

SDAŃSK UNIVERSITY 的 OF TECHNOLOGY

Subject card

| Subject name and code | Production Planning and Control, PG_00055506 | | | | | | | | |
|--|---|----------------------------|--|-----------------|------------|---|---------------|---------|--|
| Field of study | Mechanical Engineering | | | | | | | | |
| Date of commencement of studies | October 2021 | | Academic year of realisation of subject | | | 2023/ | 2023/2024 | | |
| Education level | first-cycle studies | | Subject gro | oup | | Optional subject group Subject group related to scientific research in the field of study | | | |
| Mode of study | Full-time studies | | Mode of de | livery | | at the university | | | |
| Year of study | 3 | | Language of instruction | | | Polish | Polish | | |
| Semester of study | 6 | | ECTS credits | | | 4.0 | 4.0 | | |
| Learning profile | general academic pro | ofile | Assessmer | nt form | | assessment | | | |
| Conducting unit | Institute of Manufactu Technology | uring and Mater | ials Technolog | y -> Faculty of | Mecha | nical Er | ngineering ar | nd Ship | |
| Name and surname | Subject supervisor | dr hab. inż. St | efan Dzionk | | | | | | |
| of lecturer (lecturers) | Teachers | | dr inż. Mieczy | /sław Siemiątk | owski | | | | |
| | | | dr inż. Dominika Zakrzewska | | | | | | |
| | | dr inż. Sławomir Szymański | | | | | | | |
| | | | dr inż. Bogdan Ścibiorski | | | | | | |
| | | | dr inż. Tomasz Seramak | | | | | | |
| | | | dr inz. Tomas | z Seramak | | | | | |
| Lesson types and methods | Lesson type | Lecture | Tutorial | Laboratory | Projec | :t | Seminar | SUM | |
| of instruction | Number of study hours | 15.0 | 0.0 | 15.0 | 15.0 | | 0.0 | 45 | |
| | E-learning hours incl | | | | | | | | |
| | Address on the e-lea | | | 1 | | | | | |
| Learning activity and number of study hours | Learning activity Participation ir classes includ plan | | | | Self-study | | SUM | | |
| | Number of study hours | 45 | | 6.0 | | 49.0 10 | | 100 | |
| Subject objectives | The aim of the course Possibilities of seque | | | | | | | itrol. | |
| Learning outcomes | Course outcome | | Subject outcome | | | Method of verification | | | |
| | [K6_U09] is able to plan the manufacturing, assembly and quality control processes of typical constructions and mechanical devices, estimating their costs | | The student is able to prepare a set of data indispensable in the production planning and control process. The student uses computer systems to obtain relevant data on the production planning and control process. | | | [SU3] Assessment of ability to use knowledge gained from the subject | | | |
| | [K6_U04] is able to perform a critical analysis of the existing technical solutions, present the specification of the technology of manufacturing basic construction elements of machines and engineering assemblies | | The student prepares a paper on production planning and control issues for a simple enterprise model. | | | [SU5] Assessment of ability to present the results of task | | | |
| | [K6_W11] possesses knowledge on design, technology and manufacturing of machine parts, metrology, and quality control; knows and understands methods of measuring and calculating basic values describing the operation of mechanical systems, knows basic calculating methods applied to analyse the results of experiments | | The student knows basic issues concerning production planning and control. The student uses the terminology used in production planning and control. | | | [SW1] Assessment of factual knowledge | | | |

| Prerequisites and cortequisites Subject passing criteria Passing threshold Percentage of the final grade practical excersise Assessment methods and criteria Subject passing criteria Passing threshold Percentage of the final grade practical excersise Recommended reading Basic literature 60.0% 25.0% Recommended reading Basic literature 1. Anli Mital, Anoop Desai, Anand Subarmanian, Aashi Mital: Product development, Butterworth-Heinemann is an inpirit Elsevier, 30 Corporate Drive, Suite 400, Buttington MA 01803 USA, 2008. Supplementary literature 1. Meryer Kutz, Mechanical Engineers' Handbook-Manufacturing and Management, John Wiley & Sons, INC, Hoboken New Jersey, 2006. eResources addresses Adresy ng platformie eNauczanie: Planowanie i sterowanie produkcja (PG_0005506), MIBM, sem. 6, stacjonarne i st., Ietni 2023/2024 - Moodie ID: 38310 Example issues/ example questions/ tasks being completed 1. Control theory - basic terminology. 7. The company as a cybernetic system. 5. The company as a cybernetic system. 5. The complexity of the production flow control. 6. The efficiency of the production flow control. 7. Control trues (AI-AIII, BHBII) 6. Control trues (AI-AIII, BHBII) 6. Control trues (AI-AIII, BHBII) 7. Explain whiching and production flow control. 7. Characterize the assess of production. 7. Explain which the PCC systems. 7. Explain which the PCC systems. 7. Characterize the assess of production. 7. Characterize the assess of production flow control. 7. Characterize the assess of production planning. 7. | LABORATORY Products: product attributes, routing options, resources, set-up and operation times, operation attributes. Resources data: resources, secondary constraints, resources groups. PROJECT: Entering the orders. batching methods. calendar states and shift patterns. Sequencing the orders. Standard dispatching rules. Standard algorithmic rules. Schedule analysis. Reports. Gantt Cha Order Trace Chart. Constraints plots. | operation attributes. Resources data: resources, secondary constraints, resources groups. PROJECT: Entering the orders. batching methods. calendar states and shift patterns. Sequencing the orders. Standard dispatching rules. Standard algorithmic rules. Schedule analysis. Reports. Gantt Chart. | | | | | | | |
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| 31. Discuss ways of balancing material consumption and labour. | 2. The company as a cybernetic system. 2. The company as a cybernetic system. 3. The essence of the production flow control. 4. Hierarchical control systems. 5. The complexity of the production flow control. 6. The efficiency of the production flow control. 7. Control rules (AI-AIII, BI-BIII). 8. Control standards 9. Scheduling and workload 10. Methods for controlling the flow of intracellular production, 12. Methods for controlling the flow inside the cell for the production, 13. Task switching and principles central distribution works 14. Documentation related to the production flow control 15. Checking the progress of production 16. Checking the progress of production planning and control, the chosen concept discussed in 10. Characterize task PPC systems. 17. Explain what the PPC systems available any role. 18. Introduce the basic concepts of production planning and control, replace - selected to characterize. 20. Modem concepts of management and organization of production control, replace - selected to characterize. 21. Modem concepts of the inning process. 22. Identify the main and auxiliary tasks PPC systems, taking into account levels of management. 23. Characterize the esources in the implementation process. 24. Methods to characterize the short-term production planning. 25. Discuss the results of the planning process. 26. Methods to characterize the short-term production planning. 27. Characterize the operational tasks of production control functions. 28. Discuss generations PPC systems. 29. To characterize the functional integration method PPC systems. 20. A split of list management functions of parts and materials, changes in the structure of the production of the production control functions. 28. Discuss generations PPC systems. | | | | | | | | |