THE OHIO STATE UNIVERSITY
FISHER COLLEGE OF BUSINESS

BUSML 7382
LOGISTICS ANALYTICS

Instructor:	Dr. Xiang Wan
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Meeting Hours:	Monday 6:15 PM – 7:45 PM, Aug 20, 2024- Oct 07, 2024
Office Hours:	11:45am-12:30pm Wednesday in person or visa Zoom or by appointment as needed

Email is the best method of reaching me on days outside of office hours.

COURSE DESCRIPTION:
The course of logistics analytics can be described as a method course in Logistics and Supply Chain Management. We will cover a variety of logistics issues and discuss modeling approaches for solving them. The course is organized into two modules: Demand Forecasting and Optimization Modeling. Each module will consist of a series of lectures on modeling and solution approaches to a class of problems. We focus on developing analytic, problem-solving, and cost trade-off management skills.

COURSE OBJECTIVES AND SCOPE:
The course is designed to give you:

1) An understanding of key issues in demand forecasting and several methods for developing forecasts;
2) An appreciation of optimization techniques (i.e. methods for finding the best solution);
3) A thorough presentation of how to use various methods to solve practical issues;
4) An exposure to how companies address these problems in the "real world".

COURSE MATERIALS
Carmen will be used to post course materials, announcements, changes to the course outline. Please check Carmen on a regular basis to stay current with the course.

PREQUISITES: Enrollment in a graduate program.

COURSE METHOD
Method of delivery: Distance learning. This course is designed for 100% online including synchronous meetings via Zoom, asynchronous lectures, and other online contents. There are required sessions when students must be logged in to Carmen at a scheduled time to participate in the class via Zoom. Lectures will be designed to introduce or explain some of the principles being discussed. The teaching method will be a combination of lecture, class

discussions on assigned topics, and some analysis/problems. Class meetings and lectures are required in this course. Reading course materials, but missing classes, does not guarantee a good performance in this course.

Pace of online activities: This course is divided into weekly modules. Students are expected to keep pace with weekly deadlines but may schedule their efforts freely at their own pace within that time frame. In every week, some lectures are live via Zoom and other lectures are recorded and posted online.

GRADING

Components	Points	% of Total
Participation	100	20%
Quiz	100	20%
Teamwork	100	30%
Final Exam	100	30%
Total	400	100%

In determining the final course grade, the following scale is used to convert points into letter grades:

A = 93 - 100%	C = 73 - 76.99%
A- = 90 - 92.99%	C- = 70 - 72.99%
B+ = 87 - 89.99%	D+ = 67 - 69.99%
B = 83 - 86.99%	D = 60 - 66.99%
B- = 80 - 82.99%	E = 0 - 59.99%
C+ = 77 - 79.99%	

Participation

It is strongly suggested that you plan to attend every class during the semester. Each student is expected to participate in class and responsible for taking class notes. If you must miss a class, it is your responsibility to gain an understanding of the material covered. Full attendance does not necessarily mean earning all the points for participation. Your professional behavior and class participation/preparedness is also important.

In addition, each student is required to create a 5-minute presentation. The presentation should include a brief self-introduction and cover appropriate content regarding one or more applications of data analytics in Logistics and Supply Chain Management. You can introduce a new application of data analysis in Logistics, summarize an article from BusinessWeek, WSJ, etc., or share your own experience associated with Logistics practice. The presenter should be prepared for questions during or at the end of the presentation.

Quiz

Quiz will be assigned for specific topics. Students are expected to complete the quiz questions independently。

Teamwork

The team projects will be introduced for demand forecasting. You are allowed to work on them in teams of 4-5 individuals and hand in one write-up for the team. Student performance will be evaluated as a team, with each member receiving the same grade for the project.

Issues associated with group effort or dynamic should be brought to the attention of the instructor as soon as possible. Waiting until the last minute to address these issues inevitably results in an unsatisfactory outcome of most parties involved.

Exam

There will be an exam to measure the mastery of material for content knowledge. The exam will be closed book/closed note. Questions in the exam may consist of multiple-choice, short answer, and short essay questions. Any absence not covered by a valid excuse (per University policy) may result in a grade of zero for the exam and probable failure for the class.

STUDENTS WITH DISABILITIES

Any student who feels she/he may need accommodation based on the impact of a disability should contact me privately to discuss your specific needs. In addition, you should contact the Office for Disability Services (ODS) at (614) 292-3307 or visit them at 150 Pomerene Hall. ODS will coordinate all accommodations for students with documented disabilities.

MAKE-UP EXAM POLICY

Exams should not be missed for the convenience of the student. The dates of the major exams are shown on the Course Schedule. It is expected that you will schedule your activities around these exam dates. If a major exam is missed due to an approved university absence, you must inform the instructor before the exam. The format of the exam can be different from the exam given in class. Original documentation supporting your absence must be furnished to the professor. There will be no make-ups for missed exams without a university-approved excuse. An exam, whether regularly scheduled or make-up, that is missed without an approved excuse will be assigned a grade of ZERO.

GENERAL

Students are STRONGLY encouraged to see the professor at the first sign of any problem or lack of understanding. Do not wait until it is too late!

Laptops should only be used to enhance the overall learning environment. Computer use and Internet network access during class time is not granted for the purpose of 'surfing the Web' or checking 'e-mails.' Internet access may not be permitted during certain class times except as specifically authorized by the professor.

ACADEMIC INTEGRITY

The Fisher College Honor Code and the University Academic Misconduct Policy are strictly enforced. Please familiarize yourself with both. A useful description of academic misconduct is available at http://oaa.osu.edu/coam.html.

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct Section 3335-23-04(A).

SAFETY AND HEALTH REQUIREMENTS

All teaching staff and students are required to comply with and stay up to date on all University safety and health guidance, which includes wearing a face mask in any indoor space and maintaining a safe physical distance at all times. Non-compliance will be warned first and disciplinary actions will be taken for repeated offenses.

COURSE TECHNOLOGY

For IT help contact the Ohio State IT Service Desk ocio.osu.edu/help servicedesk@osu.edu

1. Baseline technical skills for online courses.
    - Basic computer and web-browsing skills
    - Navigating Carmen: for questions about specific functionality, see the Canvas Student Guide.
2. Required Software. Microsoft Office 365: All Ohio State students are now eligible for free Microsoft Office 365 ProPlus through Microsoft's Student Advantage program.
3. Carmen Access. You will need to use BuckeyePass multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you take the following steps:
    - Register multiple devices in case something happens to your primary device. Visit the Duo Mobile application help article for step-by-step instructions.
    - Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click Enter a Passcode and then click the Text me new codes button that appears. This will text you ten passcodes good for 365 days that can each be used once.
    - Download the Duo Mobile application to all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service.

If none of these options meet the needs of your situation, contact the IT Service Desk at 614-688-4357 (HELP) and IT support staff will work out a solution with you.

USE OF ARTIFICIAL INTELLIGENCE (AI) TOOLS

There has been a significant increase in the popularity and availability of a variety of generative artificial intelligence (AI) tools, including ChatGPT and others. These tools will help shape the future of work, research and writing — but when used in the wrong way, they can stand in conflict with academic integrity at The Ohio State University.

Unless I specifically mention otherwise (and in writing), the use of any AI-generated content in any deliverables in this course will be considered academic misconduct and will be acted on as such. Writing assignments will be turned in online and I will be using Turnitin and other applications that have AI detection algorithms. You need to complete the assignments using your own brain and your own thinking…which will lead to more of your own learning!

All students have important obligations under the Code of Student Conduct to complete all academic and scholarly activities with fairness and honesty.

COURSE SCHEDULE

We will cover the topics in the following order. Announcements will be made in class should the topics or order of topics change.

Date	Topic Title	Readings & Assignments
Aug. 26	Course Introduction & Forecasting Performance Measures	Replicate all in-class numerical examples
Sep. 02	Time Series for Stationary Data & Team Project Information Labor Day – Asynchronous Meeting	Forecasting Example Questions I
Sep. 09	Time Series for Non-Stationary Data & Forecasting in Practice	Forecasting Example Questions II
Sep. 16	Heuristics, Introduction to Optimization, & Teamwork for demand forecasting	Team Project Report Forecasting Practice Questions
Sep. 23	Linear programming (LP) Graphical Solution	LP Practice Question
Sep. 30	Integer Programming (IP), Excel Solutions & Exam Review	IP Practice Question Quiz for LP and IP
TBD	Final Exam	

Industry Organizations and Journal Websites of General Logistics Interest

Source	Type	Website
Bureau of Transportation Statistics	Governmental Agency	www.bts.gov
U.S. Department of Transportation	Governmental Agency	www.dot.gov
American Society of Transportation and Logistics (AST&L)	Professional Organization	www.astl.org
APICS The Association for Operations Management	Professional Organization	http://www.apics.org/default.htm
Council of Supply Chain Management Professionals (CSCMP)	Professional Organization	http://www.cscmp.org
Institute of Supply Management	Professional Organization	http://www.ism.ws
Reverse Logistics Association	Professional Organization	http://www.rltinc.com
American Shipper	Trade Journal	http://www.americanshipper.com/asdaily
Canadian Transportation & Logistics	Trade Journal	http://www.ctl.ca
DC Velocity	Trade Journal	http://www.dcvelocity.com
Inbound Logistics	Trade Journal	www.inboundlogistics.com
Industry Week	Trade Journal	http://industryweek.com
Internet Retailer	Trade Journal	http://www.internetretailer.com/home
Logistics Management	Trade Journal	http://www.logisticsmgmt.com
Logistics Today	Trade Journal	http://www.logisticstoday.com
Retailing Today	Trade Journal	http://www.retailingtoday.com
Supply Chain Brain	Trade Journal	http://www.supplychainbrain.com/content/index.php
Supply Chain Digest	Trade Journal	http://www.scdigest.com/index.php
Transport Topics	Trade Journal	www.transporttopics.com