Discipline	QUALITY MANAGEMENT code: 32 **winter semester**	
Specialty	INDUSTRIAL MANAGEMENT	
ECTS credits: **6**	Form of assessment: Continuous assessment	
Lecturer	Assoc. prof. PhD Eng. / scientific title/ Krasimira Dimitrova /name/ Room NUK 508 Phone: +359878011079 E-mail: krasimira.dimitrova@tu-varna.bg	
Department	INDUSTRIAL MANAGEMENT	
Faculty	*FACULTY OF MECHANICAL ENGINEERING AND TECHNOLOGIES*	

Learning objectives:

The discipline "Quality Management" is profiling in the framework of the training of the students in the specialty "Industrial Management", Bachelor's degree. It aims to give students the theoretical knowledge and practical skills to manage the quality control and quality processes and its improvement in order to increase the confidence of clients by meeting their requirements, expectations and needs as well as to achieve sustainable development of business organizations. The main tasks of this course are related to acquainting students with the basic concepts used in the management of quality and the acquisition of theoretical knowledge related to:

- Founding ideas and concepts of distinguished scientists in the field of quality;
- Quality of products and processes;
- Methods of quality control;
- Diagnosis of causes of poor quality;
- Methods of statistical process regulation;
- Development of quality management concepts;
- Quality management system according to ISO 9001: 2015;
- International Quality Management Models - Malcolm Baldrige Model, EFQM Model, etc .;
- Quality Management Methods - Failure Mode and Effects Analysis; Quality Function Deployment;
- Quality and competitiveness;
- Culture of quality;
- Standards and standardization;

Within the laboratory exercises are planned discussions, analysis of examples and comparison of the concepts of leading specialists in the field of quality management as well as examination of concrete examples in different organizations, self-elaboration of referrals on particular topics in the field of quality management. Course work is also planned.

CONTENTS:

Training Area	Hours lectures	Hours seminar exercises
Quality - essence, basic principles and concepts	2	
Quality control	2	
Quality assurance	2	
Quality management	2	
Quality Management Systems (QMS);	2	
Quality Management Systems according to ISO 9001	2	
Other models of quality management systems	2	
Quality and competitiveness	2	
Quality improvement methods	2	
Quality culture	2	
Standardization requirements for products, processes and management	2	
History and regulatory framework of European standardization	2	
Standardization in Bulgaria	2	
Specialized methods of quality management – FMEA Failure Mode and Effects Analysis	2	
Specialized methods of quality management – QFD (Quality Function Deployment)	2	
Mathematical and statistical methods for evaluating quantitative quality characteristics		3
Graphic methods for data presentation		2
Quality management of products, processes and systems		2
Development of a plan for implementation and certification of QMS according to ISO 9001: 2015		2
Development QMS procedures for a concrete company		2
Analysis of opportunities for increasing the competitiveness of a industrial enterprise		2

Application of FMEA and QFD in practice		2
Course project		
Task 1		5
1.1. Practical problem solving by using Mathematical and statistical methods for evaluation of quantitative characteristics of quality - optional		
1.2. Practical problem solving by using Checklists; Pareto analysis; Cause and effect diagram (Ishikawa diagram); Stratification; Control cards; Histogram; Scatterplot		
1.3. Practical problem solving by using Methods for Analyzing the Causes of Defects and Discrepancies, Similarity Diagram, Ishikawa Causal Diagram, Pareto Diagram - optional		
Task 2		5
2.1. Practical problem solving by using FMEA method - optional		
2.2. Practical problem solving by using QFD method - optional		
Task 3		5
3.1. Development of a plan for introduction and certification of QMS according to ISO 9001: 2015 in a concrete company - optional		
3.2. Development of a QMS procedure - optional		
TOTAL: 60 h	**30**	**30**