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| **Course Title:**  Logistics and Warehousing for Applied Technologies |
| **Course Prefix & No.:** **INCT 1100** | **LEC:**  | **LAB:** | **Credit Hours:****4.5** |

##

COURSE DESCRIPTION:

This course is an introduction to the logistics career field. Students will study the planning, management and movement of people, materials and products by road, air, rail, pipeline, and water. This course is designed as an introduction to the activities associated with transportation, warehousing/distribution/material handling, and inventory management. Additional information includes industry history, legal and regulatory issues, documentation requirements, safety and security concerns. Students will be eligible to test for the nationally recognized certification as a Certified Logistics Associate (CLA).

COURSE PREREQUISITE (S):

None

RATIONALE:

This course is intended to provide a solid foundation for all individuals pursuing employment in the transportation, distribution and logistics industry. Emphasis will be placed on the topics covered under the MSSC’s CLA Certification and will prepare students to sit for the exam.

REQUIRED TEXTBOOK (S) and/or MATERIALS:

Title: Supply Chain Logistics: Foundational Knowledge

Edition: Current

## Author: Leo Reddy & Rebekah Hutton

Publisher: Manufacturing Skill Standards Council

Materials: N/A

Title: Fundamentals of Warehousing & Distribution

Edition: Current

## Author: Allan Howie

Publisher: Material Handling Industry of America

Materials: N/A

## Attached course outline written by: Date:

Reviewed/Revised by: Date:

Effective quarter of course outline: Date:

Academic Dean Date:

Course Objectives, Topical Unit Outlines, and Unit Objectives must be attached to this form.

TITLE: Logistics and Warehousing for Applied Technologies PREFIX/NO: INCT1100

COURSE OBJECTIVES:

1. Understand the global supply chain logistics life cycle and the logistics environment.
2. Identify and explain quality control principles.
3. Demonstrate effective workplace communications, computer skills, teamwork, and professional workplace behaviors to solve problems in the Logistics career field.
4. Distinguish the functions and principles of the trucking, railroad, airline, pipeline, and shipping industries.
5. Identify and explain the different laws and regulations associated with the transportation industry.
6. Solve basic logistical scenarios using transportation.
7. Model safe work practices in the workplace, classroom, and lab environments.

TOPICAL UNIT OUTLINE/UNIT OBJECTIVES:

Upon completion of this course, the student will be able to:

Unit I. Supply Chain Logistics

1. Elements of Global Supply Chain Logistics Life Cycle
2. Roles and Responsibilities within Supply Chain Logistics
3. Impact on Company Viability and Profitability
4. Cost Effectiveness and Productivity Enhancement

Unit II. The Logistics Environment

1. Concept of Warehousing
2. Security Requirements in the Logistics Environment
3. Environment Impact of Logistics Environment
4. Physical Layout of the Logistics Environment

Unit III. Material Handling Equipment

1. Types of Equipment
2. Movement in a Warehouse
3. Manual/Powered Industrial Trucks
4. Automation in the Warehouse

Unit IV. Storage Activities

1. Methods of Storage for Cost Effective and Efficient Warehouse
2. Storage Related Terminology
3. Space usage and allocation

Unit V. Safety Principles

1. Principal Federal Safety Organizations & Requirements
2. Keeping a Safe, Clean and Orderly Work Environment
3. Preventive and Emergency Safety Procedures

Unit VI. Safe Material Handling and Equipment Operation

1. Basic Safe Material Handling Practices
2. Personal Protective Equipment
3. Safety Checks
4. Maintenance

Unit VII. Quality Control Principles

1. Quality Control, Item Tracking, and Audits
2. Quality Control Systems
3. Front-line Workers and Quality Control
4. Non-Conforming Materials

Unit VIII. Protection Activities

1. Unit Load Formation
2. Equipment and Materials Used in Protection
3. Ergonomic Design

Unit IV. Transportation for Logistics

1. Modes of Transportation: Air, Water, Rail, Truck, and Pipeline
2. Advantages and Disadvantages of Each Mode
3. Routing for Logistics

**COURSE REQUIREMENTS/EVALUATION:**

### COURSE OBJECTIVES/ASSESSMENT MEASURES

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| **COURSE OBJECTIVES** | ASSESSMENT MEASURES |
| **1.** Understand the global supply chain logistics life cycle and the logistics environment.  | * Class participation and quizzes.
* Reading discussion and questions.
* Warehouse Layout Activity
 |
| **2.** Identify and explain quality control principles. | * Class participation and quizzes.
* Reading discussion and questions.
* Quality Control Activity
 |
| **3.** Demonstrate effective workplace communications, computer skills, teamwork, and professional workplace behaviors to solve problems in the Logistics career field. | * Class participation and quizzes.
* Reading discussion and questions.
* Names Activity, Teamwork Exercises
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| **4.** Distinguish the functions and principles of the trucking, railroad, airline, pipeline, and shipping industries.  | * Class participation and quizzes.
* Reading discussion and questions.
 |
| **5.** Identify and explain the different laws and regulations associated with the transportation industry. | * Class participation and quizzes.
* Reading discussion and questions.
* Logistics Routing Activity
 |
| **6.** Solve basic logistical scenarios using transportation. | * Logistics Routing Activity
 |
| **7.** Model safe work practices in the workplace, classroom, and lab environments. | * Observation of lab work
* Observation of classroom projects
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