NATIONAL UNIVERSITY OF ENGINEERING
COLLEGE OF INDUSTRIAL AND SYSTEMS ENGINEERING
INDUSTRIAL ENGINEERING PROGRAM

SYLLABUS - GP324 LOGISTICS AND OPERATIONS MANAGEMENT

I. GENERAL INFORMATION

CODE	:	GP324
SEMESTER	:	
CREDITS	:	3
HOURS PER WEEK	:	4 (2 Theory – 2 Practice)
PREREQUISITES	:	GP304 Business Logistics
CONDITION	:	Elective
INSTRUCTOR	:	Benito Zarate
INSTRUCTOR E-MAIL	:	bzarate2001@yahoo.es

II. COURSE DESCRIPTION

This course trains students in the understanding of the importance and need of encouraging the formation of mechanisms of integration between intermediate customers and suppliers with the aim of generating value in terms of quality, strategy opportunity, costs and budget size; reinforce the knowledge about logistics functions regarding gods supply and provision of services; analyze logistics processes of inventory management, purchases and storage as members of the value chain that contributes to firm competitiveness. There will be problems, cases and application works about inventory, purchase, storage and transport control.

III. COURSE OUTCOMES

1. Analyze tendencies of logistic activities as part of the supply chain in the context of market globalization and competitiveness.
2. Assess alternatives for planning and designing the supply chain considering the advantages of acquiring goods or contracting services.
3. Analyze and assess purchase engineering processes to guarantee the adequate good and services provision n terms of quality, quantity, opportunity and price contributing, at the same time, to firm competitiveness.
4. Analyze, assess and improve storage engineering processes to achieve and adequate enterprise supply considering the importance of the correct handling of stored goods and services for users and providers.
5. Assess the use and interpretation of indicators of logistic activity management to achieve effective management and control as support for decision making.

IV. LEARNING UNITS

1. SUPPLY CHAIN LOGISTCS / 12 HOURS

Introduction of objectives and course methodology / Supply chain / Supply cycle / Value chain / Decision making. Concept of service / Differentiation between good and services and its relationship with the supply chain. Historical evolution. Tendencies / Characteristic of services / Outsourcing.

2. INVENTORY PLANNING / 12 HOURS

Concepts / Inventory policies / Planning of good and services supply / Inventories management / Costs of inventories / Types of demand / Relationship with MRP and ERP systems / Maximum and minimum stocks / Models of inventories / Service level / Safety stock with probabilistic database.

3. MANAGEMENT OF PURCHASES / 12 HOURS

Purchase of goods and contracting of services / Technical specifications of goods / Technical files of services / Suppliers. Purchase mode / Purchase procedure / Assessment factors / Comparison of proposals / Purchase ordering / Purchase regulation and procedures / Selection of suppliers / Government purchases / Legal base / General principles / Modes / Selection processes / Procedure / Assessment / Solution to controversies.

4. STOCK MANAGEMENT/ 16 HOURS

Storage / Main aspects / Storage organization / Storage systems / Flow of materials. Storage devices / Material handling device / Good storage practices / Control of materials / Purpose / Regulations and procedures / Records and forms / Inventory taking / Concept / Purpose / Stages / Results interpretation / Subsequent actions.

5. LOGISTIC ASSESSMENT AND DEVELOPMENT / 4 HOURS

Key performance indicator / Concept / Importance / Main indicators / Result analysis.

V. LABORATORY AND PRACTICAL EXPERIENCES

Workshop 1: Total cost analysis.
Workshop 2: Services quality.
Workshop 3: Supply planning.
Workshop 4: Purchase function.
Workshop 5: Comparative chart and buying order.
Workshop 6: Reception and storage of goods.

VI. METHODOLOGY

Motivation, expositions, group debates and permanent dialogs. explanation, demonstration. Team work to analyze, solve and interpret the workshop subjects. At the end of the course, students must hand over a research paper. In all sessions, students' active participation is encouraged.

VII. EVALUATION FORMULA

The average grade PF is calculated as follows:

PF = 0.334 EP + 0.334 EF + 0.083 P1 + 0.083 P2 + 0.083 P3 + 0.083 TI

EP: Mid-Term Exam	EF: Final Exam
P#: Quizzes	TI: Research paper

VIII. BIBLIOGRAPHY

1. **BALLOU RONALD H.**
   Logistics. Supply Chain Administration (Spanish)
   Pearson, Mexico (2002)

2. **BOWERSOX DONALD J.; CLOS DAVID J; BIXBY COOPER M.**

Supply Chain Administration and Logistics (Spanish)
Mc Graw Hill

3. **CHASE, AQUILANO AND JACOBS**
Production and Operation Administration (Manufacture and Services) (Spanish)
Mc Graw Hill, 10th Edition, Mexico (2004)