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STUDY MODULE DESCRIPTION FORM									
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Field of study						Profile of study (general academic, practical)		Year /Semester	
Logi	stics - Par	t-time s	studies	- First-cycle		(brak)		3/6	
Elective path/specialty						Subject offered in: Polish		Course (compulsory, elective) obligatory	
Cycle of	study:				F	Form of study (full-time,part-time)			
First-cycle studies						part-time			
No. of h	ours							No. of credits	
Lectur	e: 14	Classes	: -	Laboratory:	16	Project/seminars:	16	6	
Status o	of the course in	the study p	orogram (Ba	sic, major, other)		(university-wide, from another	r field)		
		(brak)				(br	orak)	
Education areas and fields of science and art							ECTS distribution (number and %)		
technical sciences								6 100%	
Resp	onsible fo	r subje	ct / lect	urer:	R	esponsible for subj	ect /	lecturer:	
dr inż. Ireneusz Gania						dr inż. Agnieszka Grzelczak			
ema	il: ireneusz.g	ania@put	.poznan.p	l		email: agnieszka.grzelczak@put.poznan.pl			
tel. 616653385						tel. 616653369			
Faculty of Engineering Management						Faculty of Engineering Management			
ul. Strzelecka 11 60-965 Poznań ul. Strzelecka 11 60-965 Po						Pozna	ań		
Prerequisites in terms of knowledge, skills and social competencies:									
1	Knowled	lge	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 compete	encies	Student understands and is prepared to manage production and services especially in the scope of designing of production systems? structures						
Assumptions and objectives of the course:									

-Students become familiar with methodology and technique applied for designing of production systems? structures and other management aspects

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

Knowledge:

- 1. Student is able to describe historical development of service and operations management and indicate actual trends within this discipline [[K1A_W04,K1A_W07]
- 2. Student has a wide knowledge about manufacturing structures, how it changes and how to manage these changes [K1A_W08,K1A_W10]
- 3. Student knows methods and tools for developing manufacturing structures [- [K1A_W13,K1A_W14]

Skills:

- 1. Student is able to formulate desing task (engineering) in the field of production systems? structures as well as to select adequate tools and methods to solve this problem $\,$ [K1A_U04,K1A_U13]
- 2. Student can design manufacturing system and process by means of appropriate methods and techniques -[K1A_U14,K1A_U15]
- 3. Student can develop manufacturing structure including organization of production units (First degree of complexity) [[K1A_U16]]
- 4. Student is able to prepare and present in polish or foreign language discussion of problem of production management [-]

Social competencies:

Faculty of Engineering Management

- 1. Student is responsible for correct identification and arbitration of dilemma related with practice of profession in the service and operations management? domain [K1A_K02,K1A_K03]
- 2. Student can transfer his knowledge other members of project group and he has consciousness of liability for personal work and readiness of subordination in group principles of work [K1A_K04,K1A_K05]
- 3. Student understands and knows possibilities for Farthest self-improvement [K1A_K06, KInżA_W05]

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	14
2. Participation in laboratories and projects	32
3. Literature studiem	40
4. Elaboration of project	30
5. Preparation for exam	10
6. Independent solving of tasks	24

Student's workload

Source of workload	hours	ECTS
Total workload	150	6
Contact hours	80	4
Practical activities	32	2