ERP and Digital Transformation

OBJECTIVE OF THE ACTIVITY

The ERP course aims to introduce students, through concrete examples, to integrated information systems used to manage key business processes such as accounting, production, logistics, and the order-to-cash and procure-to-pay cycles.
Through video lessons and hands-on activities using real software, students will gain practical skills to analyze, configure, and use an ERP system in business contexts. The course also aims to develop a critical perspective on the management aspects and changes that these systems entail.
Additionally, business case studies will be presented to concretely illustrate the challenges and solutions adopted during the implementation of ERP systems in various organizations, providing students with practical examples of how such systems are applied and managed.

STRUCTURE AND CONTENTS OF THE ACTIVITY

The course is structured into video lessons with practical demonstrations of the system through screen sharing and proposed interactive exercises, in-person classes featuring the presentation of real case studies, and group work for the development of an independent project, culminating in a final presentation.

The activity includes the following contents:

- **Business Partner and Employee**
  Management of business partners and employees within an ERP system.
- **Item Manufactured – Item Purchased**
  Differences and interactions between manufactured items and purchased items in an ERP system.
- **Item Structure – Item Cost Accounting**
  Item structure and cost accounting within an ERP system.
- **Market to Order**
  Managing demand, preparing quotations, and finalizing orders, with a focus on ERP functionalities to optimize each step.

- **Plan to Produce**
  The "Plan to Produce" process, from MRP planning to production execution.
- **Plan to Replenishment - Ship Material**
  The ERP system's support in inventory management, material replenishment, and production material picking.
- **Warehouse Setup - Cycle Counting - Adjustment Order - Transfer Order**
  Warehouse configuration, stock inventory through cycle counting, adjustment orders, and transfer orders within an ERP system.
- **Procure to Pay**
  The "Procure to Pay" process, which covers the entire procurement and payment cycle, focusing on ERP features to improve operational efficiency and ensure control over company financial flows.

INVOLVED TEACHING STAFF

Ing. Andrea Galeazzo – Manager Lutech

ACQUIRED SKILLS FOR EMPLOYABILITY

The basic ERP course provides students with a practical introduction to the use of major management systems adopted by companies to coordinate business activities. Through guided exercises and simulations of real-world scenarios, students develop useful skills that can be immediately applied in the workplace.

Specifically, by the end of the course, students will be able to:

- Operate an ERP system with basic skills in navigating the interface, entering, and managing data (such as customer/supplier records, orders, and warehouse documents).
- Understand key business processes (sales, purchasing, inventory, accounting) and how they are integrated within a management system.
- Complete and interpret essential business documents such as sales orders, purchase orders, delivery notes, and invoices.
- Develop a hands-on, collaborative approach through group activities.

LEARNING ASSESSMENT

The learning assessment will take place at the end of the course through the digitalization of an end-to-end (E2E) process within an ERP system. Participants will work in groups to develop a prototype, which will be presented as the final output of the course.

MAXIMUM NUMBER OF STUDENTS ADMITTED

80

ADMISSION REQUIREMENTS

Master's students in Management Engineering are eligible to attend the course.

In the event of an excess number of applications, preference will be given first to second-year students, and subsequently to students enrolled in the English-taught curriculum.

REQUIREMENTS FOR RECOGNITION OF THE ACTIVITY

Students enrolled in the course are required to attend at least 2 out of 3 in-person classes and to pass the final learning assessment.

STUDENT COMMITMENT AND UNIVERSITY CREDITS

The overall student workload for the course is as follows:

- 24 hours of formal instruction through video lessons and in-person classes
- 51 hours of individual and/or group work

This activity is worth 3 ECTS credits.

LOCATION OF THE LABORATORY

The activity will take place at the DTG of the University of Padua, located at Viale Margherita, 87, Vicenza.

Dipartimento di
Tecnica e Gestione
dei sistemi industriali

Università
degli Studi
di Padova

SEMESTER OF DELIVERY

Second semester

LANGUAGE OF INSTRUCTION

English