FACULTY OF COMPUTER SCIENCE AND MANAGEMENT

SUBJECT CARD

Name in Polish …Zarządzanie operacjami
Name in English Operations Management
Main field of study (if applicable): Management
Specialization (if applicable): Organizational Management
Level and form of studies: 1st level, full-time
Kind of subject: obligatory
Subject code ZMZ1249
Group of courses NO

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	**15**	**15**	**15**		
Number of hours of total student workload (CNPS)	**60**	**30**	**30**		
Form of crediting	**Examination**	**Crediting with grade**	**Crediting with grade**		
For group of courses mark (X) final course					
Number of ECTS points	**2**	**1**	**1**		
including number of ECTS points for practical (P) classes		**1**	**1**		
including number of ECTS points for direct teacher-student contact (BK) classes	**0,5**	**0,5**	**0,5**		

*delete as applicable

 PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES
1. Essentials of Management

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SUBJECT OBJECTIVES
C1To acquire the basic knowledge concerning approaches, strategies, models and methods useful in improving effectiveness and efficiency of production and service management in business organizations
C2 To acquire skills in building feasible and efficient production plans and schedules
C3.To acquire skills in efficient using of systems and models of inventory management in enterprise.

SUBJECT EDUCATIONAL EFFECTS
relating to knowledge:
PEK_W01 Knows and defines production process, productivity, operations management objectives, strategic and operational decisions of Operations Management.
PEK_W02 Identifies and describes production planning and control levels in an enterprise and their methods.
PEK_W03 Knows and describes inventory types, functions, costs and inventory management systems and models.
PEK W04 Knows modern Operations Management approaches and strategies: MRPII/ERP,
          SUBJECT EDUCATIONAL EFFECTS

relating to skills:

PEK_U01 Explains production process, productivity, operations management , strategic and operational decisions of OM, can calculate productivity, can calculate operational profit, can select optimal product mix, can select optimal process.

PEK_U02 Develops feasible and efficient production plans and schedules, develops Gantt chart and can identify production lead time.

PEK_U03 Selects the right inventory management system and lot sizing model (MRP, EOQ) and uses them to make decisions: how much to order and when to order?, can calculate the optimal lot size.

relating to social competences:

PEK_K01 Understands importance of Operations Management in improving efficiency of an enterprise as well as of market economy.

PROGRAMME CONTENT		
Form of classes - lecture		**Number of hours**
Lec 1	Essence, functions, aims, and decisions of Operations Management. Productivity and its measuring. Approaches and strategies used by OM. Types of Productions Environments (Make to Stock, Make to Order, Assemble to Order, Engineering to Order).	2
Lec 2	Strategic decisions of OM. Selection of Product Mix, Selection of Process and Capacity, Production Location, Production System Structure and Layout	3
Lec 3	Production Planning and Control levels in Enterprise. Aggregate Production Planning (objectives, strategies and methods).	2
Lec 4	Inventory Management. Inventory: Types, Functions, Costs. Inventory management systems and models. Dependent and Independent Demand Inventory. Economic Order Quantity Model.	3
Lec 5	Master Production Scheduling. Material Requirements Planning (MRP logic). Capacity Requirements Planning.	3
Lec 6	Detailed Scheduling and Production Activity Control. Modern Operations Management Approaches and Strategies (MRPII/ERP, Lean/JIT, OPT/TOC)	2
	Total hours	15
Form of classes - class		**Number of hours**
Cl 1	Optimal product mix selection using Cost-Volume- Profit model taking into account demand and production constraints.	2
Cl 2	Process selection using Cost-Volume- Profit model	2
Cl 3	Production capacity planning in constrains conditions	2
Cl 4	Aggregate production planning using Transportation Method	3
Cl 5	Inventory Management using EOQ model and Economic Production Quantity model	3
Cl 6	Material Requirements Planning using MRP logic	2
Cl 7	Test	1
	Total hours	15
Form of classes - laboratory		**Number of hours**
Lab1	Production Flow Control simulation using OPT simulator.	4

Lab2	Aggregate Production Planning . Development of feasible and efficient plans using Chase Demand and Capacity Level Strategies (POM for Windows software)	5
Lab3	Master Production Schedule and Material Requirements Planning (STORM for Windows software)	6
	Total hours	15

Form of classes - project		Number of hours
Proj1		
Proj2		
Proj3		
	Total hours	

Form of classes - seminar		Number of hours
Sem1		
Sem2		
Sem3		
	Total hours	

TEACHING TOOLS USED

N1.Multi media show
N2.Computer simulation
N3.Problems solving
N4 Literature studies

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation(F – forming (during semester), P – concluding (at semester end)	Educational effect number	Way of evaluating educational effect achievement
F1Homework and Classwork	PEK_U01, PEK_U02, PEK_U03	Student's presence. Acceptance of homework and classwork with grade (4 problems to solve).
F2Laboratory report	PEK_U01, PEK_U02, PEK_U03	Student's presence. Acceptance of 3 laboratory reports with grade.
Classes: P1 = average of 4 accepted homework grades. Laboratory: P2 = average of 3 accepted laboratory reports grades. Lecture: P Exam in test form		

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:
[1] Render B., Heizer J., *Principles of Operations Management*, Prentice-Hall, Inc. A Simon & Schuster Co. New Jersey 1997.
[2] Bozarth C., C., Handfield R., Introduction to Operations and Supply Chain Management, Pearson Education, Inc. Co. Upper Saddle River, New Jersey 2006.
[3] Vonderembse M., A., White G., P., Operations Management. Concepts, Methods, and Strategies, West Publishing Company 1991
SECONDARY LITERATURE:
[1] Reid R.D., *Operations management: an integrated approach* , John Wiley & Sons, Hoboken 2005.
[2] Heizer J., Render B., *Production and Operations Management. Strategies and Tactics*, Allyn and Bacon, a division of Simon & Schuster Inc. 1993.

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

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MATRIX OF CORRELATION BETWEEN EDUCATIONAL EFFECTS FOR SUBJECT
Operations Management
AND EDUCATIONAL EFFECTS FOR MAIN FIELD OF STUDY **Management**
AND SPECIALIZATION **Organizational Management**

Subjecteducationaleffect	Correlation between subject educational effect and educational effects defined for main field of study and specialization (if applicable)**	Subject objectives***	Programme content***	Teaching tool number***
PEK_W01	K1_ZARZ_W09 K1_ZARZ_W13	C1	Lec.1,Lec.2, Cl.1, Cl.2, Cl.3,	N1,N2,N3,N4
PEK_W02	K1_ZARZ_W09 K1_ZARZ_W13	C1,C2	Lec.3, Lec.5, Cl.4, Cl.5, Lab.2, Lab.3	N1,N2,N3,N4
PEK_W03	K1_ZARZ_W09 K1_ZARZ_W13	C3	Lec.4, Lab.3, Cl.5,Cl.6,	N1,N2,N3, N4
PEK_W04	K1_ZARZ_W09 K1_ZARZ_W13	C1	Lec.1,Lec.2, Lec.6, Lab.1	N1,N4
PEK_U01	K1_ZARZ_U02 K1_ZARZ_U03	C1	Lec.1,Lec.2, Cl.1, Cl.2, Cl.3,	N1,N2,N3
PEK_U02	K1_ZARZ_U02 K1_ZARZ_U03	C2	Lec.3, Lec.5, Cl.4, Cl.5, Lab.2, Lab.3	N1,N2,N3
PEK_U03	K1_ZARZ_U04 K1_ZARZ_U07 K1_ZARZ_U08 K1_ZARZ_U11 K1_ZARZ_U15 K1_ZARZ_U16	C3	Lec.4,Lec.6, Lab.1, Lab.3, Cl.5,Cl.6,	N1,N2,N3
PEK_K01	K1_ZARZ_K01	C1,C2,C3	Lec.1, Lec.2, Lec.3, Lec.4, Lec.5, Lec.6, Cl.4, Cl.5, Cl.6, Lab.2, Lab.3	N1,N2,N3, N4

** - enter symbols for main-field-of-study/specialization educational effects

*** - from table above