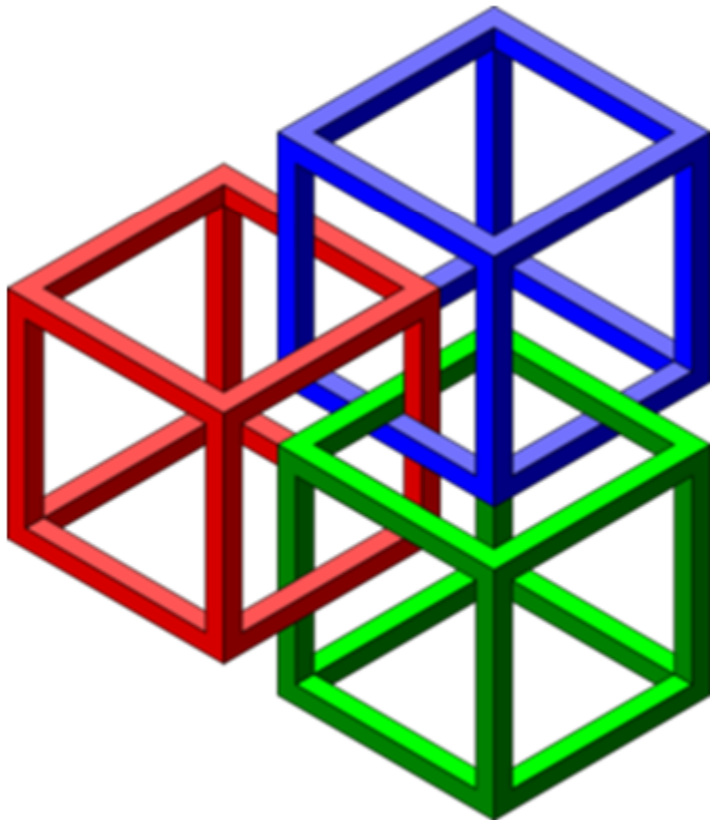


Ingineria Calității în Mecatronică și Robotică ICMR

Quality Engineering for Mechatronics and Robotics QEMR



MSc Program
Department of Mechatronics
University Polytechnica Timisoara

Contact:

Department of Mechatronics, Faculty of Mechanical Engineering
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What a Quality Engineer does

Quality Engineer: a person whose job is to design or improve a production process so that the goods produced are of the intended standard

(acc. to Cambridge Dictionary)

The QE also participates in the change management process to assure the products or services continue to meet customer requirements. The QE is usually part of a cross-functional team with other business and engineering disciplines. Quality Engineers establish the principles of product and service quality evaluation and control for the system. The QE provides independent oversight and review of the project deliverables throughout the lifecycle.

Expectations of a Quality Engineer

A Quality Engineer will;

- have a fundamental understanding of quality philosophies, principles, systems, methods, tools, standards, organizational and team dynamics, customer expectations and satisfaction, supplier relations and performance, leadership, training, interpersonal relationships, improvement systems, and professional ethics.
- have a fundamental understanding of a quality system and its development, documentation, and implementation with respect to domestic and international standards or requirements. have a basic understanding of the audit process including types of audits, planning, preparation, execution, reporting results, and follow-up.
- be able to develop and implement quality programs, including tracking, analyzing, reporting, and problem solving.
- be able to plan, control, and assure product and process quality in accordance with quality principles, which include planning processes, material control, acceptance sampling, and measurement systems.
- be able to plan, control, and assure product application, including design, manufacturing and construction.
- have basic knowledge of reliability, maintainability, and risk management, including key terms and definitions, modeling, systems design, assessment tools, and reporting.
- have a thorough understanding of problem-solving and quality improvement tools and techniques.
- This includes knowledge of management and planning tools, quality tools, preventive and corrective actions, and how to overcome barriers to quality improvements.
- be able to acquire and analyze data using appropriate standard quantitative methods across a spectrum of business environments to facilitate process analysis and improvements.
- Understand risk analysis philosophies and methodologies and their applications.
- Understand readiness processes and requirements.

(according to the American Society for Quality)

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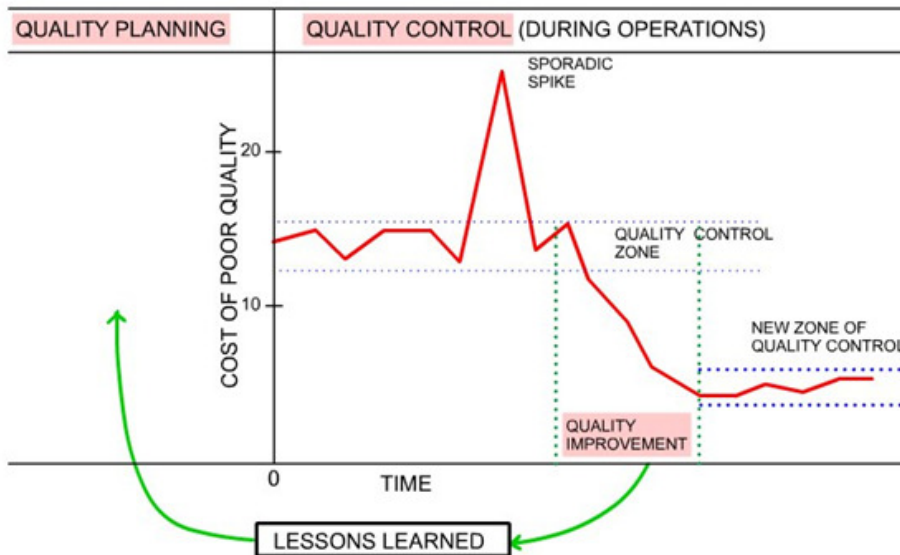
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About our MSc Program

The Quality Engineering for Mechatronics and Robotics (QEMR) Program focuses on Quality Engineering Methods and on Mechatronic/Robotic Technology, combining them in a synergistic way. It is our belief that to effectively apply the Lessons Learned (the Feedback of the system), as shown in the Juran Trilogy Diagram, the Quality Engineer has to understand also some Technology concepts.



The Juran Trilogy Diagram

According to this idea we propose the following courses:

Quality Management
Computer Aided Design - ProE Creo
Statistical Control in the Production Process
Product development and project management

Semester 1

Computer Aided Quality Assurance
Mechatronic Systems Reliability
Shape Integration and Mechatronic System Configuration
Quality Assurance Methods and Systems

Semester 2

Automation and Robotization of the Production Workflow
Human-Machine Interface
Programmable Logic Controllers
Integrated Quality Management

Semester 3

Dissertation

Semester 4

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Admission and other info

Admission Calendar

The Admission to the program is possible twice a year, at the beginning of July or September, details for the admission can be found on the Faculty of Mechanical Engineering Website:

mec.upt.ro

under the Education → Master section

Admission process and fees

The Admission process consists basically in enlisting and admission test.

There is only an admission fee of 150RON. There are **NO TUITION FEES!!** for **EU Citizens**

Program Start, Progress and Graduation

- The program starts at the end of September.
- You will get some lecture modules taught in **ENGLISH**
- During some courses there will be **invited speakers from the Industry**
- At the end of the Program you will receive a **MSc Diploma**, and also, optional, a **TUV Austria Certificate** as Internal Quality Auditor !!!
(45 euro release fee, market value aprox. 300 euro - **NOT to be paid by you**)



“As **Internal Quality Auditor** you will have knowledge on

- ISO 9001:2008 and ISO 19011:2011 standards
- Specific documentation development, Audit techniques
- Nonconformities reports, Audit report

which will aid any job application “

Camelia STOICHESCU
Analist Servicii Client , TUV AUSTRIA ROMÂNIA SRL

Other bonuses

- possibility of accommodation on the University Campus for the study period
- free access to the Sport Facilities of the University

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