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	STUDY MODULE D	ES	CRIPTION FORM		
Name of the module/subject			Cod	de 11101261011110433	
Field of study	entudian First analystud	•	Profile of study (general academic, practical	ıl)	Year /Semester
Logistics - Full-time	studies - First-cycle stud	ies	(brak)		3/6
Elective path/specialty	-		Subject offered in: Polish		Course (compulsory, elective obligatory
Cycle of study:		For	m of study (full-time,part-time	!)	
First-cycle studies			full	-tim	е
No. of hours					No. of credits
Lecture: 30 Class	es: - Laboratory: 15	5	Project/seminars:	15	6
Status of the course in the stu	dy program (Basic, major, other)	(university-wide, from another	field)	
	(brak)			(br	ak)
Education areas and fields of science and art				ECTS distribution (number and %)	
technical sciences					6 100%
Responsible for sub	ject / lecturer:	Re	sponsible for subje	ect /	lecturer:
dr inż. Agnieszka Stach	owiak	(dr inż. Ireneusz Gania		
email: agnieszka.stacho	wiak@put.poznan.pl		email: ireneusz.gania@put.poznan.pl		
tel. 616653401			tel. 616653385		
Faculty of Engineering Management ul. Strzelecka 11 60-965 Poznań			Faculty of Engineering Management ul. Strzelecka 11 60-965 Poznań		
					an
Prefequisites in ter	ms of knowledge, skills an	u 50	ociai competencies	•-	
1 Knowledge	Student has a fundamental knowledge in the field of process engineering, production and logistics organization				
2 Skills	Student understands and is able to apply the parameters of manufacturing process and systems for designing of production structures.				
3 Social competencies	Student understands and is prepared to manage production and services especially in the scope of designing of production systems? structures				
Assumptions and o	ojectives of the course:				
	with methodology and technique ap	oplied	for designing of producti	ion sy	stems? structures and oth

Study outcomes and reference to the educational results for a field of study

Knowledge:

- 1. He has a basic knowledge of computer science (information technology), economics and transportation, production management and services, production systems design (industrial design) - [K1A_W09]
- 2. He is able to explain the relationship between: IT (information technology), economics and organization of transport, production management and services, production systems design (industrial design) and logistics, supply chain management - [K1A_W10]
- 3. Student knows methods and tools for developing manufacturing structures [K1A_W33]

Skills:

- 1. He can independently develop a set, housed in the subject being studied issue [T1A_U05]
- 2. He can be formulated using analytical methods, simulation or experimental located within the subject being studied design task and solve the task in the field of logistics and its specific issues (inventory management, logistics, distribution, logistics, manufacturing and sourcing, logistics service,) and supply chain management - [K1A_U09]
- 3. He is able to select appropriate tools and methods to solve the problem of falling within the logistics and supply chain management as well as how to use them effectively - [T1A_U15]

Social competencies:

Faculty of Engineering Management

- 1. He is aware of the need for lifelong learning; inspire and organize the learning process of others in the coming within studied concerning issues [K1A_K01]
- 2. He is willing to cooperate and work in teams to resolve contained within the subject being studied problems [K1A_K03]
- 3. He is able to see the cause-and-effect relationships in the implementation of the set objectives and importance rangować tasks [K1A_K04]
- 4. He is able to plan and manage in an entrepreneurial manner [K1A_K06]

Assessment methods of study outcomes

-Written exam, final test, project, presentations

Course description

-Enterprises as manufacturing system. Production structure, fundamentals of its model ling. Plant specialization. Similarity and stabilization of production. Types and forms of production organization. Criteria of system optimization. Algorithm for design and reconstruction of manufacturing structures. Technical development of production units with usage of software support. Design of production units layout and surface arrangement. New trends in the field of service and operations management

Basic bibliography:

- 1. Organizacja i sterowanie produkcją, Brzeziński M, AW Placet, Warszawa, 2002
- 2. Inżynieria zarządzania, Durlik I., AMP WN, Katowice, 1993
- 3. Projektowanie struktur systemów produkcyjnych, Mazurczak J., WPP, Poznań, 2001
- 4. Zarządzanie. Produkcja i usługi, Muhlemann A., Oakland J., Lockyer K, PWN, Warszawa, 2001
- 5. Sterowanie przepływem produkcji, Senger Z, WPP, Poznań, 1998

Additional bibliography:

- 1. Zarządzanie produkcją, Głowacka D., Fertsch M., WSL, Poznań, 2004
- 2. Podstawowe zagadnienia zarządzania produkcją, Liwowski B., Kozłowski R., Oficyna Ekonomiczna, Kraków, 2006
- 3. Zarządzanie produkcją. Produkt, technologia, organizacja, Pająk E., PWN, Warszawa, 2006

Result of average student's workload

Activity	Time (working hours)
1. Participation in lectures	30
2. Participation in laboratories and projects	30
3. Literature studiem	30
4. Elaboration of project	10
5. Preparation for exam	10
6. Independent solving of tasks	20

Student's workload

Source of workload	hours	ECTS
Total workload	130	6
Contact hours	80	4
Practical activities	30	2