

| <b>STUDY MODULE DESCRIPTION FORM</b>  |   |  |
|---|---|--|
| Name of the module/subject<br><b>Production flow steering</b>   |   | Code<br><b>1011102231011115121</b>   |
| Field of study<br><b>Corporate Management - Full-time studies -</b>   | Profile of study (general academic, practical)<br><b>(brak)</b> | Year /Semester<br><b>2 / 3</b>   |
| Elective path/specialty<br><b>Corporate Management</b>  | Subject offered in:<br><b>Polish</b>                            | Course (compulsory, elective)<br><b>elective</b>   |
| Cycle of study:<br><b>Second-cycle studies</b>  | Form of study (full-time, part-time)<br><b>full-time</b>        |  |
| No. of hours<br>Lecture: <b>15</b> Classes: <b>-</b> Laboratory: <b>-</b> Project/seminars: <b>15</b>   |   | No. of credits<br><b>3</b>   |
| Status of the course in the study program (Basic, major, other)<br><b>(brak)</b>  |   | (university-wide, from another field)<br><b>(brak)</b>   |
| Education areas and fields of science and art<br><b>technical sciences</b>  |   | ECTS distribution (number and %)<br><b>3 100%</b>  |
| <b>Responsible for subject / lecturer:</b><br>dr inż. Ireneusz Gania<br>email: ireneusz.gania@put.poznan.pl<br>tel. 616653385<br>Wydział Inżynierii Zarządzania<br>ul. Strzelecka 11 60-965 Poznań  |   | <b>Responsible for subject / lecturer:</b><br>dr inż. Ireneusz Gania<br>email: ireneusz.gania@put.poznan.pl<br>tel. 616653385<br>Wydział Inżynierii Zarządzania<br>ul. Strzelecka 11 60-965 Poznań |
| <b>Prerequisites in terms of knowledge, skills and social competencies:</b>   |   |  |
| 1   | <b>Knowledge</b>  | The student knows the basic concepts related to the management of production.  |
| 2   | <b>Skills</b>   | The student has the ability to perceive, association, interpretation of the phenomena occurring in the sphere of production  |
| 3   | <b>Social competencies</b>                                      | The student understands and is prepared to take on social responsibility for decisions related to the design of production systems in Polish enterprises of mechanical engineering                 |
| <b>Assumptions and objectives of the course:</b><br>Acquainting students with the nature and principles of controlling the flow of production. The students mastery of basic skills in controlling the flow of production.                              |   |  |
| <b>Study outcomes and reference to the educational results for a field of study</b>   |   |  |
| <b>Knowledge:</b>   |   |  |
| 1. He has knowledge of the relationships found in corporations and holding companies, and in-depth knowledge of organizational relationships that exist between organizational units of the company - [K2A_W05]   |   |  |
| 2. He knows in depth the methods and tools of information modeling - [K2A_W08]  |   |  |
| 3. He knows the methods and tools for modeling decision-making processes - [K2A_W09]  |   |  |
| <b>Skills:</b>  |   |  |
| 1. It can be used to describe the theoretical knowledge and analysis of the causes and processes and social phenomena and formulate their own opinions and choose the critical data and methods of analysis - [K2A_U02]                                 |   |  |
| 2. He can analyze the causes and processes and social phenomena, formulate opinions on the subject and put a simple hypothesis testing and verifying them - [K2A_U03]   |   |  |
| 3. He can predict and model complex phenomena involving social processes in the areas of social life using advanced methods and tools in the discipline of management science - [K2A_U04]   |   |  |
| 4. Efficiently uses normative systems, standards and rules (legal, professional, ethical), or know how to use them in order to solve specific problems, has expanded the ability for the category of social ties or selected such standards - [K2A_U05] |   |  |
| 5. Has the ability to use their knowledge in various areas and forms, enhanced by a critical analysis of the effectiveness and suitability of applied knowledge - [K2A_U06]   |   |  |
| 6. Has the ability to independently propose specific solutions to the problem of the management and implementation procedures to take decisions in this regard - [K2A_U07]  |   |  |
| <b>Social competencies:</b>   |   |  |

1. He can see depending on cause and effect in achieving the set goals and give the rank of the relevance of alternative or competing tasks - [K2A\_K03]
2. Is aware of interdisciplinary knowledge and skills needed to solve complex problems of organization and the need to create interdisciplinary teams - [K2A\_K06]

### Assessment methods of study outcomes

Forming Rating:

a) for the project based on the current progress of the tasks, b) in respect of lectures based on answers to questions concerning the material discussed in the previous lectures.

-Rating summary:

a) for the project on the basis of the presentation of the project tasks and answer questions about the design task and the solutions used in the task, b) in respect of lectures: (1) a written examination concerning the content of the lecture, each question is scored on a scale from 0 to 1, exam is passed after obtaining at least 55% of the points. The exam can be applied after completion of the project (20 to discuss the results of the exam).

### Course description

Lecture begins with the presentation of the production flow control substance. There are two main variants of this process: a model niezinformatyzowany and computerized model. Highlighted are the differences between the two models. Presented is the course and the main methods of controlling material flow management at the level of products and components of the computerized version does not. The presented method is material requirements planning (MRP) as the basis for controlling the flow of production at the level of the components of the computerized version. Deals with the problem of integration of computerized variant and not computerized - the integration of MRP - JiT. In class, students design project, according to the guidelines operator, selected production flow control system

Teaching methods

Information lecture (conventional) (information transfer in a systematic way) monographic (specialist).

- Project method (individual or team implementation of large, multi-stage cognitive or practical task resulting in the creation of a work).

### Basic bibliography:

- Zarządzanie produkcją, Dwiliński L., Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa, 2002
- Podstawy zarządzania przepływem materiałów w przykładach, Fertsch M., Biblioteka logistyka, Wydawnictwo ILiM, Poznań, 2003
- Sterowanie przepływem produkcji, Senger Z., Wydawnictwo Politechniki Poznańskiej, Poznań, 1998
- Zarządzanie przepływem materiałów, Fertsch M., Gania I., Wydawnictwo Politechniki Poznańskiej, Poznań 2011.
- Podstawy zarządzania produkcją. Ćwiczenia, Kosieradzka A., (red.), Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa, 2008

### Additional bibliography:

- Podstawy zarządzania produkcją. Ćwiczenia, Kosieradzka A., (red.), Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa, 2008
- Krzyżaniak S., Podstawy zarządzania zapasami w przykładach, Poznań, Instytut Logistyki i Magazynowania, 2008.

### Result of average student's workload

| Activity                       | Time (working hours) |      |
|--------------------------------|----------------------|------|
| 1. Lecture                     | 15                   |      |
| 2. Projects                    | 15                   |      |
| 3. Consultation to the project | 10                   |      |
| 4. Preparation for the project | 20                   |      |
| 5. Preparation for the exam    | 10                   |      |
| 6. Exam                        | 3                    |      |
| 7. Overview of exam            | 2                    |      |
| Student's workload             |                      |      |
| Source of workload             | hours                | ECTS |
| Total workload                 | 75                   | 3    |
| Contact hours                  | 40                   | 2    |
| Practical activities           | 35                   | 1    |