INLT: IND. & LOGISTICS TECH (INLT)

INLT 141. Introduction to Logistics. (3 Credits)
This course will cover topics related to logistics in a systems approach to managing activities associated with transportation, inventory management and control, forecasting, and integration of logistics with other functional areas, cross functional teams, supplier, distributor, and customer partnerships.

INLT 201. Technology and Society. (3 Credits)
A survey of the technology field as it relates to the academic background and opportunities for industrial technology graduates is covered. Advancing technology and its impact on industry, business, and society is reviewed.

INLT 212. Principles of Technology. (3 Credits)
Provide students with experience in the application of the principles of physics and mathematics as they relate to the modern technological systems, including robotics in a unified systems approach to explore mechanical, electrical, fluid, and thermal systems dealing with force, work, rate, resistance, energy, power, force transformers, momentum, wave, energy converters, transducers, radiation, optical systems, and time constants.

INLT 217. Tech Graphics Communication. (3 Credits)
Introduction to the use of various technical graphics media and methods of presentation of technical information. Topics include; electronic slide shows, graphic file formats, basic editing of graphic data, user interface design, graphic presentation, and interpreting graphic data.

INLT 245. Distribution Systems. (3 Credits)
The course is designed to provide students with an introduction to the methods and strategies used in distributing products and managing the inventory in supply chain. Topics covered include the design of channels and activities performed by node members to facilitate efficient movement of goods, and Enterprise Resource Planning simulation games. Prerequisite: INLT 141 201608.

INLT 247. Material Hand & Inven Controls. (3 Credits)
The principles of quantitative and operational approaches to the design of handling system including receiving, storage, retrieval, packaging, palletizing, material handling, order picking, shipping, facility sizing and layout. Information systems and operating policies of material handling and warehousing will be covered. Prerequisite: INLT 141, INLT161 201608.

INLT 248. Geog Infor Systs Logistics. (3 Credits)
This course will expose students to the concept of spatial analysis using GIS tools. Topics covered will include GIS needs assessment, mapping of spatial entities, linear referencing, development of a GIS-based transportation routing and decision support system, and applications in asset management and planning Prerequisite: INLT 245.

INLT 249. Material Process & Safety Anal. (3 Credits)
This course provides a strong foundation of knowledge of manufacturing materials, standards and standard organizations; properties and nature of materials, materials testing and applications. Safety engineering and program management of specific construction and industrial hazards and other safety documents dealing with accident investigations. Prerequisite: INLT 212.

INLT 250. Manufact Materials & Processes. (3 Credits)
This course provides a strong foundation of knowledge of industrial materials, ranging from traditional metals, wood, ceramics, and polymers to advanced engineered materials and composites. Standards and standard organizations; properties and nature of materials, materials testing and applications. Prerequisite: INLT 212 201608.

INLT 261. Engineering Graphics II. (3 Credits)
Introduction to 3D modeling including visualization skills, basic parametric modeling, CSG modeling, primitives, Boolean operators, view extraction, file management, assembly, dimensioning, and drawing standards. Student projects required (sketching, CAD software). Prerequisite: I.

INLT 270. Processes Systems & Infor. (3 Credits)
Introduction to processes and information systems from the point of view of creation, monitoring, and adaptation of processes, systems and information with tutorial exercises of an ERP system is covered in this course.

INLT 280. Industrial Ergonomics. (3 Credits)
This course focuses on work design and ergonomics in manufacturing. Specific attention will be on introducing the terminology and the techniques used in work design, and the fundamental concepts embodied in industrial ergonomics. Community based projects may be required. Prerequisite: MATH 122.

INLT 281. Industrial Safety. (3 Credits)
OSHA and its administration. Safety engineering and program management of specific construction and industrial hazards; standards, codes, and other safety documents. Accident investigation and safety analysis. Topics in occupational safety and environmental health are widely covered in the course. Prerequisite: INLT 249.

INLT 290. Introd Database Applications. (3 Credits)
This course introduces the underlying concepts behind data modeling and database systems using relational database management systems (RDBMS), the structured query language (SQL), and web applications (Perl DBI in CGI).

INLT 292. Introduction to ERP. (3 Credits)
ERP approaches to design, plan, and control of logistics management. Core aspects of enterpriser resources planning (ERP) infrastructure and application with extensive hands on practice example s applications will be covered.

INLT 320. Introd ERP & Financial Acct. (3 Credits)
Studies the need for integration and the challenges of managing complex interfaces of functional areas of business with its financial accounting. Activities that lead to integration of information funds and material flows across multiple organizations are discussed. Prerequisite: INLT 141, INLT 245 201608.

INLT 330. Sales and Procurement. (3 Credits)
A realistic perspective on the role of industrial sales and the nature of the sales task in our business. Identification of critical influences on organizational buyer behavior, both internal and external, definition of various types of buying situations, and organizational purchasing processes. Prerequisite: INLT 245.

INLT 335. Lean Process Management. (3 Credits)
A systematic approach to eliminating non-value added activities throughout a production system. Lean principles and techniques will be applied to improve organizations ability to provide added customer value on products. Community based projects may be required. Prerequisite: INLT 212.

INLT 340. Supply Management. (3 Credits)
Student deeply explore the supply function, including organization, procedures, supplier selection, quality, inventory decisions, and price determination. Prerequisite: INLT 141, INLT 245.

INLT 345. Transportation Logistics. (3 Credits)
Introduction to the theory and applications of transportation, logistics, and associated costs is covered. Topics include modes of transportation and their networks; optimization of transportation systems across networks; flow across networks; supply, demand, and forecasting for transportation services; costs and benefits of specific modes and transportation policy analysis. Prerequisite: INLT 141 and INLT 245.

INLT 346. Plan Cont Syst Supp Chain Mgmt. (3 Credits)
Topics such as forecasting, capacity planning, inventory planning, MRP and ERP are discussed to provide students with knowledge of planning and control systems for supply chain management. Prerequisite: INLT 247, INLT 340.

INLT 359. Org'l Mgmt & Supervision. (3 Credits)
The course is a survey of organizational structures, operational, financial, marketing, and accounting management. Emphasis is places on planning, control, personnel, safety, wages, policies, and leadership for an effective industrial management.

INLT 374. Statics & Strength of Material. (3 Credits)
Structural principles and concepts linked to real buildings and components. Elementary statics and strength of materials as they related to the basic principles of mechanics. Gravity and lateral load tracings; determinate structural frame-works. Concept of stress and strain, and material properties; cross-sectional properties; Beam and column analysis and design; steel connections. Use of structural software to generate graphically display outlook. Prerequisite: MATH 212, INLT 372 or consent of instructor 201608.

INLT 383. Quality Management. (3 Credits)
Quality management philosophies of Deming, Juran, and Cosby; total quality management (TQM); quality improvement and problem solving, with practical examples of quality problem tools; sampling techniques. The Taguchi loss function, quality function and policy deployment, materials control and just-in-time; quality audits; ISO 9000 inspection standards; charts for statistical process control and interpretation. Prerequisite: CISY 212 or MATH 210, STAT 210 201608.

INLT 385. Cost Estimating. (3 Credits)
Principles and techniques necessary for the economic analysis and cost evaluation of construction and industrial design projects. Interpretation of construction and engineering drawings and specifications; estimating, operations, products, projects, and systems. Estimate assurance and contract considerations. Prerequisite: INLT 250 201608.

INLT 400. Intelligent Transport Systems. (3 Credits)
This course is designed to expose the student to the role of new technology in transportation and logistics particularly in the areas of travel information, traffic and incident management, public transportation, freight transportation, and inventory control. The history of cross-cutting issues in intelligent transportation systems development in the U.S. will be examined. Prerequisite: INLT 345.

INLT 443. Engr & Tech Entrepreneurship. (3 Credits)
This course covers concepts related to entrepreneurship relevant to engineering and technology applications. Major topics include entrepreneurial risk taking, start up strategies, innovative idea evaluation, business plan writing, financing and venture capital, managing growth and introducing and sustaining innovative products and services. Through case studies and guest speakers, the course introduces students to the knowledge and skills needed to recognize and seize technological entrepreneurial opportunities. Prerequisite: Junior or senior standing 201608.

INLT 444. Enterprise Resource Config. (3 Credits)
Analytical approaches to design, planning, and control of logistics management. Core aspects of enterprise resource planning (ERP) infra-structure and applications in industry. ERP planning strategies and implementation, including domestic and international manufacturing and service operations. Prerequisite: Consent of Instructor.

INLT 445. Procurement Management. (3 Credits)
The role of acquisition in business and industry; relationships with other departments, procedures, and basic policies. Planning, organization, budgeting, negotiations, purchasing ethics, procurement control, strategic purchasing management, and impact of research and value analysis. Prerequisite: INLT 444 201608.

INLT 446. Electronics Logistics. (3 Credits)
Reviews several E-Business trends related to logistics management; the impact of E-Business on creating a business plan and discussing E-Business architecture. CRM core competencies, organizational challenges, implementation trends, and planning strategies. Prerequisite: INLT 444 201608.

INLT 447. Supply Chain Management. (3 Credits)
The planning and implementation of supply chain management, reverse logistics, integrated production. Inventory and distribution problems, multi-partner pricing analysis, and supply chain distribution network designs will be covered. Prerequisite: INLT 345 201608.

INLT 448. Global Logistics. (3 Credits)
It covers topics related to global logistics as key component of supply chains that coordinates the movement of raw materials, work-in-process in a global network of shippers, forwarders, third party transportation providers, warehouses, customs agencies, and consignees to coordinate the activities that provide the logistics product. Prerequisite: INLT 141, INLT 345 201608.

INLT 449. Supply Chain Strategy. (3 Credits)
This capstone course provides an opportunity for students to synthesize the knowledge gained in their previous coursework to integrate supply chain management, production, logistics and enterprise solutions to develop supply chain strategies. Prerequisite: INLT 340, INLT 346, INLT 447.

INLT 451. Analysis/Business Intelligence. (3 Credits)
This course is an introduction to business analytics that uses extensive data, statistical and qualitative analysis, exploratory and predictive models, and fact-based management to drive decisions and actions. The development and use of data warehouses and data marts to support business analytics is discussed. The use of key performance indicators, dashboards and scorecards for performance management and opportunity assessment are addressed. Text and web mining are discussed, and the application of selected data mining techniques to business decision making situations is illustrated. Hands-on exercises will be provided for active participation. Prerequisite: INLT 320, INLT 444 201608.

INLT 465. Research and Negotiations. (3 Credits)
Students expand upon knowledge gained in INLT 340 and discuss current philosophy, methods and techniques for conducting strategic and tactical supply chain negotiations. Prerequisite: INLT 340, INLT 447.

INLT 480. Facilities Management. (3 Credits)
Facilities planning strategies, product, process, and schedule design; flow space and activity relationships; design of material handling system. Facilities functions and systems; quantitative facilities planning models, including the use of software applications. Industrial facility management. Prerequisite: ENGR 200 and INLT 245.

INLT 485. Project Management. (3 Credits)
The principles and techniques of managing engineering and construction projects from the conception phase through design and construction, to completion. Working with project teams, early estimates, and design proposals; project budgeting, scheduling, and aggregate planning. Case study approach is emphasized. Prerequisite: INLT 385 201608.

INLT 486. Planning and Scheduling. (3 Credits)
Principles of planning and scheduling in manufacturing and service industries; the conversion of a project plan into an operating time-table. Application areas to cover project, job-shop, workforce, supply chain, and economic lot scheduling. Methodologies to include PERT, WBS, and Gantt chart. Utilization of current and emerging technologies and global dynamics with project management will be emphasized. Prerequisite: INLT 485 201608.

INLT 499. Special Topics. (3 Credits)
A course or independent study covering a topic in Industrial Technology that may be used in lieu of a technical elective. The goal of this course is to enhance students' skills and knowledge in an area relevant to their area of study. Prerequisite: Permission of Instructor 201608.