

**FACULTY OF COMPUTER SCIENCE AND MANAGEMENT****SUBJECT CARD****Name in Polish ...Kompleksowe zarządzanie jakością****Name in English ...Total Quality Management****Main field of study (if applicable): ...ORGANIZATION AND MANAGEMENT****Specialization (if applicable): ORGANIZATIONAL MANAGEMENT (OM)****Level and form of studies: 1st, full-time****Kind of subject: obligatory****Subject code ZMZ1255****Group of courses NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30	30			
Number of hours of total student workload (CNPS)	90	60			
Form of crediting	Exam	crediting with grade			
For group of courses mark (X) final course					
Number of ECTS points	3	2			
including number of ECTS points for practical (P) classes		1			
including number of ECTS points for direct teacher-student contact (BK) classes	1	1			

**PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES**

Basic knowledge of theory of management

**SUBJECT OBJECTIVES**

- C1 Acquisition of knowledge of the concepts of quality management in organizations, in particular the terms and the principles of quality management in the philosophy of TQM and KAIZEN.
- C2 Acquisition of knowledge of the design, implementation, operation, maintenance and improvement of quality management systems in business organizations, especially the quality management standard according to ISO 9000 series.
- C3 Acquisition of knowledge about the basic techniques and methods of improve the quality management.
- C4 Acquisition of skills at using selected quality management tools in solving quality problems in organizations.

**SUBJECT EDUCATIONAL EFFECTS****relating to knowledge:**

PEK\_W01 Knows basic terms and definitions connected with the quality management.

PEK\_W02 Knows concepts of quality management in organizations, in particular the principles of quality management according to TQM and KAIZEN.

PEK\_W03 Knows the quality management standards according to ISO 9000 series

PEK_W04	Knows the basic techniques and methods of quality management improvement.
<b>relating to skills:</b>	
PEK_U01	Can apply quality improvement tools in hipotetical organizations.
PEK_U02	Can identify and evaluate the possibilities of using quality improvement tools in organizations.
PEK_U03	Can interpret the requirements of the ISO 9001 quality management standards and develop plans to implement the quality management systems.
<b>relating to social competences:</b>	
PEK_K01	Can search and choose the methods for solving problems in the workplace.
PEK_K02	Can individually improve the knowledge and understanding skills in the field.

PROGRAMME CONTENT		
Form of classes - lecture		Number of hours
Lec 1	Introduction to the lecture. Basic terms (quality, characteristics of quality, quality management)	2
Lec 2	Classic techniques of quality management.	2
Lec 3	Evolution of approaches to quality and quality management.	2
Lec 4	The concept of Kaizen.	2
Lec 5	New techniques of quality management.	2
Lec 6	The concept of quality management according to W. E. Deming and J.M. Juran.	2
Lec 7	Quality management according to the concept of Ph.B. Crosby.	2
Lec 8	Other philosophers of quality management. Costs of quality.	2
Lec 9	The concept and principles of Total Quality Management - TQM.	2
Lec 10	TQM principles - continued.	2
Lec 11	The FMEA Method.	2
Lec 12	Standard-setting bodies. Standardization of the quality management systems.	2
Lec 13	Requirements of the quality management according to the ISO 9001 standard.	2
Lec 14	The ISO 9001 auditing and certification. Other standards of quality management.	2
Lec 15	Summary of the lecture	2
	Total hours	30

Form of classes – class		Number of hours
Cl 1	Introduction to the classes.	2
Cl 2	The classic techniques of quality management: the Ishikawa diagram.	2
Cl 3	The classic techniques of quality management: the Pareto-Lorenz diagram.	2
Cl 4	The classic techniques of quality management: the scatter diagram and histogram.	2
Cl 5	The classic techniques of quality management: the control chart $\bar{X}_{ev}R$ .	2
Cl 6	Additional classic techniques of quality management.	2
Cl 7	The modern techniques of quality management: “7 waste”, the matrix diagram	2
Cl 8	The modern techniques of quality management: the systematic diagram, the PDPC diagram.	2

CI 9	Analysis of the quality costs.	2
CI 10	Process mapping.	2
CI 11	Failures analysis, their effects and causes: the FMEA method.	2
CI 12	Evaluation of customer satisfaction: CSI method.	2
CI 13	Analysis of the requirements of the ISO 9001:2008 standard.	2
CI 14	New techniques of quality management and another tools.	2
CI 15	Final test.	2
	Total hours	30

### TEACHING TOOLS USED

- N1. The traditional lecture - presentation using a slide projector.  
N2. Own work - independent literature studies and preparation for the final test.  
N3. Solving tasks during classes and at home.

### 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
F1	PEK_U01÷PEK_U03 PEK_K01, PEK_K02	Results of solving tasks during classes
F2	PEK_U01÷PEK_U03	Written test on the skills at using the quality management tools
F3	PEK_W01÷PEK_W04	Exam
Classes P=F1+F2 Lecture P=F3		

### PRIMARY AND SECONDARY LITERATURE

#### **PRIMARY LITERATURE:**

- [1] The materials published on the course website.  
[2] Hoyle D., *Quality: Management Essentials*, Oxford; Burlington, MA: Butterworth-Heinemann, 2007.  
[3] Sujak-Cyruł B., *Quality Management System. An introduction to the Project of Documenting and Audit of Quality Management Systems*, Wrocław University of Technology, Wrocław 2011.  
[4] ISO 9001, *Quality management systems – Requirements. ISO, 2008*  
[5] ISO 9000, *Quality management systems - Fundamentals and vocabulary, ISO, 2005*

#### **SECONDARY LITERATURE:**

- [1] Dahlgaard J.J., Kristenson K., Kanji G. K. , *Fundamentals of Quality management*, Taylor and Francis 2002  
[2] Frankel E.G., *Quality decision management - the heart of effective futures-oriented management: a primer for effective decision-based management*, Springer Verlag, 2008.  
[3] Oakland J. S., *Total quality management: text with cases*, Amsterdam : Elsevier, 2003.  
[4] www.ISO.org.  
[5] www. PKN.org (polish).  
[6] Selected articles from: „*The TQM Magazine*”, „*The Total Quality Management and Excellence*”, „*The International Journal of Quality and Reliability Management*”, „*Managing Service Quality*”, „*The International Journal of Operational & Production Management*”, „*Quality Progress*”.

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

Anna Dobrowolska PhD, Ing. (Anna.Dobrowolska@pwr.wroc.pl)

**MATRIX OF CORRELATION BETWEEN EDUCATIONAL EFFECTS FOR SUBJECT  
TOTAL QUALITY MANAGEMENT  
AND EDUCATIONAL EFFECTS FOR MAIN FIELD OF STUDY Management  
AND SPECIALIZATION ORGANIZATIONAL MANAGEMENT (OM)**

<b>Subject educational effect</b>	<b>Correlation between subject educational effect and educational effects defined for main field of study and specialization (if applicable)**</b>	<b>Subject objectives***</b>	<b>Programme content***</b>	<b>Teaching tool number***</b>
<b>PEK_W01 (knowledge)</b>	K1_ZARZ_W15 S1_ZARZ_OM_W05	C1- C4	Lec 1-15	N1, N2
<b>PEK_W02</b>	K1_ZARZ_W15 S1_ZARZ_OM_W05	C1, C2	Lec 3-lec10	N1, N2
<b>PEK_W03</b>	K1_ZARZ_W15 S1_ZARZ_OM_W05	C2	Lec 12-15	N1, N2
<b>PEK_W04</b>	K1_ZARZ_W15 S1_ZARZ_OM_W05	C3	Lec3, Lec5, Lec8, Lec11	N1, N2, N3
<b>PEK_U01 (skills)</b>	S1_ZARZ_OM_U06	C4	CI2-CI14	N3
<b>PEK_U02</b>	S1_ZARZ_OM_U06	C4	CI2-CI14	N3
<b>PEK_U03</b>	S1_ZARZ_OM_U06	C2, C4	CI 13	N3
<b>PEK_K01 (competences)</b>	K1_ZARZ_K05	C1-C4	CI6	N3
<b>PEK_K02</b>	K1_ZARZ_K01	C1-C4	Lec2-Lec15 CI 2-CI15	N2