Division of Economics and Business

EBGN 559A - Supply Chain Management

Spring 2020

Instructor

David N. Culbreth, Professor of Practice

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Office hours: Monday: 3:30-5:30pm
Tuesday: 9:00 – 12:00 noon
Wednesday: 3:30-5:30pm
Thursday: 9:00 – 12:00 noon
Please send an email to schedule a 30 minute slot.

Class meeting days/times: Monday & Wednesday, 11:00am – 12:15pm.

Class meeting location: Coolbaugh Hall 210

Course Details

Instructional activity: 3 hour lecture

Course designation: Elective

Course description:

Due to the continuous improvement of information technology, shorter life cycle of products, rapid global expansion, and growing strategic relationships, supply chain management has become a critical asset in today’s organizations to stay competitive. The supply chain includes all product, service and information flow from raw material suppliers to end customers. This course focuses on the fundamental concepts and strategies in supply chain management such as inventory management and risk pooling strategies, distribution strategies, make-to-order/make-to-stock supply chains, supplier relationships and strategic partnerships. It introduces quantitative tools to model, optimize and analyze various decisions in supply chains as well as real-world supply chain cases to analyze the challenges and solutions.

During the semester, students will learn:

1) The fundamental concepts and strategies of supply chain management.

2) Challenges that arise in supply chains.
3) The quantitative decision-making tools used to model, optimize and analyze decisions in supply chains.

4) Critical thinking skills used to characterize a supply chain, understand its main challenges, and come up with the right techniques and solutions.

5) Simulation exercises and optimization of a supply chain using simulation software

6) The information systems that measure, monitor and enable streamlined supply chain management

Topics
- Business structure and value chains
- Supply Chains and Uncertainty (simulation game)
- Sales and Operations Planning
- Capacity and Demand Forecasting Strategies
- Inventory Control and Management
- Lean Manufacturing and Six Sigma
- Monitor and Measure the Supply Chain
- Coordinated Product and Supply Chain Design
- Global Supply Chains
- Supply Chain Sustainability
- Simulation
- Modeling and Optimization

Course Materials

Canvas: This course will make use of Canvas. All course materials will be available on the course site (listed as Supply Chain Management – Sprg.2020.EBGN559A).

Textbook (Required): Operations and Supply Chain Management, Roberta S. Russell and Bernard W. Taylor (eBook available)

Textbook Required: Dynamic Value Chains, David N. Culbreth (Hardcopy in Bookstore and eBook available on Amazon)
Other Materials: During the semester, some Harvard Business School case studies, research papers and/or articles may be utilized for class discussion. They will be provided by the instructor.

Software: This course will make use of Simul8 to develop simulation supply chain models. The software has been uploaded to the labs in the Engineering Hall labs. The software is free to use by students.

Simulation Game: Students will be required to play an in-class simulation game. The game cost will be covered by the university.

Homework Exercises and Reports:
Each student must work individually. Homework must be turned in before it is due to be graded. Late submissions will receive a 10% penalty, plus 10% per day after that. If you would like to discuss your grade for any specific homework, please bring it to my attention within a week of the date it was returned to you. Otherwise, it will not be considered for re-grading.

Simulation Game:
Students will be required to play a simulation game in class. Students will be asked to write a 2 page report including:
- Specific decisions made during the game and their resulting outcomes.
- What decisions lead to your success or failure?
- What could have been done differently or better?

Case Discussions: There will be in-class case discussions during the semester. Students must be well-prepared before each discussion class and must participate in each discussion. At the beginning of each case discussion class, each student must submit a case report (1-2 pages). Case reports should include (i) a brief summary of the case, and (ii) the answer for each case discussion question. Violations of academic honesty such as obtaining any material, including case summaries and/or answers of case questions from the internet, will not be tolerated.

Exam: There will be a midterm exam. It will be closed book, closed notes. You can bring a two sided 8.5x11 sheet with your notes and formulas. Please make sure to prepare it by hand. Computer printouts will not be accepted. If you are to be absent during a scheduled exam, you should schedule time for a make-up before you leave.

Team Project: In this class you will be required to complete a team project. Please check the team project assignment document for the details.

Attendance/Participation – Attendance will be taken in each class and will account for 100 points. Excused absences: medical note, sports event note, travel for business or interviews (travel confirmation provided). Always notify the professor ahead of time. 2 unexcused classes allowed, then 10 points off per class
Participation - it is especially valuable and appreciated when you come to class with questions about the readings. Your interest and participation in class will be the primary factors for this grade. Your class participation will be worth 100 points.

All connectivity (mobile phones, PDAs, pagers, and other electronic devices) must be stored away during class. Use of laptops in the class is a privilege, not a right. Laptops are to be used for class activities only. If you are seen surfing, chatting, e-mailing, etc., you may lose laptop privileges and receive a negative mark for class contribution.

**Grading Procedures:** The final grade is based on the following activities.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Points</th>
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<tbody>
<tr>
<td>Homework Assignments</td>
<td>100</td>
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<tr>
<td>Mid Term Exam</td>
<td>200</td>
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<tr>
<td>Reports</td>
<td>150</td>
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<tr>
<td>Simulation Exercise</td>
<td>50</td>
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<tr>
<td>Team Project Document</td>
<td>200</td>
</tr>
<tr>
<td>Team Project Presentation</td>
<td>100</td>
</tr>
<tr>
<td>Attendance</td>
<td>100</td>
</tr>
<tr>
<td>Class Participation</td>
<td>100</td>
</tr>
</tbody>
</table>

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To pass the course, the overall grade percentage must be at least 60%. The letter grade assignment from your final grade will be based on the following scale:

- A $93 \leq$ Final grade
- A- $90 \leq$ Final grade < 93
- B+ $87 \leq$ Final grade < 90
- B $83 \leq$ Final grade < 87
- B- $80 \leq$ Final grade < 83
- C+ $77 \leq$ Final grade < 80
- C $73 \leq$ Final grade < 77
- C- $70 \leq$ Final grade < 73
- D+ $67 \leq$ Final grade < 70
- D $60 \leq$ Final grade < 67
- F Final grade < 60

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**Diversity and Inclusion:**

At Colorado School of Mines, we understand that a diverse and inclusive learning environment inspires creativity and innovation, which are essential to the engineering process. We also know that in order to address current and emerging national and global challenges, it is important to learn with and from people who have different backgrounds, thoughts, and experiences.

Our students represent every state in the nation and more than 90 countries around the world, and we continue to make progress in the areas of diversity and inclusion by providing [Diversity and Inclusion programs and services](#) to support these efforts.
Disability Support Services:
The Colorado School of Mines is committed to ensuring the full participation of all students in its programs, including students with disabilities. If you anticipate or experience any barriers to learning in this course, please feel welcome to discuss your concerns with me. Students with disabilities may also wish to contact Disability Support Services (DSS) to discuss options to removing barriers in this course, including how to register and request official accommodations. Please visit their website at disabilities.mines.edu for contact and additional information. If you have already been approved for accommodations through DSS, please meet with me at your earliest convenience so we can discuss your needs in this course.

Accessibility within Canvas:
Read the Accessibility Statement from Canvas to see how the learning management system at the Colorado School of Mines is committed to providing a system that is usable by everyone. The Canvas platform was built using the most modern HTML and CSS technologies, and is committed to W3C's Web Accessibility Initiative and Section 508 guidelines.
Discrimination, Harassment, and Title IX:
All learning opportunities at Mines, including this course, require a safe environment for everyone to be productive and able to share and learn without fear of discrimination or harassment. Mines’ core values of respect, diversity, compassion, and collaboration will be honored in this course, and the standards in this class are the same as those expected in any professional work environment. (More information can be found here.) Discrimination or harassment of any type will not be tolerated. As a participant in this course, we expect you to respect your instructor and your classmates. As your instructor, it is my responsibility to foster a learning environment that supports diversity of thoughts, perspectives and experiences, and honors your identities. To help accomplish this:

- Course rosters are provided to the instructor with the student’s legal name. I will honor your request to address you by a preferred name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records.
- If something is said or done in this course (by anyone, including myself) that made you or others feel uncomfortable, or if your performance in the course is being impacted by your experiences outside of the course, please report it to:
  - Me (if you are comfortable doing so)
  - Wellness Center - Counseling (https://www.mines.edu/counseling-center/)
  - Speak Up (https://www.mines.edu/speak-up/) - Anonymous Option

In this course, we will cultivate a community that supports survivors, prevents interpersonal violence, and promotes a harassment free environment. Title IX and Colorado State law protects individuals from discrimination based on sex and gender in educational programs and activities. Mines takes this obligation seriously and is committed to providing a campus community free from gender and sex-based discrimination. Discrimination, including sexual harassment, sexual violence, dating violence, domestic violence, and stalking, is prohibited and will not be tolerated within the Mines campus community. If these issues have affected you or someone you know, you can access the appropriate resources here: http://www.mines.edu/title-ix/. You can also contact the Mines Title IX Coordinator, Camille Torres, at 303.384.2124 or titleix@mines.edu for more information.

It's on us, all of the Mines community, to engineer a culture of respect.

CARE @ Mines:
If you feel overwhelmed, anxious, depressed, distressed, mentally or physically unhealthy, or concerned about your wellbeing overall, there are resources both on- and off-campus available to you. If you need assistance, please ask for help form a trusted faculty or staff member, fellow student, or any of the resources below. As a community of care, we can help one another get through difficult times. If you need help, reach out. If you are concerned for another student, offer assistance and/or ask for help on their behalf. Students seeking resources for themselves or others should visit care.mines.edu.

Additional suggestions for referrals for support, depending on comfort level and needs include:
- CARE at Mines: care.mines.edu for various resources and options, or to submit an online “CARE report” about someone you’re concerned about, or email care@mines.edu
- CASA - https://www.mines.edu/casa/ for academic advising, tutoring, academic support, and academic workshops
- Counseling Center – https://www.mines.edu/counseling-center/ or students may call 303-273-3377 to make an appointment. There are also online resources for students on the website. Located in the Wellness Center 2nd floor. Located at 1770 Elm St. (photo below)
- Health Center - https://www.mines.edu/student-health/ or students may call 303-273-3381 for appointment. Located in Wellness Center 1st floor.
- Colorado Crisis Services - For crisis support 24 hrs/7 days, either by phone, text, or in person, Colorado Crisis Services is a great confidential resource, available to anyone. http://coloradocrisisservices.org , 1-844-493-8255, or text “TALK” to 38255. Walk-in location addresses are posted on the website.
- Food and/or Housing - Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact the Dean of Students for support. Furthermore, please notify your professor if you are comfortable in doing so. This will enable your professor to provide resources that may be available.

All of these options are available for free for students. The Counseling Center, Health Center, and Colorado Crisis Services are confidential resources. The Counseling Center will also make referrals to off-campus counselors, if preferred.

In an emergency, you should call 911, and they will dispatch a Mines or Golden PD officer to assist.

Absence Policy:
The Student Absences webpage outlines CSM's policy regarding student absences. It contains information and documents to obtain excused absences.

Note: All absences that are not documented as excused absences are considered unexcused absences. Faculty members may deny a student the opportunity to make up some or all of the work missed due to unexcused absence(s). However, the faculty members do have the discretion to grant a student permission to make up any missed academic work for an unexcused absence. The faculty member may consider the student’s class performance, as well as their attendance, in the decision.

In the case of an absence, the student is responsible for determining what work was missed and for putting forth a good faith effort to review the material on their own.

Policy on Academic Integrity/Misconduct:
The Colorado School of Mines affirms the principle that all individuals associated with the Mines academic community have a responsibility for establishing, maintaining an fostering an understanding and appreciation for academic integrity. In broad terms, this implies protecting the environment of mutual trust within which scholarly exchange occurs, supporting the ability of the faculty to fairly and effectively evaluate every student’s academic achievements, and giving credence to the university’s educational mission, its scholarly objectives and the substance of the degrees it awards. The protection of academic integrity requires there to be clear and consistent standards, as well as confrontation and sanctions when individuals violate those standards. The
Colorado School of Mines desires an environment free of any and all forms of academic misconduct and expects students to act with integrity at all times.

Academic misconduct is the intentional act of fraud, in which an individual seeks to claim credit for the work and efforts of another without authorization, or uses unauthorized materials or fabricated information in any academic exercise. Student Academic Misconduct arises when a student violates the principle of academic integrity. Such behavior erodes mutual trust, distorts the fair evaluation of academic achievements, violates the ethical code of behavior upon which education and scholarship rest, and undermines the credibility of the university. Because of the serious institutional and individual ramifications, student misconduct arising from violations of academic integrity is not tolerated at Mines. If a student is found to have engaged in such misconduct sanctions such as change of a grade, loss of institutional privileges, or academic suspension or dismissal may be imposed.

The complete policy can be found in the Mines’ Policy Library.