



AGRIBUSINESS QUALITY MANAGEMENT

Basic data of the subject	
Academic Unit:	Faculty of Life and Environmental Sciences
Course title:	Agribusiness quality management
Study program:	Agribusiness Management
Level:	Master (MSc)
Course status:	Obligatory (O)
Study year:	1 year / 2 semester
Number of hours per week:	3 + 2
Credit value – ECTS:	6 ECTS
Time / location:	To be announced
Lecturer:	Prof. Dr. Ilir Kapaj
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Course description:	This course is focused on the main topics of the quality management problems, among others in understanding and examining the topics such as Quality basics and definition of quality. The role of consumers in quality management focus, TQM (Total Quality Management) approach. Total Quality Management and its main focus. Total Quality Management and Continuous Improvement. Quality tools and their use for quality problem solving, the role of the quality control tools. Quality improvement and solving the quality problems. ISO family of quality standards, a detailed description of the ISO family. Introduction to ISO 22000:2005, food safety management systems. The basic concepts of ISO 14000 dealing with environmental management. Control charts and their use. Metrics of quality and cost of the low quality. The role of employee involvement in the projects of the quality improvement and use of Benchmark as a project for achieving the superior quality and leader position in the market. Six-sigma concept, its role in the context of quality management. QFD (Quality Function Deployment), and (Taghuchi Loss Function), their main points and implications for quality improvement. Internal quality audit and its role for quality management.
Course objectives:	This module aims at introducing the basic concepts of quality management in the business organizations, and to emphasize also the importance of new quality management approaches within the actual context of market and globalization. It aims students to possess the newest quality management approaches philosophy starting from GMP (Good Management Practices) and going on with more noted focus on management systems like, HACCP (Hazard Analysis Critical Control Point), ISO series or even most advanced approaches in terms of quality management TQM (Total Quality Management). Furthermore, the module aims students to be capable of using the quality tools for organizational quality management as whole.
Learning outcomes:	Upon successful completion of this course, students will be able to: ▪ Recognize the quality management systems and international quality management standards ▪ Understand the process of implementing a quality standard and identify the advantages that these standards offer to the business organization ▪ Identify quality problems in the organization

	▪ Develop competencies to evaluate the benefits that businesses have from the implementation of modern quality management standards ▪ Implement quality tools in function of a superior quality in the organization, ▪ Analyze and evaluate information, in the context of quality in the organization, and turn it into concrete actions to improve the quality of the business organization, ▪ Implement quality management standards (ISO, TQM) regardless of the nature of the business where they will work ▪ Develop proactive team work skills in the context of quality management of a business organization.		
Contribution on student load (must correspond with learning outcomes)			
Activity	Hours	Days/week	Total
Lectures	3	13	39
Exercise theoretical/laboratory	2	13	26
Practice work	1	3	3
Contact with lecturer/consultations	1	15	15
Field exercises	/	/	/
Mid-terms, seminars	1	1	1
Homework	1	13	13
Individual time spent studying (at the library or home)	2	15	30
Final preparation for the exam	2	8	16
Time spent in evaluation (tests, quiz, final exam)	2	2	4
Projects, presentations, etc.	3	1	3
Total			150 hours (6 ECTS)
Teaching methods:	Lectures, exercises, discussions, consultations, course projects, homework, midterm exam (colloquium), exams		
Evaluation methods:	▪ Attendance in lectures and exercises: 10%, ▪ Midterm exam (colloquium): 10%, ▪ Final exam: 80%.		
Literature			
Basic Literature:	Luning, L.A., Marcelis, W.J. and Jorgen, W.M.F., (2002). Food Quality Management: a Techno Managerial Approach. Wageningen Pers, Wageningen, Netherlands		

	Deming, W. E. (2012). The Essential Deming: Leadership Principles from the Father of Quality. United States: McGraw Hill LLC. Schein, E. H., Schein, P. (2016). Organizational Culture and Leadership. Germany: Wiley. Feigenbaum, A. V. (1991). Total Quality Control, Revised. (n.p.): McGraw-Hill Companies. Nicolaides, L. (2014). Private Sector Systems for Providing Quality Insurance: From Good Practices to Total Quality Management. Natural Resource Institute, University of Greenwich, UK. Womack, J. P., Jones, D. T. (2013). Lean Thinking: Banish Waste And Create Wealth In Your Corporation. United Kingdom: Simon & Schuster UK. Tague, N. R. (2005). The Quality Toolbox. United States: ASQ Quality Press.
Additional Literature:	Lawton, R. (2002). Balance your balanced scorecard. Categories of measures should reflect key values of both organizations and customers. Quality Progress. 35(3), 66-71. International Standardization Organization (ISO), (2018). Quality Management Systems-Guidelines (9004; 2000). Document ISO/TC 176/SC 2N/415. International Standardization Organization (ISO), (1994). Quality Systems-Model for Quality Assurance in Design, Development, Production, Installation and Servicing ISO: 9001, Quality Management and Quality Systems Elements ISO. 9004. International Standardization Organization (ISO), (1998a). Quality Management Systems- Concepts and Vocabulary ISO 9000:2000, ISO/TC 176/SC1/N185 Sharma, M., & Joshi, S. (2023). Digital supplier selection reinforcing supply chain quality management systems to enhance firm's performance. The TQM Journal, 35(1), 102-130. Chen, C. K., Reyes, L., Dahlgaard, J., & Dahlgaard-Park, S. M. (2022). From quality control to TQM, service quality and service sciences: a 30-year review of TQM literature. International Journal of Quality and Service Sciences, 14(2), 217-237. Van Kemenade, E. (2022). Patterns emerging from the TQM paradigm in relation to the 21st century complex context within TQM journal. The TQM Journal, 34(3), 494-514. Jasti, N. V. K., Venkateswaran, V., & Kota, S. (2022). Total Quality Management in higher education: a literature review on barriers, customers and accreditation. The TQM Journal, 34(5), 1250-1272. Palmer, B. (2014). Making Change Work: Practical Tools for Overcoming Human Resistance to Change. Iran: ASQ Quality Press

Designed study plan:		
Week	Lectures	Exercises
<i>First week:</i>	Introduction to the basics of quality management.	Discussion and distribution of the semestral project topics.

<i>Second week:</i>	Quality, basics; consumers and TQM as managerial approach for quality management. Defining Quality and Guru's of the principles of quality. Different perspectives related to quality. Stout's View related to quality and its measurement. Quality dimensions; Manufacturing dimensions; Service dimensions History of Quality Paradigms and why it is required quality improvement in the current market situation. Need for a New Strategy and quality hierarchy. TQM's Customer Approach, Some Data on Customer Attitudes and Loyalty and methods to collect customer satisfaction data. Total Quality Management and the evolution of the quality era, understanding and its focus. The umbrella model of TQM, old cultures vs new ones in context of quality management. Quality dimensions and quality cost. Obstacles face in quality management implementation systems and its benefits. Basic principles of TQM and productivity. Continues Improvement vs Traditional Approach.	Assignments, quizzes and case studies related to the topic of the first week lecture.
<i>Third week:</i>	Quality improvement: Problem solving Quality Tools and its use for problem solving. Quality Control Tools Pareto chart, Histogram, Process flow diagram, Check sheet, Scatter diagram, Control chart, Run chart and Cause and effect diagram. Process Chart Symbols and examples of cases when we can use control charts. "Stem and leaf" displays	Assignments, quizzes and case studies related to the topic of the second week lecture.
<i>Fourth week:</i>	Quality improvement: Problem solving - continuation What is QC Problem Solving? "Problem solving, the isolation and analysis of a problem and the development of a permanent solution, is an integral part of the quality-improvement process". Problem Solving Process. All managers need problem solving skills. Ten problem solving steps. Gap Analysis and PDCA cycle diagram. Florida Power & Light's 7 step model.	Assignments, quizzes and case studies related to the topic of the third week lecture.
<i>Fifth week:</i>	ISO Standards What are ISO 9000 Standards and its history. The basic functions of ISO 9000 standards? Who created the standards? How did ISO get started? Documentation and the aim of ISO standards. What has ISO Accomplished? Specific standards and guides for their implementation. Why are ISO important? What	Assignments, quizzes and case studies related to the topic of the forth week lecture.

	are the elements of the standards? Why adopt ISO 9000? Ten Steps to ISO Registration. How can a company determine whether it will benefit from ISO 9000 certification? Can the company quantify exactly what it will be worth? Can it give a competitive edge? Documentation is at the core of the ISO standards. Need for implementation of the ISO standards. How ISO standards benefit society? Benefits of implementation for customers, for governments, for trade officials and for developing countries. ISO 22000 and its main focus. ISO 14000 on environmental management standards. Guides and main principles of these standards.	
<i>Sixth week:</i>	Control charts Control charts functions. Control charts as instruments for understanding the process performance. Control charts as instruments to identify the variation. Control charts as instruments to monitor the processes. Control charts components. Control charts for variables; X-bar and R charts. Eight steps in using control charts for quality variables identification. Consequences of process misinterpretation and process variation. Graphs zones, and model or trends identification. Control charts review.	Assignments, quizzes and case studies related to the topic of the fifth week lecture.
<i>Seventh week:</i>	Variables/metrics of quality and quality cost Customer quality measures, definition of the metrics of quality and quality measure based on customer approach. True versus substitute performance measures. Customers - use “true” performance measures vs. Producers - use “substitute” performance measures Educating Consumers on - use “substitute” performance measures. Identifying effective metrics and use of quality effective metrics. Acceptable ranges and break points. Targets, tolerances and specifications. Cost of Quality and its trends on time. Hidden costs of poor quality. Traditional model of poor quality costs and its development. Emerging COQ model. The 1-10-100 rule (prevention, correction and failure). Characteristics of cost of quality assurance and its aspects.	Assignments, quizzes and case studies related to the topic of the sixth week lecture.
<i>Eighth week:</i>	Midterm exam	Assignments, quizzes and case studies related to the topic of the seventh week lecture.

<i>Ninth week:</i>	Employee involvement and using benchmarking Employee Involvement is one approach to improving quality and productivity. Maslow's Need Theory and the importance of needs identification from the management side. Herzberg's two-factor theory – Motivators; Hygiene or dissatisfies factors Motivated Work Force and working teams. Barriers to team progress and Benefits of employee involvement. Benchmarking concept (comparative analysis) and reasons why a business organization should carry out benchmark analysis. Benchmark process and its 12 steps. Process of performance gap closing and types of Benchmarking. Benefits of benchmarking followed by a case study analysis (meat industry in Albania).	Assignments, quizzes and case studies related to the topic of the eight week lecture.
<i>Tenth week:</i>	Six-sigma Six sigma concept and historical context of using it as managerial approach for quality improvement. Process capability and control limit establishment. Limits/tolerances establishment in a production process. Defects numbers in a process situation 1σ, 2σ, 3σ, 4σ, 5σ and 6σ. Six Sigma implementation approach is a process that implies five steps. Six Sigma - three dimensions, Methodology, Tools and Organization. DMAIC process (Do, Measure, Analyze, Implement and Control). Six-sigma and Benchmark integration of the two approaches together. Six-sigma, costs and savings of the companies by implementing. Six-sigma (example of international companies that have implemented Six-sigma approach and saved cost from this action). Scope of Six Sigma	Assignments, quizzes and case studies related to the topic of the ninth week lecture.
<i>Eleventh week:</i>	Quality function deployment and quality loss function (QFD & QLF) History of QFD according Yoji Akao. When to use QFD and its main focus. QFD links the needs of the customer (end user) with design, development, engineering, manufacturing, and service functions. QFD empowers organizations to exceed normal expectations and provide a level of unanticipated excitement that generates value. How do we capture our Customers' requirements? What should we use to prioritize Requirements? How does QFD differ from other quality initiatives? What are the characteristics of QFD as a quality system? What are "expected quality" and "exciting	Assignments, quizzes and case studies related to the topic of the tenth week lecture.

	quality??" the difference between them. Benefits of QFD. Taguchi's Loss Function. Taguchi Loss Function definition. Taguchi approach vs traditional. Taguchi's Quadratic Quality Loss Function. Taguchi's U-shaped loss function curve. Formula to find Taguchi's Loss Fn.	
<i>Twelfth week:</i>	Internal audit for assuring quality management standards 1. Quality is conformance to requirements Do What you said you would do 2. The system for producing quality is prevention not appraisal Solve Problems permanently 3. The performance standard is zero defects Right First Time and Every Time 4. Quality is measured by the cost of non-conformance Repair / Rework is paid for out of Profits	Assignments, quizzes and case studies related to the topic of the eleventh week lecture.
<i>Thirteenth week:</i>	Review and discussion of the evaluated topics.	Assignments, quizzes and case studies related to the topic of the twelfth week lecture.
<i>Fourteenth week:</i>	Preparation for the s semester projects.	Assignments, quizzes and case studies related to the topic of the thirtieths week lecture.
<i>Fifteenth week:</i>	Presentation of the semester projects.	Presentation of the course projects.
Academic policies and rules of conduct:		
- Students should be aware of and respect the institution and Code of ethics. - Students should respect the schedule of lectures, and exercises and be attentive. - It is mandatory to possess and presents a student ID card in the mid-terms and exam, - During the compilation of course projects, students must adhere to the instructions given by the professor. - During the exam is forbidden the use of mobile phones.		