TID7202 : Logistics Engineering

Hours per semester				Weighted Total Mark	Weighted Exam Mark	Weighted Continuous Assessment Mark	Credit Units
LH	**PT**	**TH**	**CH**	**WTM**	**WEM**	**WCM**	**CU**
45	00	00	45	100	60	40	3

Course description

Logistics is about the purchasing, transport, storage, distribution, warehousing of raw materials, semi-finished/work-in-process goods and finished goods. This course will provide knowledge to students on the fundamentals, modelling and practice of this function in an organization.

Course objectives:

To show an overview of the general area of logistics, its nature, scope, and process; a critical examination of logistics management functions and the interrelationships among strategic support and operational logistics

Learning Outcome

By the end of this course the students should be able to;

- To manage the flow of goods, information and other resources, including energy and people, between the point of origin and the point of consumption in order to meet the requirements of consumers (frequently, and originally for military organizations).
- To involve the integration of information, transportation, inventory, warehousing, material-handling, and packaging.

Course content

Scope and elements in logistics, logistics planning, logistics in the systems life cycle, logistics engineering **(6 hours)**

Measures of logistics; system feasibility analysis, chain supply management, Procurement systems, system operational requirements **(6 hours)**
Logistics in design, manufacturing and support **(3 hours)**
Inventory management- **(6 hours)**
Maintenance and support concept, technical performance measures, functional analysis, allocation of requirements, synthesis, analysis and design optimization **(9 hours)**
Supportability analysis process, methods, tools and applications **(3 hours)**

Course delivery method

The teaching of students will be conducted through lectures, tutorials, short classroom exercises, case studies, group discussions among the students and projects aimed at solving real life problems. The lecture material will be availed to the students in advance to enable them have prior reading. Solving real life problems in each theme or a number of topics will enhance the students' understanding of the problem based learning techniques.

Assessment method

Assessment will be done through coursework which will include assignments, class room and take home tests, project work and presentations and a written examination. Course work will carry a total of 40% and written examination carries 60%. Coursework marks will be divided into; Assignments 5%, Tests 10% and Practical Work 25%.

Reading list/references

1. Blanchard, Benjamin S (2004), *Logistics Engineering and Management,* 6th – International Edition, Prentice Hall Inc.
2. Paul Cousins and Richard Lamming and Ben Lawson Brian Square. (2008). Trentice Hall.
3. Martin Christopher (2005). Logistics and Supply Chain Mangement. Creating Value Adding Networks. Prentice Hall.
4. Leutz Prauss,(2005) The Green Multiplier. A Study of Environmental Protection and Supply Chain. . Antonn Rauss Limited, Palgrave Macmillan.
5. Logistics Engineering handbook, (2008)G Don Taylor Editor, CRC Press 2008, ISBN 13: 978-0-8493-3053-7, Amazon.com