

## **Student qualification – specialization logistics, management, Business, Supply**

### **Chain180 credits**

### **Industrial Engineering and Management, specialization Logistics and Management**

The main purpose of the education is to give the students a good position on the labour market. During the education, the students gathers knowledge in industrial management, business logistics, production and materials flows analysis, organisation, leadership, project management, mathematical statistics, quality management, purchasing and supplier relations, production logistics and distribution logistics. This provides the students with a good foundation for analyzing and improving processes.

Before the internship course, the students have taken the following courses:

#### **Business logistics**

- Analysis of key performance indicators
- Costs and tied up capital
- Inventory level analysis
- Order quantities
- Basic methods of material control

#### **Production and materials flows analysis**

- Materials supply systems
- Process mapping
- Value flow analysis
- Production layout
- Lean manufacturing tools, 5S
- Production and material analysis

#### **Purchasing logistics**

- Purchasing processes
- Tools related to purchasing
- Total cost of ownership (TCO)
- Negotiation skills
- Supplier relations
- Supplier assessment and development
- Sustainability and Corporate Social Responsibility (CSR)

#### **Quality Management**

- Statistical process control
- Methods of quality improvement
- Business management system according to ISO 9000 and 14000
- Risk analysis

#### **Production logistics**

- Sales and operations planning (S&OP)
- Forecasting vs. customer orders
- Available-to-promise
- Customer-order-driven
- MRPII, takt and bottleneck based planning and control

#### **Industrial management**

- Product cost calculation
- Return on Investment calculation
- Profitability Assessment
- Deviation analysis
- Budget planning and monitoring
- Accounting
- Sustainability aspects

#### **Organization-leadership-project**

- Organizational structures
- Leadership and group dynamics
- Behavioral change theories
- Planning and managing projects
- Project as a work model
- Meeting techniques

#### **Distribution logistics**

- Retailing and e-commerce
- Distribution systems
- Customer management
- Localization analysis
- Third-party logistics

#### **Mathematical statistics**

- Basic probability theory
- Descriptive statistics
- Identify correlations
- Examine relations, analyze a data set, evaluate the results