

ISE 642 – Warehousing and Distribution Systems

Spring 2006

Course: ISE 642 – Warehousing and Distribution Systems - 4 credit hours

03951

Catalog description:

Quantitative and operational approach to the design of the total receiving, storage, and retrieval system including packaging, palletizing, storage, material handling, order picking, shipping, facility sizing and layout, information systems, and operating policy.

Sessions: M-W 10:10-12:00, 110 Irvine

Instructor: Dale Masel masel@ohio.edu
273 Stocker Center, 593-1541

Office hours: Monday & Wednesday – 1:30-3:00
Thursday – 3:00-4:00

Textbooks:

Warehouse and Distribution Science, Bartholdi and Hackman, Aug. 2005. Binder available at Grade A Notes (13 W. Union St.)

In addition, selected readings will be provided during the quarter.

Course objectives:

This course will focus on the design of warehouse facilities and the management of warehouse operations. Some background information will be presented regarding issues that arise in the operations of a distribution center, but it is expected that students with no background in warehousing will need to do additional reading for a complete understanding. Background material can be found in the initial chapters of the textbook.

An emphasis in this course will be on the modeling of distribution operations. Development of accurate and realistic models is essential to managing and optimizing a warehouse system. Models will include deterministic and stochastic models; research articles will be used as a basis for the discussion of how the models are developed and how they can be extended.

Grading policy:

Assignments:

- Homework Assignments..... 25%
 - Course Project..... 20%
 - Midterm—in class, closed book 25%
 - Final Exam—closed book (Thursday, June 8 at 10:10 am)..... 30%
- 100%

Grading Scale:

A	94% - 100%	A-	90% - 93%				
B+	87% - 89%	B	84% - 86%	B-	80% - 83%		
C+	77% - 79%	C	74% - 76%	C-	70% - 73%		
D+	67% - 69%	D	64% - 66%	D-	60% - 63%	F	0% - 59%

Course Project:

The project for this course will require you to develop a strategy for making a specific decision in the design or operation of a warehouse. You will be expected to:

- 1) Identify a problem to be studied
- 2) Develop a model to represent the situation
- 3) Develop an approach to optimize the situation or a heuristic for making the decision in that situation
- 4) Test the approach or heuristic to demonstrate its effectiveness

In doing this project, I am expecting that you will generate new knowledge or insights about your chosen topic. My goal is for us to be able to turn each of your reports into a paper that can be presented at a conference.

Attendance policy:

Attendance will not be taken for lecture classes, but students are expected to be present for all class periods and are responsible for all material covered in class.

Academic misconduct:

Cheating will not be tolerated. All work that you turn in—for homework, projects, and exams—must be your own. It is expected that there will be some discussion on homework and on the projects about how to approach and/or solve some of the problems. However, the assignments are given to allow *you* to demonstrate *your ideas and your abilities*, so what you submit **must** be your own work.

If you copy from another person, plagiarize, turn in someone else’s work as your own, or otherwise fail to maintain a high standard of academic honesty, you will receive a 0 on the assignment and the case will be referred to the university judiciary office.

Quarterly Schedule:

Wk.	Date	Topics
1	3/27	Introduction to distribution centers
2	4/3	Storage Design
3	4/10	Storage Management
4	4/17	Order Picking
5	4/24	Order Picking – Routing
6	5/1	Order Picking – Scheduling
7	5/8	Sortation and order consolidation
8	5/15	Shipping
9	5/22	Cross docking distribution centers
10	5/29	Monday – No class; Weds. – Project presentations