**EHS402: OPERATIONS AND SUPPLY CHAIN**

**MANAGEMENT (Elective)**

**L T P C**

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**Module I 9 hours**

**Introduction to Operations Management:** History of operations management, types of manufacturing systems, role and responsibilities of operations manager, services operations.

**Module II 9 hours**

**Understanding the Logistics and Supply Chain:** Introduction to supply chain, supply chain links, role of logistics in supply chain, drivers and metrics in supply chain, designing the supply chain network, online sales and distribution network, factors influencing the network design

**Module III 8 hours**

**Impact of Uncertainty in Network:** Globalization and supply chain, risk management in global supply chain, demand forecasting in supply chain role of information technology in forecasting.

**Module IV 8 hours**

**Coordination in Supply Chain:** Collaborative planning and replenishment strategies, CPFR, managing uncertainties in inventory.

**Module V 8 hours**

**Impact of replenishment policies in safety inventory:** Role of information technology in inventory management, transportation in supply chain.

**Text Book(s)**

Sunil Chopra, Supply Chain Management: Pearson Publications, 2012.

**References**

1. Sridhara Bhatt, Logistics and Supply Chain Management, Himalaya Publishers, 2011

2. D.K Agarwal, Logistics and supply chain Management, Macmillan Publishers, 2013.

**EME332: INDUSTRIAL ENGINEERING LABORATORY**

**(Elective)**

**L T P C**

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**List of Experiments**

1. Two handed process chart for the assembly of bolt, washer and nut

2. Time study of electric plug assembly

3. Predetermined motion time system (PMTS)

4. Time study using pin board apparatus

5. Multiple activity chart

6. Physiological test on tread mill

7. X & R chart along with determination of process capability

8. Control chart for fraction defective, P chart or control chart for number of defects, C chart

9. To show that sample means from normal universe follow normal distribution

10. Operation characteristic curve for single sampling attributes plan.

11. Body measurements by using ANTHROPOMETER.

12. Draw flow diagram and string diagram for the given layout.