

# Integrated Management Systems - opis przedmiotu

Informacje ogólne	
Nazwa przedmiotu	Integrated Management Systems
Kod przedmiotu	06.9-WM-ZiIP-ANG-D-03_22
Wydział	<a href="#">Wydział Mechaniczny</a>
Kierunek	Management and Production Engineering
Profil	ogólnoakademicki
Rodzaj studiów	drugiego stopnia z tyt. magistra inżyniera
Semestr rozpoczęcia	semestr zimowy 2023/2024

Informacje o przedmiocie	
Semestr	1
Liczba punktów ECTS do zdobycia	3
Typ przedmiotu	obowiązkowy
Język nauczania	angielski
Sylabus opracował	<ul style="list-style-type: none"><li>dr hab. inż. Sławomir Kłos, prof. UZ</li></ul>

Formy zajęć					
Forma zajęć	Liczba godzin w semestrze (stacjonarne)	Liczba godzin w tygodniu (stacjonarne)	Liczba godzin w semestrze (niestacjonarne)	Liczba godzin w tygodniu (niestacjonarne)	Forma zaliczenia
Wykład	15	1	-	-	Egzamin
Laboratorium	30	2	-	-	Zaliczenie na ocenę

## Cel przedmiotu

The main effect of instruction is learning of the functionality of integrated management systems, learning of a process approach to management of manufacturing companies where such systems have been implemented. The aim of the course is to learn the basics of working with SAP software.

## Wymagania wstępne

Production and Services Management.

## Zakres tematyczny

**The content of the lecture includes the following issues:** Development and classification of integrated management systems. Transactional systems and decision support systems. A complex system vs. integrated system. Module approach to the complex system. Assessment of ERP-class systems. Material Requirements Planning MRP and Manufacturing Resource Planning MRPII. MRP and MRP II specifications. Basic functions of the integrated enterprise management system. ERP-class systems, implementation of information systems. Management of an implementation project of an integrated management system. Package selection process. The methodology of implementation of the ERP system. Formation of an implementation team. Time-cost schedule for an IT system implementation. The pre-implementation analysis. Identification of critical areas in the company. The determination of the increase in the amount of data in time and the determination of assumptions for the IT equipment requirements. Preparing the IT infrastructure. The selection of equipment: servers, workstations, hardware and network infrastructure. Security of the IT system: anti-virus systems, data archiving systems and anti-surge systems. Logistics in ERP systems. Customer Relationship Management (CRM) systems. Management information system. Modelling business processes and workflows in an enterprise (Workflow Management). Systems of modelling of flows of business processes in an enterprise. Administration of integrated management systems. The administration of a database server, ideas for e-commerce applications, Business-to-Business (B2B) and Business-to-Customer (B2C). Review of existing solutions in the field of E-commerce. Online stores and online payments. Virtual organizations. The SAP HANA software will be performed.

L1 - Introduction to the SAP system, functionality of the SAP system and the GBI model

L2 - SD module, sales and distribution of products

L3 - MM module, supply and warehouse management,

L4 - PP module - planning and implementation of production processes

L5.- FI and CO modules, finance, financial and management accounting

L6 - HCM module, human capital management,

L7 - WM module, warehouse management, EAM module, maintenance management

L8 - PS module, project management in the SAP system

Thematic scope of the project classes:

P1 - introduction to the operation of the SAP system,

P2 - SD module, basic data input, offer inquiry, offer, sales order,

P3 - SD module, product distribution and sales order settlement

P4 - MM module, basic data input, purchase order fulfillment

P5 - PP module, production planning, monitoring the implementation of a production order, settlement of a production order,

P6 - PM module, project management in the SAP system

P7 - WM module, warehouse management

P8 - FI and CO modules, financial and management accounting, QM and EAM modules, management of maintenance and quality control processes.

## Metody kształcenia

Conventional lecture. Project.

## Efekty uczenia się i metody weryfikacji osiągnięcia efektów uczenia się

Opis efektu	Symbole efektów	Metody weryfikacji	Forma zajęć
The student understands the importance of the non-technical aspects and effects of engineering, including their impact on the environment; the student is aware of the responsibilities resulting from decisions taken in this regard.	• <a href="#">K_K02</a>	• projekt	
The student is able to choose the relevant modules and use integrated management information systems.	• <a href="#">K_U12</a>	• projekt	
The student has an orderly, theoretical knowledge of integrated management systems.	• <a href="#">K_W11</a>	• egzamin - ustny, opisowy, testowy i inne	• Wykład
The student is able to formulate and solve tasks, related to production engineering and management, applying a systemic approach while taking into account ethical, economic, legal and social aspects.	• <a href="#">K_U17</a>	• projekt	
The student is able to think and act both creatively and entrepreneurially.	• <a href="#">K_K06</a>	• projekt	
Has an orderly, theoretical knowledge of decision support systems and knowledge management.	• <a href="#">K_W14</a>	• egzamin - ustny, opisowy, testowy i inne	• Wykład
The student has an orderly, theoretical knowledge of computer-aided management in an enterprise.	• <a href="#">K_W09</a>	• egzamin - ustny, opisowy, testowy i inne	• Wykład
The student has the general knowledge necessary to understand social, economic, legal and other non-technical aspects of ethical engineering and the importance of taking them into account in engineering practice.	• <a href="#">K_W19</a>	• bieżąca kontrola na zajęciach • egzamin - ustny, opisowy, testowy i inne	

## Warunki zaliczenia

Lecture credit is awarded after passing a written exam. Project credit is awarded based on the assessment of the project presenting issues concerning data structures and models of business processes of an exemplary enterprise. Credit for project classes is awarded based on the assessment of the project related to issues of data structures and business process models presented on a sample production enterprise and performed based on a selected ERP system.

Completion of the course - 50% of the project grade, 50% of the exam grade.

## Literatura podstawowa

1. K. Ganesh, S. Mohapatra, S. P. Anbuudayasankar, P. Sivakumar, Enterprise Resource Planning, Fundamentals of Design and Implementation, Springer 2014.
2. K. E. Kurbel, Enterprise Resource Planning and Supply Chain Management, Functions, Business Processes and Software for Manufacturing Companies, Springer 2012.
3. Marianne Bradford, Modern ERP: Select, Implement, and Use Today's Advanced Business Systems, lulu.com, 2015.
4. Bjoern Weber, First Steps in the SAP Production Processes 2018, Espresso Tutorials GmbH.

## Literatura uzupełniająca

1. S. Scott Phillips, Control Your ERP Destiny: Reduce Project Costs, Mitigate Risks, and Design Better Business Solutions, Street Smart ERP Publications, 2013

## Uwagi

Zmodyfikowane przez dr hab. inż. Sławomir Kłos, prof. UZ (ostatnia modyfikacja: 14-04-2023 15:06)