

GUIDE TO THE SUBJECT

| | |
|-----------------------------------|---|
| <u>Course title</u> | Quality Management |
| <u>Form of study</u> | Management |
| <u>The level of qualification</u> | Stationary |
| <u>The level of qualification</u> | II level |
| <u>Year</u> | III |
| <u>Semester</u> | V |
| <u>Unit running the program</u> | Institute of Production Engineering |
| <u>The person making</u> | dr hab. inż. Robert Ulewicz prof. PCz. |
| <u>Profil</u> | general academic |
| <u>Type of course</u> | |
| <u>Number of credits ECTS</u> | 6 |

COURSE TYPE - NUMBER OF SEMESTER HOURS

| Lecture | Exercise | Laboratory | Project | Seminar |
|-----------------------|-----------|------------|---------|---------|
| 30^E | 15 | | | |

PURPOSE OF THE SUBJECT

- C1. Knowledge of fundamentals of quality management (systems, standards, procedures)
 C2. Using practical tools and methods of quality management

REQUIREMENTS FOR KNOWLEDGE, SKILLS AND OTHER POWERS

- 1 The student knows the basics of production processes.
- 2 The student has knowledge of the overall functioning of the economy.
- 3 The student knows the basics of management.
- 4 Student is able to perform mathematical calculations.

LEARNING OUTCOMES

- EK 1-The student uses the concepts of quality management
 EK 2 - The student is able to describe a system of accreditation, certification and quality management system
 EK 3 - Student lists the basic standards and quality management system documentation,
 EK 4 - The student describes the theoretical basis for conducting audits in companies
 EK 5 - The student is able to use the traditional tools and methods of quality management
 EK 6 - Students can work individually and in teams,
 EK 7 - The student has the ability to synthesize and use of knowledge from different areas of learning in order to analyze and solve a given problem qualitative
 EK 8 - The student has the ability to use literature sources in order to broaden their knowledge.

COURSE CONTENT

| Type of course - LECTURES | Number of hours |
|--|-----------------|
| W 1- Development of quality management including the reasons for success of Japanese and Western concepts of quality management. Basic concepts in the field of quality. | 3 |
| W 2- Presentation and discussion of standards for quality management. Variability, randomness, variety in quality management. | 2 |
| W3- Model of quality management process | 2 |
| W 4- Total Quality Management - TQM. TQM and process changes within the company. Strategic areas of TQM. Evolution of Quality Management. TQM by Deming, Juran, and Oakland. | 3 |
| W 5- Special processes | 2 |
| W6- Quality management methods . | 4 |
| W 7- Internal control in the enterprise: the concept of auditing, auditing standards, internal auditor, audit models. | 3 |
| W 8- Qualitative research capabilities. | 2 |
| W 9-. Principle of quality management | 2 |
| W 10- Charakterystyka procesów specjalnych oraz zarządzania nimi. | 2 |
| W 11- Improving quality in services. | 2 |
| W12- The basic documents of the quality management system based on ISO standards. The problems associated with the introduction of quality management. | 3 |

| Type of course - EXERCISE | Liczba godzin |
|---|---------------|
| C1 – 7 quality tools | 3 |
| C2 – 7 new quality tools | 3 |
| C3 - Failure Mode and Effects Analysis (FMEA) method | 3 |
| C4 – Control card (X-R, X-S) use and interpretation | 3 |
| C5 Statistical process control (SPC). Six Sigma and Cp i Cpk factors. | 3 |

TEACHING TOOLS

- 1 lecture with the use of audiovisual
2. ISO norm
- 3 . Chalk board
4. Manuals and scripts

METHODS OF EVALUATION (F - forming P - SUMMARY)

- F1. Evaluation of sub-projects
 F2. Observation of student work to assess
 P1. Final test
 P2. The written examination

OBCIĄŻENIE PRACĄ STUDENTA

| Forma aktywności | | Średnia liczba godzin na zrealizowanie aktywności | | |
|---|-----------|---|-----------------|------|
| | | [h] | ECTS | ECTS |
| Godziny kontaktowe z prowadzącym | Wykład | 30 | | |
| Przygotowanie do egzaminu | | 25 | | |
| Obecność na egzaminie | | 2 | | |
| Godziny kontaktowe z prowadzącym | Ćwiczenia | 15 | | |
| Przygotowanie sprawozdania z ćwiczeń | | 25 | | |
| Przygotowanie do kolokwium z ćwiczeń | | 15 | | |
| Zapoznanie się ze wskazaną literaturą | | 28 | | |
| Obecność na konsultacjach | | 10 | | |
| SUMARYCZNA LICZBA GODZIN/PUNKTÓW ECTS DLA PRZEDMIOTU | | Σ 150 h | Σ 6 ECTS | |

BASIC AND SUPPLEMENTARY LITERATURE**Basic literature:**

1. Borkowski S.: Mierzenie poziomu jakości, Wyd. Wyższej Szkoły Zarządzania i Marketingu w Sosnowcu, Sosnowiec 2004
2. Borkowski S., Čorejow T., Instrumenty rozwizywania problemw w zarzdzeniu, Wyd. Wyższej Szkoły Zarzdzenia i Marketingu w Sosnowcu, Sosnowiec 2004.
3. Hamrol A., Zarzdzenie jakoci z przykadami, PWN, Warszawa 2008

SUPPLEMENTARY LITERATURE

1. Wiceek J. (red). Zintegrowane zarzdzenie jakoci, Wyd. Uniwersytetu Łdzkiego, Łdz 2007.
2. Wolniak R., Skotnicka B. Metody i narzdzia zarzdzenia jakoci. Teoria i praktyka, Wydawnictwo Politechniki Ślskiej, Gliwice 2008.
3. Urbaniak M.: Zarzdzenie jakoci teoria i praktyka, Difin, Warszawa 2004.

TEACHER ACTIVITY (name, E-MAIL ADDRESS)

1. hab. inż. Robert Ulewicz ulewicz@zim.pcz.pl

MATRIX EFFECTS OF EDUCATION

| The effect of education | The reference to the effects of the effect defined for the entire program (PEK) | Objectives of the course | Course content | Teaching Tools | Evaluation method |
|-------------------------|---|--------------------------|-----------------------|----------------|-------------------|
| EK1 | K_U11, K_U10, K_W01 | C1 | W1, W3, W8-W10, C1-C5 | 1, 2, 3 | P1, P2 |
| EK 2 | K_U11, K_U10, K_U09, K_W01, K_W07 | C1 | W4, W5, C1-C5 | 1, 2, 3 | P1, P2 |
| EK 3 | K_U11, K_U10, K_U09 | C1 | W2, W11, W12, C1-C5 | 1, 2, 3 | P1, P2 |
| EK 4 | K_U11, K_U10, K_U09 | C1 | W6, C1-C5 | 1, 2, 3 | P1, P2 |
| EK 5- | K_U11, K_U10 | C1, C2 | W6-W8, C1-C5 | 1, 2, 3 | F1, F2, P1, P2 |
| EK 6 | K_U11, K_U10, K_K02, K_K03 | C2 | C1-C5 | 1, 2, 3 | F1, F2 |
| EK 7 | K_U11, K_U10, K_U09, K_W01 | C1, C2 | W6-W8, C1-C5 | 1, 2, 3 | F1, F2 |
| EK8 | K_U11, K_U10 | C1, C2 | C1-C5 | 3 | F1, F2, P1, P2 |

EVALUATION FORM – DETAILS

| | Mark 2 | Mark 3 | Mark 4 | Mark 5 |
|-----|--|---|--|--|
| EK1 | The student does not know how to use the concepts of quality management | The student is able to use the selected concepts of quality management | The student is able to use the concepts of quality management | Student umie posługiwać się pojęciami z zakresu zarządzania jakością oraz wyrażać o nich opinię |
| EK2 | The student is able to use the concepts of quality management and to express an opinion on these | The student knows the basic terminology of accreditation, certification and quality management system | The student knows the system of accreditation and certification and quality management system | The student knows the system of accreditation and certification and quality management system, can express their opinion on their actions |
| EK3 | The student does not know the basic standards and quality management system documents | Students know only certain standards and quality management system documents | The student knows all the standards and quality management system documents presented in the classroom | The student knows all the standards and quality management system documentation can point out the differences between them |
| EK4 | The student does not know the theoretical basis to carry out audits in enterprises | The student knows the terminology related to audit | The student knows the terminology related to audit, conduct an audit basis | The student knows the terminology related to audit, conducting the audit and the base can express your opinion about it |
| EK5 | Students can not use the traditional tools and methods of quality management | The student knows selected traditional tools and methods of quality management | The student knows the traditional tools and methods of quality management is able to use them | The student knows the traditional tools and methods of quality management is able to use them, learn from them suitable applications are able to select methods or tools according to your needs |
| EK6 | The student is not able to work individually and in a team | Students with difficulty executing commands leading both independently and in groups | Students either individually, and in the group is able to execute the order of conducting | Students can work individually and the band stands out from the background group, respectively concludes |

| | | | | |
|-----|--|--|--|---|
| EK7 | The student does not have the skills of synthesis and use of knowledge from different areas of learning in order to analyze and solve a given problem of quality | The student uses the "dry method" performance of their knowledge and can not adequately analyze or solve the problem of quality | Students can use their knowledge to solve the problem of quality | Students can use their knowledge to properly address the problem of quality and is able to suggest directions of improving |
| EK8 | The student does not have the ability to use literature sources in order to broaden their knowledge | The student does not know how to use student from literature sources identified by the teacher has the ability to use literature sources in order to broaden their knowledge | The student does not know how to use student from literature sources identified by the teacher has the ability to use literature sources in order to broaden their knowledge | Students deepen their knowledge by seeking additional sources of literature, it can compare the messages in them, learn from them |

OTHER USEFUL INFORMATION ABOUT THE SUBJECT

1. Information where you can see the presentations to classes, instructions to the lab, etc. - the information presented to students in the class, if required by the formula classes are sent electronically to the e-mail addresses of individual groups dean
2. Information about the location of event schedule - information can be found on the website of the department
3. Information on the timing of the course (day of week / time) - information can be found on the website of the department
4. Information on the consultation (hours + seats) - are given to students at the first meeting can be found on the website of the department and in the doorway of individual employees

.....

signature