MURRAY STATE UNIVERSITY

DEPARTMENT OF INDUSTRIAL AND ENGINEERING TECHNOLOGY

COURSE SYLLABUS

Course Number: ITD 492 Credit Hours: 3

I. TITLE: Plant Layout and Material Handling

II. CATALOG DESCRIPTION:
A study of the arrangement of physical facilities and materials handling to optimize the interrelationships among operating personnel, material flow, information flow, and the methods required in achieving enterprise objectives efficiently, economically, and safely.

III. PURPOSE:
The purpose of this course will be to provide a comprehensive understanding of plant layout and material handling. Methods and techniques required to analyze, conceptualize, design and implement systems for the production of goods or services will be described.

IV. COURSE OBJECTIVES:
As a result of this course, each student will:
A. Learn process design and methods of analyzing material flow and facility layout.
B. Learn the principles of material handling.
C. Acquire insight into the selection of material handling equipment
D. Learn an ordered planning system for effective physical facility layouts.

V. CONTENT OUTLINE:
A. Lean Manufacturing
B. Just-in-time basics
C. Time study
D. Process and workstation design
E. Ergonomics in manufacturing
F. Flow and activity relationship analysis
G. Principles of material handling
H. Material handling equipment
I. Area allocation
J. Facility design and layout
K. Simulation

VI. INSTRUCTIONAL ACTIVITIES:
A. Lecture and problems
B. Student presentation
C. Projects
D. Video presentations

VII. FIELD, CLINICAL, AND/OR LABORATORY EXPERIENCES:
Trips to local manufacturing/printing plants

VIII. RESOURCES:
The Blackboard course site: additional readings, study guides, and other course related resources.

IX. GRADING PROCEDURES:

All late work will be penalized by a reduction of 10 points for each 24 hours that the assignment is late.

Course Requirements:

A.	Quizzes	25%
B.	Homework	25%
C.	Project	40%
D.	Attendance	10%

Letter grades will be assigned according to the following scale:

90-100%	**A**
80-89%	**B**
70-79%	**C**
60-69%	**D**
Below 60%	**E**

X. ATTENDANCE POLICY:

This course will adhere to the policy published in the MSU Undergraduate Bulletin.
Attendance will be taken at every scheduled class. No make-ups unless:

A. Organized university trip.
B. Illness or death in immediate family.
C. Illness of student.

Each one of these will require either a doctor's statement or a signed statement from the individual in charge of the trip.
Make-up examinations are the student's responsibility. No excuses will be accepted after the exam is given. The instructor must be notified prior to the scheduled exam. If not, the student forfeits their right to take the exam. Quizzes will not be made up unless prior acceptable excuse for absence has been received by the instructor.

XI. ACADEMIC HONESTY POLICY:

This course will adhere to the policy published in the MSU Undergraduate Bulletin.

XII. TEXT AND REFERENCES:

Meyers, F. E. & Stephens M. P., (2010), *Manufacturing Facilities Design and Material Handling*, Pearson Education, Inc. Upper Saddle River, NJ.

XIII. PREREQUISITE: Junior standing.

XIV. STATEMENT OF AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY:

Murray State University endorses the intent of all federal and state laws created to prohibit discrimination. Murray State University does not discriminate on the basis of race, color, national origin, gender, sexual orientation, religion, age, veteran status, or disability in employment, admissions, or other provision of services and provides, upon request, reasonable accommodation including auxiliary aids and services necessary to afford individuals with disabilities equal access to participate in all programs and activities. For more information, contact Sabrina Y. Dial, Director of Equal Opportunity, Murray State University, 103 Wells Hall, Murray, KY 42071-3318. Telephone: 270-809-3155 (voice), 270-809-3361 (TDD).

Dr. Emre Bahadir, Spring 2011