Engineering Cost Estimation - opis przedmiotu

informacje ogolne	
Nazwa przedmiotu	Engineering Cost Estimation
Kod przedmiotu	06.9-WM-MaPE-P-EngCostEst-23
Wydział	Wydział Nauk Inżynieryjno-Technicznych
Kierunek	Management and Production Engineering
Profil	ogólnoakademicki
Rodzaj studiów	pierwszego stopnia z tyt. inżyniera
Semestr rozpoczęcia	semestr zimowy 2023/2024

Informacie o przedmiocie

Semestr	3
Liczba punktów ECTS do zdobycia	6
Typ przedmiotu	obowiązkowy
Język nauczania	angielski
Sylabus opracował	dr inż. Renata Kasperska

Formy zaieć

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

Cel przedmiotu

The main objective of the course is for students to acquire knowledge of production and product costing methods used in manufacturing enterprises.

Wymagania wstępne

Basic issues concerning production and service management.

Zakres tematyczny

Lectures:

- 1. Basic concepts of cost accounting. The place and tasks of cost accounting. The concept of cost. Methods of cost classification and division.
- 2. Cost accounting by type. Tasks of generic cost accounting. Types of costs in generic cost accounting basic definitions and concepts. Application of generic cost accounting in an enterprise.
- 3. Cost accounting by place of formation basics. Tasks of cost accounting by place of formation.
- 4. Methods of intra-company settlement of production and services.
- 5. Cost accounting by place of formation advanced techniques. ZAR enterprise cost accounting sheet. ZAR tasks.
- 6. Cost accounting according to the place of formation with the use of ZAR. Analysis of an example.
- 7. Position cost accounting. Cost analysis in position cost accounting. Analysis of an example.
- 8. Calculation according to cost carriers. Calculation tasks according to cost carriers. Calculation methods according to cost carriers.
- 9. Activity-based costing. ABC method introduction.
- 10. Activity-based costing an application and practice.
- 11. Comparative cost accounting economic analysis of a project.
- 12. Cost accounting in integrated enterprose management systems introduction and registration of costs.
- 13. Cost accounting in integrated business management systems cost analysis and evaluation.
- 14. Cost analysis in terms of a budget.
- 15. Account of costs and effects of managing production factors

Exercises:

- 1. Calculation of selected costs by type,
- 2. Fixed costs, variable costs tasks.
- 3. Mixed costs, borderline costs tasks.
- 4. Calculation of the selected workplace in the production plant tasks.
- 5. Construction of the company settlement sheet ZAR.
- 6. Determining mark-ups based on the company's settlement sheet tasks.
- 7. Determination of cost indicators based on the company's settlement sheet tasks.
- 8. Cost calculation methods tasks.
- 9. The method of costing with an equivalent tasks.
- 10. The overhead costing method tasks part. 1.
- 11. The overhead costing method tasks part 2.

12. Man-hour calculation, machine-hours in production - tasks.

- 13. Costing using the ABC method tasks.
- 14. Comparative costing tasks.
- 15. Creating cost reports.

Metody kształcenia

Lecture: conventional methods and multimedia presentations. **Exercises**: solving tasks with understanding.

Efekty uczenia się i metody weryfikacji osiągania efektów uczenia się

Opis efektu	Symbole efektów	Metody weryfikacji	Forma zajęć
The student has basic knowledge of economics, including microeconomics and macroeconomics useful for formulating and solving simple tasks in the field of Production Management.	• K_W13	 egzamin - ustny, opisowy, testowy i inne 	WykładĆwiczenia
The student has a structured, well-founded knowledge of the basics of management related to Management and Production Engineering.	• K_W18	 aktywność w trakcie zajęć 	WykładĆwiczenia
The student has elementary knowledge of running a business.	• K_W41	 egzamin - ustny, opisowy, testowy i inne 	WykładĆwiczenia
The student uses the terminology related to Management and Production Engineering	• K_U10	 aktywność w trakcie zajęć 	WykładĆwiczenia
Studnet is able to estimate initial costs and estimated costs of engineering projects in the field of mechanical engineering; is able to make a preliminary economic analysis of undertaken engineering activities.	ne • K_U20	 egzamin - ustny, opisowy, testowy i inne 	WykładĆwiczenia
The student is aware of the importance of non-technical aspects and effects of engineering activities, including its impact on the environment, and the associated responsibility for decisions.	• K_K02	 aktywność w trakcie zajęć 	WykładĆwiczenia
The student is able to think and act in an entrepreneurial way.	• K_K06	• aktywność w trakcie zajęć	 Wykład Ćwiczenia

Warunki zaliczenia

Lecture: The grade for the exam is given on the basis of a written test covering the verification of knowledge of basic issues.

Percentage thresholds from the sum of points for grades: insufficient 0%-50%, sufficient 51%-60%, sufficient plus 61%-70%, good 71%-80%, good plus 81%-90%, very good 91%-100%.

Exercises: The grade is determined on the basis of all partial grades from completed exercises.

Final grade: The grade is the arithmetic average of the individual forms of its implementation.

Literatura podstawowa

- 1. Arora M.N., A Textbook of Cost and Management Accounting, 11th Edition, Vikas Publishing House, Delhi, 2021.
- 2. Bhabatosh B., Cost Accounting: Theory and practice, 14th edition. PHI Learning Pvt. Ltd., 2021.
- 3. Bragg S.M, Cost Accounting Fundamentals: Essential Concepts and Examples. 7th Edition, Pub. Accounting Tools LLC, Centennial, CO USA, 2022.
- 4. Schuster P., Heinemann M., Cleary P., Management Accounting. Springer, 2021.

Literatura uzupełniająca

- 1. Aswathappa, K., Shridhara Bhat K., Production & Operations Management, Himalaya Publishing House, 2018.
- 2. Bhattacharyya A. K., Principles and Practice of Cost Accounting. PHI Learning Pvt. Ltd., 2004.
- 3. Tayyari F., Cost Analysis for Engineers and Scientists. 1st Edition. CRC Press, 2021.

Uwagi

Other conditions of participation and crediting are set out in the Study Regulations.

Zmodyfikowane przez dr inż. Renata Kasperska (ostatnia modyfikacja: 11-05-2023 00:07)

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