

# CERTIFIED **ELECTRICAL SAFETY** ENGINEER (CESE) CERTIFICATION COURSE



This seminar provides the necessary legal foundation and understanding of electrical safety standards to evaluate, design and calculate the functional safety of machinery. Through this seminar Wieland provides industry recognized **SGS-TÜV Saar** certification. This certification covers the functional safety aspects of machinery with a focus on programmable electrical, electronic and electro-mechanical requirements.

#### **Benefits:**

- + SGS-TÜV certification recognized globally
- + Ability to design machines that comply with functional safety laws and regulations
- + Certified knowledge about the service and maintenance of sensors, logic and electronics related to the functional safety of machines





#### Contents

- Directives, law and standards
- Risk assessment according to EN ISO 12100
- Functional safety according to EN ISO 13849-1 and -2
- Sensors, logic and actuators related to safety (Safety Functions)
- Realization of safety performance level (PL)
- Verification and validation of safety systems

#### **Duration**

• CESE SGS-TÜV-Saar Certification – 3 days including the exam (see prerequisites noted below)

#### Who should attend

- Design Engineers
- Application Engineers
- System Integrators
- Service personnel
- Security specialists and machine safety experts

### Certification Requirements

Minimum two (2) years of experience in design, construction or service of functional safety systems.

## Number of participants

Minimum 5 persons Maximum 12 persons

For more information please contact your local sales representative.



