



Europe-wide ECQA Certified Automotive Quality Manager Student Certificate



Achieving future career in Automotive Engineering
through the integration of:

- Automotive SPICE® (ISO/IEC 15504)
- Functional Safety (ISO 26262)
- Design for Six Sigma

www.automotive-quality-universities.eu

✓ DID YOU KNOW THAT...

- ...a F35 Fighter has 25 million lines of software code, while a modern car has far more than a 100 million?
- ...mechatronic systems control more than 70% of a modern cars' functions?
- ...cars communicate with their environment and will soon be driving autonomously?
- ...only the best Quality Management can provide the safety standards needed?
- ...failing automotive mechatronic sub-systems can lead to fatal accidents?
- ...quality in development and manufacturing are heavily linked to each other?

The **A**utomotive **Q**uality **U**niversities' program transfers cutting-edge knowledge and solutions to current quality and safety engineering challenges!

Compared to existing courses, AQU offers an integrated view on the currently most relevant automotive quality domains:

- **Automotive SPICE® [ISO/IEC 15504]:** Quality linked to the development process of software and electronics.
- **Functional Safety (ISO 26262):** Quality associated with the achievement of Functional Safety requirements.
- **Design for Six Sigma:** Focus on the reliability and robustness of products and production processes.

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Student of the M.Sc. level (Automation and Robotics) at the Faculty of Electrical Engineering and Computer Science, University of Maribor, Maribor, Slovenia.



During my future career, I will most likely find myself working in the automotive industry, where the knowledge delivered in the AQU course programme. Therefore, I will be able to design the product within the international standards.

This subject exceeded my expectations so I would like to warmly recommend it to all students, thinking about working in the automotive industry.

Prof. (FH) Dr. Kurt STEINER
Head of the Institute
of Automotive Engineering
at FH JOANNEUM (University
of Applied Sciences)



When having a look into the future of mechanical engineering, Quality & Safety Management are becoming hot-topics for our prospect engineers. I am convinced that an integrated view of different quality dimensions facilitates students to process the information gathered during the course.

We, the FH JOANNEUM, have implemented all modules of AQU into our degree program for automotive engineering. Positive feedback from students confirms that they evaluate AQU as an additional benefit for finding a job after their studies.

WHAT SHOULD YOU BRING ALONG?

This course is designed for teachers and students with an engineering background. Industry experience is not required, but surely an advantage!

ADDITIONAL INDUSTRY-SPECIFIC QUALIFICATION MATTERS!

TEACHERS, WHY SHOULD YOU BE INTERESTED?

- INNOVATIVE teaching methods and concept.
- Combine classroom teaching with distance learning according to your needs (INDIVIDUALITY).
- FLEXIBLE and UP TO DATE modular course materials in different languages.
- Library of industrial CASE STUDIES.
- Exams and certifications for students through the ECQA.
- ECQA - qualified as a Automotive Quality University teacher.

STUDENTS, WHY SHOULD YOU BE INTERESTED?

- SPRING-BOARD to modern jobs in the automotive industry.
- ACQUIRE KNOWLEDGE in the most recent topics, challenges and solutions in SAFETY and QUALITY for automotive engineers.
- BENEFIT from exchanging experiences and discussions on the Europe-wide forum.
- Recognized European CERTIFICATION through the ECQA.



BECOME PART OF THE COMMUNITY of highly demanded Quality & Safety Experts for the automotive industry.

GET YOUR DREAM JOB! STAND OUT! BE UNIQUE!
As a certified automotive quality expert you are highly demanded in the automotive industry.

UNIT 1 INTRODUCTION

1. Integrated view and general part

Introduces essential technical challenges of each automotive quality domain and provides an integrated view on them.

2. Organisational Readiness

Explains organisational challenges linked to automotive quality engineering and management.

UNIT 2 PRODUCT DEVELOPMENT

1. Life Cycle

Explains the life cycle approach of automotive quality engineering starting from early design over manufacturing and use until end of life.

2. Requirements

Discusses how to manage product & process requirements with a focus on the three quality domains during the entire product life cycle.

3. Design

Introduces design approaches and methods, required to cover comply with automotive quality and safety standards.

4. Integration and Testing

Gives insights into verification and validation methods for assuring product quality and safety.

OUR ROADWAY THROUGH THE AUTOUNIVERSE PROGRAM FOR YOU: ✓

The course consists of 4 units providing an integrated view on the quality domains Automotive SPICE®, Functional Safety and Six Sigma.

UNIT 3 QUALITY AND SAFETY MANAGEMENT

1. Capability

Reveals the essential differences and commonalities among the three quality domains with respect to process and product capability.

2. Hazard & Risk Management

Explains the meaning and significance of hazards and risks related to the environment, the product and the process. Further the ways of dealing with such risks are introduced for each domain.

3. Assessment and Audit

Explains the role of assessments and audits in the context of automotive quality engineering.

UNIT 4 MEASURE

1. Measurements

Investigates the importance of measurements for each of the three quality domains and compares approaches to process and product metrics.

2. Reliability

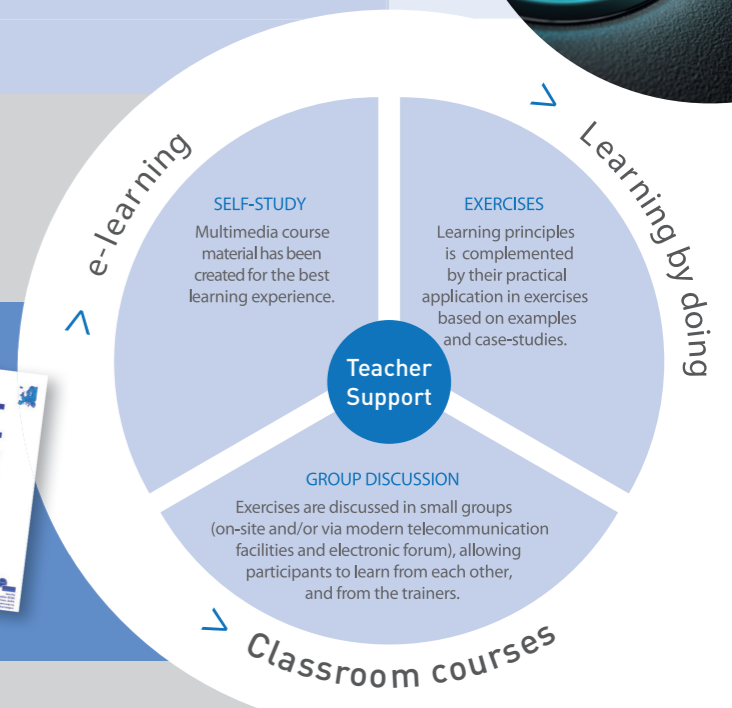
Analyses the meaning of reliability from three different points of view and introduces reliability-engineering methods.



AND HERE IS YOUR TROPHY!

Your tangible competitive advantage in the automotive industry!

The successful completion of this course and its respective exam entitles you to receive an internationally recognized European certificate, issued by the ECQA (European Certification and Qualification Association).





THE AUTOUNIVERSE CONSORTIUM MEMBERS

APPLY!
 For registration and more information please contact:
ECQA_president@ecqa.org
 or one of the AutoUniverse consortium members



VSB – Technical University of Ostrava
 Faculty of Electrical Engineering and Computer Science
 17. listopadu 15, 708 33 Ostrava-Poruba, Czech Republic
 Web page: www.fe.i.vsb.cz
 Contact: sekretariat.fe.i@vsb.cz

- Coordinator of AutoUniverse Project.
- Expertise in teaching, research and development of mechatronics system engineering, software and hardware.
- Expertise in automotive process improvement, research and development.
- Expertise in Machine Learning, Artificial Intelligence, Deep Learning, Supercomputing.
- Expertise in leading numerous international projects.



Graz University of Technology, Institute of Technical Informatics
 Inffeldgasse 16/1, 8010 Graz, Austria
 Web page: www.iti.tugraz.at
 Contact: office@iti.tugraz.at

- Expertise in research and education for Automotive Mobility and Manufacturing.
- Cooperation with numerous automotive companies. Member of Automotive Clusters.



FH Joanneum Gesellschaft mbH – Institute for Automotive Engineering
 Alte Poststraße 147, 8020 Graz, Austria
 Web page: www.fh-joanneum.at
 Contact: info@fh-joanneum.at

- Expertise on applied teaching on automotive engineering.
- Extensive network of international operating companies and universities to improve teaching quality.
- Certified testing bay facilities for national and international projects.



University of Maribor
 Faculty of Electrical Engineering and Computer Science
 Koroška cesta 46, SI-2000 Maribor, Slovenia
 Web page: <http://feri.um.si/en/>
 Contact: feri@um.si

- Expertise in research and development of mechatronic system engineering, hardware and software.
- Automotive and industrial processes, control and data handling.
- Expertise in research and development in power electronics and drives, mechatronics and robotics.
- Machine learning, big data analysis and optimization in automotive and medical field.



EMIRacle AISBL – European Manufacturing and Innovation Research Association
 46, av. Félix Viallet, 38031 Grenoble Cedex 1, France
 Web page: www.emiracle.eu
 Contact: info@emiracle.eu

- International network association of leading-edge academic institutions in design and manufacturing research.
- Associated industry partner network.



International Software Consulting Network
 Schiessstattgasse 4, 8010 Graz, Austria
 Florence House, 1 Florence Villas, Bray, Wicklow, Ireland
 Web page: www.iscn.com
 Contact: echristoff@iscn.com

- INTACS Founding Member (SPICE® Quality Assessor Network).
- VDA-QMC (www.vda-qmc.de) Training Provider.
- Moderator of German Automotive Industry Task Forces (www.socrates.de).
- EuroSPI network and conference organisation (www.eurospi.net).



ECQA – European Certification and Qualification Association
 Unified EU-Certification Scheme
 Web page: www.ecqa.org
 Contact: info@ecqa.org

- Guarantees quality standards for Training und Certification.
- More than 30 certified professions.
- Members from 24 EU countries.



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