Integrated management systems - opis przedmiotu

Informacje ogólne

Nazwa przedmiotu	Integrated management systems
Kod przedmiotu	04.2-WM-BizElP-ZintSystZarządz-Er
Wydział	Wydział Informatyki, Elektrotechniki i Automatyki
Kierunek	Biznes elektroniczny
Profil	praktyczny
Rodzaj studiów	Program Erasmus pierwszego stopnia
Semestr rozpoczęcia	semestr zimowy 2022/2023

Informacje o przedmiocie

Semestr	3
Liczba punktów ECTS do zdobycia	5
Typ przedmiotu	obowiązkowy
Język nauczania	angielski
Sylabus opracował	• dr hab. inż. Sławomir Kłos, prof. UZ

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	30	2	-	-	Egzamin
Laboratorium	30	2	-	-	Zaliczenie na ocenę

Cel przedmiotu

The aim of the course is to introduce students to work with ERP systems (enterprise resource planning) . The structure and main functionality of integrated management systems will be presented. Students will learn about the methods of data entry and work in the ERP system by performing various roles such as: constructor, technologist, salesman, purchaser, etc. Skills related to data preparation and application of the basic functions of integrated ERP class systems will be developed. Students will learn the methodology for implementing integrated ERP management systems.

The course will be based on SAP HANA software.

Wymagania wstępne

Database management. Basis processes in enterprises.

Zakres tematyczny

Introduction, development and classification of integrated management systems. Introduction to data management and information processing. Structure of integrated management systems. Decision support systems. Key business processes and IT support for process management in an enterprise. Selection, evaluation and implementation of ERP systems. Basic functions of the ERP system. Product data management, construction and technological specifications. Sales order management and generation of production orders. MRP material requirements planning and MRP II manufacturing resource planning. Registration of operations in ERP systems. Report generation and data export in ERP systems. Warehouse and material management. Pre-implementation analysis and identification of critical areas in the enterprise. Implementation of ERP systems in small, medium and large enterprises. The following issues are being developed under the project:

W1. Preparation of construction, technological and calculation data for a selected product. Product lifecycle management.

W2. Entering construction and technological data. Bill of Material and routing. Analysis of the cost of own production of the product.

W3. Data acquisition for ERP - case study.

W4. Configurable products and technological variants of products. Definition of manufacturingresources.

W5. Preparing sales offers and sales orders. Determining the price of the product.

W6. Preparing production orders. Variants of manufacturing processes.

W7. Scheduling and production planning. Production planning methods. Manufacturing resource planning MRPII.

W8. Material requirements plannning MRP. Generating material requirements and preparing purchasing orders.

W9. Material turnover documents and registration of production operations.

W10. Warehause management.

W11. Production control. Monitoring and regiration of manufacturing operations.

W12 Settlement of the production order. Invoicing.

W13. Implementation of ERP systems in manufacturing enterprises.

W14. Implementation of ERP systems - case study.

W15. New development trends of ERP.

L1. Data preparing (bill of material and manufacturing resources). Material indexes.

L2. Data preparing (bill of material, routing manufacturing resources). Machines, workplaces, manufacturing capacities.

L3. Data acquisiton. costs analyse.

L4. Semi ready products and ready prodycts.

L5. Configurable products and manufacturing variants.

L6. Sales offers and orders. Pricing.

L7. Production orders. Production planning and scheduling. Manufacturing resource planning - MRPII.

L8.Production orders. Production planning and scheduling. Manufacturing resource planning - MRPII.

L9. Purchasing orders. Material requirements planning MRP.

L10. Warehouse management and material receipt and issue documents.

L11. Monitoring and control of manufacturing process. Registration of production operations.

L12. Completion of the production order.

L13. Analyse of manufacturing data.

L14. ERP raporting.

L15. Completion of the course.

Classes will be conducted with the use of the Rekord.ERP software

Metody kształcenia

Lecture - conventional lecture using a video projector.
Project - practical classes in the computer laboratory.

Efekty uczenia się i metody weryfikacji osiągania efektów uczenia się

Opis efektu	Symbole efektów	Metody weryfikacji	Forma zajęć
The student knows the structure of ERP systems.		• sprawdzian z progami punktowymi	• Wykład
The student is able to model business processes in ERP system.		• przygotowanie projektu	• Laboratorium
The student understands the need to expand knowledge related to the implementation of integrated management systems.		• przygotowanie projektu	• Laboratorium
The student knows the methodology of implementing integrated management systems in enterprises.		• sprawdzian z progami punktowymi	• Wykład
The student knows the basic functions of integrated management systems.		• sprawdzian z progami punktowymi	• Wykład
The student is able to use the functionality of the selected integrated management system.		• przygotowanie projektu	• Laboratorium
The student is aware of the social role of a technical university graduate, and in particular understands the need to formulate and provide the public with information on aspects of engineering and business activities in a universally comprehensible way.		• przygotowanie projektu	• Laboratorium
The student is aware of the opportunities, challenges and threats posed by the formation of the information society		• przygotowanie projektu	• Laboratorium
The student is able to prepare data describing the product for the needs of integrated management systems.		• przygotowanie projektu	• Laboratorium
The student knows the methods of supporting key processes in the enterprise through integrated management systems.		• sprawdzian z progami punktowymi	• Wykład

Warunki zaliczenia

Lecture - written test (extam) carried out at the end of the semester.

Project - the final grade is the weighted sum of the marks obtained for the implementation of individual elements of the project. Contribution of individual elements of the assessment: project assessment - 50%, including quality assessment of the entered product data - 25%, knowledge of the selected ERP software package - 25%.

Final grade = 50% of the final grade of the lecture + 50% of the final grade of the project.

Literatura podstawowa

1. Banaszak, Z., Kłos, S., Mleczko, J., Zintegrowane systemy zarządzania, PWE, 2016.
2. Gospodarek T., Systemy ERP. Modelowanie, projektowanie, wdrażanie, Helion, 2016
3. Kisielnicki, J., Pańkowska, M., Sroka, H., Zintegrowane systemy informatyczne, PWN, 2012.

Literatura uzupełniająca

1. Lech, P., Zintegrowane systemy zarządzania ERP/ERP II. Wykorzystanie w biznesie, wdrażanie, Warszawa, Difin, 2003.
2. Flasiński, M., Zarządzanie projektami informatycznymi, PWN, 2009.

Uwagi

Zmodyfikowane przez dr hab. inż. Sławomir Kłos, prof. UZ (ostatnia modyfikacja: 07-04-2022 15:04)