



### **Course Description**

#### **MAN4523 | Production Information Systems | 3.00 credits**

This course presents the fundamental aspects of computer technology required by the systems that provide data to, and derive information from, production in manufacturing. Students will learn the techniques to organize, store, manipulate data, report, derive and analyze production information, basics networking used in production, as well as various forms of information systems.

### **Course Competencies:**

**Competency 1:** The student will be able to understand the general principles of Production Information Systems by:

1. Defining Production Information Systems
2. Illustrating how Production Information Systems are integral to managing production systems
3. Illustrating the fundamental aspects of production
4. Examining the basic theories, concepts, methods, and terminology in Production Information Systems

**Competency 2:** The student will demonstrate the underlying technologies that enable Production Information Systems by:

1. Illustrating the various modes of telecommunications.
2. Assessing current network infrastructures used in industry
3. Depicting the various means by which data is sent and information gathered from production information systems using the underlying networking technologies
4. Analyzing how production systems communicate within their systems and external monitoring/data gathering systems

**Competency 3:** The student will demonstrate how Production Information Systems are developed by:

1. Defining an algorithm and describing the systems analysis and design phases
2. Constructing a set of statements to be acted out to accomplish a simple task
3. Describing and analyzing a sequence of instructions
4. Performing the basic steps in algorithmic problem solving
5. Creating each phase of the systems analysis and design methodology using the applicable automation tool
6. Designing a basic production information system via a model

**Competency 4:** The student will develop a desktop database application by:

1. Creating a new database
2. Defining Data Types that define the data being stored
3. Creating Tables in design view
4. Adding and deleting records to a table
5. Creating and modifying a Form

### **Learning Outcomes:**

- Communicate effectively using listening, speaking, reading, and writing skills
- Use quantitative analytical skills to evaluate and process numerical data
- Solve problems using critical and creative thinking and scientific reasoning
- Formulate strategies to locate, evaluate, and apply information
- Demonstrate knowledge of diverse cultures, including global and historical perspectives