major Learning Outcomes

**GLOBAL SUPPLY CHAIN MANAGEMENT**

Students who successfully complete the program will be prepared and competitive for entry-level positions in areas pertaining to supply chain management. These jobs include areas such as materials project manager, sourcing leader, supply chain analyst, production analyst, logistics planning, shipping and delivery management, among others.

- Graduates from the program will have the knowledge and skills to manage and coordinate all supply chain functions in an enterprise, from overseeing acquisition, internal allocation of resources, movement and storage of raw materials and inventory, to managing complex networks of supply and demand.
- They will have the knowledge and skills to lead supply chain improvement projects, to function in supply chain teams, and to perform or lead supply chain activities.
- Graduates will be able to recognize the systemic and global nature of supply chain processes and activities in the decision-making process, the interdependencies critical to effectively manage and improve performance, the role of supply chain information technology in the effective management and improvement of supply chain activities, and the complexities of global supply chain operations and related ethical issues.
- In addition, students will recognize the great potential that supply chain activities and decisions offer in terms of making a positive contribution not only to the improvement of business performance but also to society.

### GSCM 191. First-Year Seminar. 1-3 Hours.

Engages students in active learning strategies that enable effective transition to college life at WVU. Students will explore school, college and university programs, policies and services relevant to academic success. Provides active learning activities that enable effective transition to the academic environment. Students examine school, college and university programs, policies and services.

### GSCM 350. Sourcing and Supply Management. 3 Hours.

PR or CONC: BCOR 360. Critical managerial issues in sourcing and supply management operations, structure, and processes, and supporting tools. Ethical, legal, and contractual issues pertaining to the global scope of this important set of business processes.
GSCM 355. Logistics and Distribution Management. 3 Hours.
PR or CONC: BCOR 360. Critical managerial issues in the implementation and control of forward and reverse flow and storage of goods, services, and related information between the point of origin and the point of consumption.

GSCM 360. Supply Chain Analytics. 3 Hours.
PR: GSCM 350 with a grade of C- or better and GSCM 355 with a grade of C- or better. A survey of the broad spectrum of mathematical modeling methodologies available to supply chain analysts for solving supply chain problems.

GSCM 370. Transportation Management. 3 Hours.
PR: GSCM 350 with a grade of C- or better and GSCM 355 with a grade of C- or better. An introductory study of the wide range of issues facing supply chain professionals in transportation. This includes the impact of transportation systems in the economy, regulations, and management of distinct transportation modes with focus on the U.S. domestic transportation systems.

GSCM 425. Supply Chain Network Design. 3 Hours.
PR: GSCM 360 and GSCM 370. An in-depth study of how to parse supply chain problems into a network design formulation and how to collect appropriate data to use on these models. Students will also learn how to validate, debug, and test the sensitivity of models to various input and model assumptions.

GSCM 430. Supply Chain Technology. 3 Hours.
PR: GSCM 370. A comprehensive study of the strategic and operational use of main supply chain technologies. This includes dependencies and linkages between the various technologies, best practices, and potential pitfalls.

GSCM 450. Supply Chain Quality Management. 3 Hours.
PR: GSCM 350 and GSCM 355. Critical managerial issues in the organizational and behavioral dimensions of quality management systems and their application to simplify and improve supply chain processes, as well as key supporting methodologies and tools.

GSCM 455. Project Management. 3 Hours.
PR: BCOR 330 and PR or CONC: BCOR 360. Critical managerial issues in the planning, scheduling, organization, and management of projects. Project management process and tools and the effects of management style on the success of a project.

GSCM 470. Global Supply Chain Systems. 3 Hours.
PR: GSCM 425 and GSCM 450. Analysis and problem solving of sourcing, operations, and logistics issues from a systems-perspective, and discussion of managerial issues in those areas in the international context from an integrated supply chain network perspective. The course encompasses the design, simulated operation, improvement, and analysis of a supply network.

GSCM 491. Professional Field Experience. 1-18 Hours.
PR: Consent. (May be repeated for a maximum of 18 hours.) Prearranged experiential learning program, to be planned, supervised, and evaluated for credit by faculty and field supervisors. Involves temporary placement with public or private enterprise for professional competence development.

GSCM 493. Special Topics. 1-6 Hours.
PR: Consent. Investigation of topics not covered in regularly scheduled courses.

GSCM 495. Independent Study. 1-6 Hours.
Faculty-supervised study of topics not available through regular course offerings.