

COURSE SYLLABUS
GSCM 425: Supply Chain Network Design
Fall Semester, 2024

Global Supply Chain Management
John Chambers College of Business and Economics
West Virginia University
Morgantown, West Virginia 26506 USA

Instructor: Dr. Bo Lan
Reynolds Hall Rm 6003,
83 Beechurst Avenue
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General Information

Class meetings: 12:30PM - 01:20PM Monday, Wednesday, Friday. Reynolds Hall Rm 3203 (Wehrle Global Supply Chain Lab).

Office hours: 10:30am-11:30am, Monday, Wednesday. (or by appointment. If you want to meet me online, you should make an appointment with me in advance and then use the Zoom link in Appendix A.)

Final Exam: 2:00pm-4:00pm, Wednesday, December 18th, 2024. Location will be announced in classes and on eCampus.

Textbooks: **(Optional) Book 1:** Hillier, 'Introduction to Operations Research', 11th ed- **ONLY Ch3, 9,10,12** in a custom eBook.

1. Go to <https://create.mheducation.com/shop/>
2. Search for and select book by Title, ISBN, Author, or State/School.

ISBN: 9781307618990

Title: Custom ebook for GSCM425 WVU (part 1)

3. Add the book to your cart and pay using a credit card or access code. (You can download it on to your computers or print it.)

(Optional) Book 2: Sunil Chopra 'Supply Chain Management: Strategy, Planning, and Operation (7th Edition)'- **ONLY Ch5, 6.**
Due to technical reasons the second custom eBook is not available.
You may consider renting this book.

Optional Book: Ronald H. Ballou, *Business Logistics / Supply Chain Management*, 5th ed. (Upper Saddle River, NJ: Prentice Hall).

Handouts: Additional reading materials will be distributed throughout the semester (or posted on eCampus).

Prerequisite: GSCM 360: Supply Chain Analytics and GSCM 370: Transportation Management with a minimum grade of C-.

The Learning Objectives of the Course

After taking this class, students should be able to use mathematical programming techniques and powerful Excel Solver to implement supply chain network optimization and design, solve facility location problems. Using decision tree to analyze and make smart decisions of supply chain network under uncertainty is also an important skill in industries. Finally, students will be exposed to a simple, powerful, and popular computer programming language Python. It is also famous for its good performance in data mining and machine learning. You will learn some useful techniques of Python to do network analysis and visualization. Those are attractive to employers. No prior experience of Excel and Python is required.

Grading Policy

Your grade will be determined by the following factors: three homework assignments (10% each, 30% in total), two lecture quizzes (3% each, 6% total), final Python project (14%), class attendance (10%), Mid-term and Final examinations (20% each, 40% total). Homework No. 1 and lecture quizzes 1, 2 are individual works. Homework assignments No. 2 and No. 3, as well as the final Python project are team works (2 or 3 students in each group). For descriptions of the final Python project, refer to 'Final project' on eCampus.

Grading Scale	A	84.5	≤	A	≤	100
	B	69.5	≤	B	<	84.5
	C	54.5	≤	C	<	69.5
	D	39.5	≤	D	<	54.5
	F	0	≤	F	<	39.5

Your grade can also be affected by the "peer evaluation form", which is the form that students use to evaluate their group members (peers). Students submit this form to the instructor at the end of the semester. The form is self-explanatory and is available from the folder of 'Final Project' on eCampus.

Mid-Semester Grade

Mid-semester grade due at the midpoint of the semester is equal to 45% of the final grade (hw01~02, attendance quiz 01, midterm exam).

Homework Assignments & Quizzes

Details of the assignments will be given to you (via the class web page) later. Assignments can be found on eCampus- 'Assignments'. Quizzes can be found on eCampus- 'Exams & Quizzes'.

Final Project of Python

You will learn some basic skills of one of the simplest and most popular computer programming languages named Python. After taking several lectures in the second half of the semester, you and your team will be able to write Python programs to implement some network analysis and

visualization. Detailed requirements are described in 'GSCM425_FinalPy_project.pdf'. This and other project related files will be posted on eCampus- 'Final Project'.

Class Attendance

You are strongly encouraged to attend all lectures. So, there are two attendance quizzes for the first and second halves of the semester. You will be asked to answer some simple questions in those quizzes to earn as many as 10% of total points. Answers to those questions are scattered randomly in the lectures. If you attend all the lectures, it will be very easy for you to find those answers and earn attendance points. Attendance quizzes are on eCampus- 'Exams & Quizzes'.

Exams

Each of the mid-term and final exams contains about 30 to 40 multiple-choice questions. The final exam is not comprehensive. If you cannot take the exam(s) on a scheduled exam date, you must notify the instructor in advance, so that a special arrangement can be made. You will also be asked to provide a legitimate reason (with evidence when appropriate) for missing the exam date to the instructor. Failure to do so may result in "zero" points for the exam.

Email

Starting the subject of your email with the course number and what your message is about, e.g., 'GSCM425- a question about HW01'.

Academic Integrity, Disability Accommodation

Academic Integrity Statement

The integrity of the classes offered by any academic institution solidifies the foundation of its mission and cannot be sacrificed to expediency, ignorance, or blatant fraud. Therefore, instructors will enforce rigorous standards of academic integrity in all aspects and assignments of their courses. For the detailed policy of West Virginia University regarding the definitions of acts considered to fall under academic dishonesty and possible ensuing sanctions, please see the West Virginia University [Academic Standards Policy](#). Should you have any questions about possibly improper research citations or references, or any other activity that may be interpreted as an attempt at academic dishonesty, please see your instructor before the assignment is due to discuss the matter.

Academic Standards Policy, including Academic Dishonesty

The WVU Catalog contains the full [Undergraduate Academic Standards Policy](#) and [Graduate Academic and Professional Standards Policy](#).

[Resources for Faculty and Students for Reporting and Appealing Violations of Academic Standards](#)

Inclusivity Statement

The West Virginia University community is committed to creating and fostering a positive learning and working environment based on open communication, mutual respect, and inclusion.

If you are a person with a disability and anticipate needing any type of accommodation in order to participate in your classes, please advise your instructors and make appropriate arrangements with the Office of Accessibility Services.
(<https://accessibilityservices.wvu.edu/>)

More information is available at the Division of Diversity, Equity, and Inclusion (<https://diversity.wvu.edu/>) as well. [adopted 2-11-2013]

Related University policies:

Students in this course are responsible for being familiar with the University's policies. Visit the WVU Policies' website (<https://tlcommons.wvu.edu/syllabus-policies-and-statements>).

Mental Health Statement - Main Campus

Mental health concerns or stressful events can adversely affect your academic performance and social relationships. WVU offers services to assist you with addressing these and other concerns that you may be experiencing. You can learn more about the broad range of confidential mental health services available on campus at the Carruth Center for Psychological and Psychiatric Services (CCPPS) website: <https://carruth.wvu.edu/>

If you are in need of crisis services, call the CCPPS main number 24/7: (304) 293-4431.

Crisis services are also available through text: Text WVU to 741741 for support 24/7 from a trained Crisis Counselor.

Tentative Schedule (the instructor may change this schedule. Exact dates of assignments releasing, due, exams will be announced in classes or on eCampus)

wk	Fall 2024	Monday	Wednesday	Friday
1	08/21 (Wed.) ~ 23	No class	1 st class Intro_Syllabus	Linear_Programming_01
2	08/26~ 08/30	Linear_Programming_02	Linear_Programming_03	Linear_Programming_04
3	09/02~ 09/06	Labor Day, no class	Linear_Programming_05 [HW01 may be released. 7 days to finish]	Min_cost_network_01
4	09/09~ 13	Min_cost_network_02	Min_cost_network_03	Min_cost_network_04

5	09/16~ 20	Min_cost_network_05 [HW02 released. 7 days to finish]	Facility_Location_01	Facility_Location_02
6	09/23~ 27	Facility_Location_03	Facility_Location_04	Facility_Location_05
7	09/30~ 10/04	Facility_Location_06	Review Midterm- 1	Review Midterm- 2
8	10/07~ 11	Midterm Exam [attendance quiz01 due today; HW03 may be released on Tue. 7 days to finish.]	IntegerLP_01	Fall Break, no class
9	10/14~ 18	Network Design_01	Network Design_02	Help session for hw03
10	10/21~ 25	Network Design_02	Python 01_01 for Project part 1	Python 01_02 for Project part 1
11	10/28~ 11/01	Python 01_03 for Project part 1	Python 01_04 for Project part 1	Python 02_01 for Project part 2
12	11/04~ 08	Python 02_02 for Project part 2	Python 02_03 for Project part 2	Python 03_01 for Project part 3
13	11/11~ 15	Python 03_02 for Project part 3	SCM uncertainty_01; Decision Tree	SCM uncertainty_02 NPV
14	11/18~ 22	SCM uncertainty_03	SCM uncertainty_04	No class. Happy Thanksgiving!
15	11/25~ 29	Fall Recess. Thanksgiving.		
16	12/02~ 12/06	SCM uncertainty_05; [Python project may be due today; lecture quiz 02 may be released, 5 days to finish]	Review Final Exam 1	Review Final Exam 2
17	12/09~ 13	Review Final Exam 3	No class	Prep Day for Finals. No class

Week 18 Final Exam: 2:00pm-4:00pm, Wednesday, December 18th, 2024. Location will be announced in classes and on eCampus.

Appendix A The Zoom Meeting Link for **GSCM425**

Bo Lan is inviting you to a scheduled Zoom meeting.

Topic: Virtual Office Hours of Dr. Bo Lan on WVU Zoom

Time: This is a recurring meeting

Join Zoom Meeting for **GSCM425**

<https://wvu.zoom.us/j/95656934608?pwd=anZHRDVVVkV3SUK3azYwamIndy82Zz09>

Meeting ID: 956 5693 4608

Passcode: B2L?eAdQ

One tap mobile

+16465588656,,95656934608# US (New York)

+13017158592,,95656934608# US (Germantown)

Dial by your location

+1 646 558 8656 US (New York)

+1 301 715 8592 US (Germantown)

+1 312 626 6799 US (Chicago)

+1 669 900 9128 US (San Jose)

+1 253 215 8782 US (Tacoma)

+1 346 248 7799 US (Houston)

877 853 5257 US Toll-free

888 475 4499 US Toll-free

Meeting ID: 956 5693 4608

Find your local number: <https://wvu.zoom.us/j/abNmAKHloO>

Join by SIP

95656934608@zoomcrc.com

Join by H.323

162.255.37.11 (US West)

162.255.36.11 (US East)

115.114.131.7 (India Mumbai)

115.114.115.7 (India Hyderabad)

213.19.144.110 (EMEA)

103.122.166.55 (Australia)

64.211.144.160 (Brazil)

69.174.57.160 (Canada)

207.226.132.110 (Japan)

Meeting ID: 956 5693 4608

Passcode: 89618657

Join by Skype for Business

<https://wvu.zoom.us/skype/95656934608>