

**ISE 5633: Supply Chain Management and Transportation**  
**University of Oklahoma**  
**School of Industrial and Systems Engineering**  
**Fall 2019**

**Instructor:** Andrés D. González  
**Office:** Carson Engineering Center (CEC) 215C  
**Email:** andres.gonzalez@ou.edu  
**Office Hours:** Tuesdays/Thursdays, 8:00AM-9:00AM

**Course Meeting Times:** T/R 4:30-5:45PM  
**Course Location:** Carson Engineering Center (CEC) 438

**Course Description:**

*This course introduces transportation and supply chain concepts along with important issues in supply chain system design and operation. Students will learn how to formulate and analyze systems models for supply chain systems using information technology skills and decision support systems.*

**Course Goals and Outcomes:**

*After taking this class, the students should be able to:*

- *Understand the structure of a supply chain, its scope, and strategic fit*
- *Evaluate the performance of a supply chain through diverse financial and operational metrics*
- *Design efficient supply chain networks*
- *Plan and coordinate demand and supply in a supply chain*
- *Plan and manage inventories in a supply chain*

**Texts and Materials:**

*Required:*

- B1. Chopra, S., & Meindl, P. (2016). *Supply chain management: Strategy, planning, and operation (6<sup>th</sup> edition)*. Pearson. <https://www.pearson.com/us/higher-education/program/Chopra-Supply-Chain-Management-Strategy-Planning-and-Operation-6th-Edition/PGM178843.html>

*Please note that additional readings will be placed on the course website or in the library or required for look-up when appropriate course content is being covered. These readings will be required.*

*Recommended:*

- B2. Frazelle, E. (2002). *Supply chain strategy: The logistics of supply chain management*. McGraw-Hill.
- B3. Ramanathan, U., & Ramanathan, R. (2013). *Supply chain strategies, issues and models*. Springer

**Teaching Philosophy:**

The main skills and abilities encouraged and developed in this class are related to

- Developing strong conceptual foundations and problem-solving intuition
- Expanding critical thinking and reasoning
- Enriching collaborative work proficiency
- Enhancing problem formulation and solution skills

**Grading details:**

Grade percentages associated with individual and group work are as follows:

<i>Group (3-4 people) work:</i> <u>40%</u>	
Group assignments / case studies	25%
Final project	15%
<i>Individual work:</i> <u>60%</u>	
Individual assignments / quizzes	8%
Journal paper discussions	7%
Exam 1	15%
Exam 2	15%
Final exam	15%

**Grading discrepancy review:**

Grades can be reviewed and possibly revised, only if requests are made within one week of the grade posting.

**Grading scale:**

A ← [90, 100]
B ← [80, 90)
C ← [70, 80)
D ← [60, 70)
F ← [0, 60)

**Grading policy:**

Homework due dates and other relevant dates will be announced well in advance. All homework assignments are due at the beginning of class on the date due. Late homework assignments will be penalized as follows (unless indicated otherwise):

<i>Submission time</i>	<i>Maximum grade possible</i>
On time	100%
0 to 48 hours late	75%
More than 48 hours late	0%

A course project near the end of the semester will allow you to practice the concepts of statistical process control. A project proposal summarizing the anticipated project will be due at a subsequent date to be determined and is subject to approval by the instructor.

**Tentative Schedule:**

<b>Module</b>	<b>Unit</b>
Part 1: Building a strategic framework to analyze supply chains	1. Understanding the supply chain
	2. Supply chain performance: achieving strategic fit and scope
	3. Supply chain drivers and metrics
Part 2: Designing the supply chain network	4. Designing distribution networks and applications to online sales
	5. Network design in the supply chain
	6. Designing global supply chain networks

<i>EXAM 1</i>	<i>Includes: Parts 1 and 2</i>
Part 3: Planning and coordinating demand and supply in a supply chain	7. Demand forecasting in a supply chain
	8. Aggregate planning in a supply chain
	9. Sales and operations planning: planning supply and demand in a supply chain
	10. Coordination in a supply chain
Part 4: Planning and managing inventories in a supply chain	11. Managing economies of scale in a supply chain: cycle inventory
	12. Managing uncertainty in a supply chain: safety inventory
	13. Determining the optimal level of product availability
<i>EXAM 2</i>	<i>Includes: Parts 3 and 4</i>
Additional topics (if time permits)	Designing and planning transportation networks
	Managing cross-functional drivers in a supply chain
<i>FINAL EXAM</i>	

**Important Dates:**

- Exam 1: *Thursday, October 3, 2019, 4:30PM*
- Exam 2: *Thursday, November 21, 2019, 4:30PM*
- Final Project: *Tuesday, November 26, 2019, 4:30PM*
- Final exam: *Thursday, December 12, 2019, 4:30PM*

**University Policies:**

**Academic Integrity**

To be successful in this class, all work labeled as “individual” must be yours and yours alone. You may not receive outside help. On examinations and quizzes, you will never be permitted to use your notes, textbooks, calculators, or any other study aids, unless indicated otherwise. Should you see someone else engaging in this behavior, I encourage you to report it to myself or directly to the Office of Academic Integrity Programs. Be aware that it is my professional obligation to report academic misconduct, which I will not hesitate to do. In professional and personal contexts, it is important to adequately integrate the analytical tools and abilities developed in class with strong integrity and ethics. For more information on this subject, please refer to the Student’s Guide to Academic Integrity at [http://integrity.ou.edu/students\\_guide.html](http://integrity.ou.edu/students_guide.html)

**Reasonable Accommodation Policy**

Students requiring academic accommodation should contact the Disability Resource Center for assistance at (405) 325-3852 or TDD: (405) 325-4173. For more information please see the Disability Resource Center website <http://www.ou.edu/drc/home.html> Any student in this course who has a disability that may prevent him or her from fully demonstrating his or her abilities should contact me personally as soon as possible so we can discuss accommodations necessary to ensure full participation and facilitate your educational opportunities.

**Religious Observance**

It is the policy of the University to excuse the absences of students that result from religious observances and to provide without penalty for the rescheduling of examinations and additional

required class work that may fall on religious holidays. Please contact me in advance to ensure adequate accommodations.

### **Title IX Resources and Reporting Requirement**

For any concerns regarding gender-based discrimination, sexual harassment, sexual misconduct, stalking, or intimate partner violence, the University offers a variety of resources, including advocates on-call 24/7, counseling services, mutual no contact orders, scheduling adjustments and disciplinary sanctions against the perpetrator. To learn more about this or to report an incident, please contact the Sexual Misconduct Office at 405/325-2215 (8AM to 5PM, M-F) or [smo@ou.edu](mailto:smo@ou.edu). Incidents can also be reported confidentially to OU Advocates at 405/615-0013 (phones are answered 24 hours a day, 7 days a week). Also, please be advised that a professor/GA/TA is required to report instances of sexual harassment, sexual assault, or discrimination to the Sexual Misconduct Office. Inquiries regarding non-discrimination policies may be directed to: Bobby J. Mason, University Equal Opportunity Officer and Title IX Coordinator at 405/325-3546 or [bjm@ou.edu](mailto:bjm@ou.edu). For more information, visit <http://www.ou.edu/eoo.html>.

### **Adjustments for Pregnancy/Childbirth Related Issues**

Should you need modifications or adjustments to your course requirements because of documented pregnancy-related or childbirth-related issues, please contact me as soon as possible to discuss. Generally, modifications will be made where medically necessary and similar in scope to accommodations based on temporary disability. Please see [www.ou.edu/content/eoo/faqs/pregnancy-faqs.html](http://www.ou.edu/content/eoo/faqs/pregnancy-faqs.html) for commonly asked questions.

### **Final Exam Preparation Period**

Pre-finals week will be defined as the seven calendar days before the first day of finals. Faculty may cover new course material throughout this week. For specific provisions of the policy please refer to OU's Final Exam Preparation Period policy (<https://apps.hr.ou.edu/FacultyHandbook#4.10>).

### **Emergency Protocol**

During an emergency, there are official university [procedures](#) that will maximize your safety.

**Severe Weather:** If you receive an OU Alert to seek refuge or hear a tornado siren that signals severe weather *1. LOOK* for severe weather refuge location maps located inside most OU buildings near the entrances *2. SEEK* refuge inside a building. Do not leave one building to seek shelter in another building that you deem safer. If outside, get into the nearest building. *3. GO* to the building's severe weather refuge location. If you do not know where that is, go to the lowest level possible and seek refuge in an innermost room. Avoid outside doors and windows. *4. GET IN, GET DOWN, COVER UP.* *5. WAIT* for official notice to resume normal activities.

[Link to Severe Weather Refuge Areas](#) , [Severe Weather Preparedness - Video](#)

### **Armed Subject/Campus Intruder**

If you receive an OU Alert to shelter-in-place due to an active shooter or armed intruder situation or you hear what you perceive to be gunshots:

*1. GET OUT:* If you believe you can get out of the area WITHOUT encountering the armed individual, move quickly towards the nearest building exit, move away from the building, and call 911. *2. HIDE OUT:* If you cannot flee, move to an area that can be locked or barricaded, turn off lights, silence devices, spread out, and formulate a plan of attack if the shooter enters the room. *3. TAKE OUT:* As a last resort fight to defend yourself.

For more information, visit <http://www.ou.edu/emergencypreparedness.html>

[Shots Fired on Campus Procedure - Video](#)

**Fire Alarm/General Emergency**

If you receive an OU Alert that there is danger inside or near the building, or the fire alarm inside the building activates: 1. *LEAVE* the building. Do not use the elevators. 2. *KNOW* at least two building exits 3. *ASSIST* those that may need help 4. *PROCEED* to the emergency assembly area 5 *ONCE safely outside, NOTIFY first responders of anyone that may still be inside building due to mobility issues.* 6. *WAIT* for official notice before attempting to re-enter the building.

[OU Fire Safety on Campus](#)

**Students are responsible for any changes/additions to this syllabus announced in class.**