EuroSPI / ASA Certified Cybersecurity Engineer/Manager Basic Level

Goal

The project CYBERENG developed a skills set and training material of the EuroSPI/ASA Certified Cyber Security Manager and Engineer Basic Level.

https://www.project-cybereng.eu/

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The content has been developed and reviewed in partnership with SOQRATES (https://soqrates.eurospi.net/) which is a group of leading automotive and electronics companies and consultants that work together in areas of ASPICE, functional safety, cybersecurity, and new areas such as machine learning and AI in future.

SoQrates SOFTWARE OFFENSIVE BAYERN

The course offers a comprehensive introduction to norms, assessments, audits and methods and tools to prepare an organization for cybersecurity in Automotive.

Content

In this 5 days training course the attendees get introduced to UNECE 155, ISO 21434, ACSMS Automotive Cybersecurity Management System, and ASPICE for Cybersecurity. Based on examples from cybersecurity classified projects in Automotive the meaning of the cybersecurity related norms is explained.

Attendees will participate actively in case studies and elaborate exercises. The certification is based on 1. A multiple choice exam and 2. a mandatory set of exercises in the course which are performed in teams.

The skills sets covered are published by the EU project DRIVES, as a Blueprint for Automotive in Erasmus+ program,

https://www.project-drives.eu/en/driveslearningplatform

Scroll down and select the cybersecurity job roles.

The units and elements addressed in the course are outlined below.

Skill Card Item	Engineer	Manager
U.1 Cybersecurity Management		
U1.E1 Legal Aspects and Privacy		Practitioner
U1.E2 Organisational Structure		Practitioner
U1.E3 Cybersecurity Planning		Practitioner
U.2 Cybersecurity Operation and Maintenance		
U2.E1 Life Cycle Assessment		Expert
U2.E2 Cybersecurity processes and audits		Expert
U2.E3 Incident Response Management		Expert
U2.E4 Supply Chain Security		Expert
U.3 Engineering Aspects of Cybersecurity		
U3.E1 System Threat Analysis and Cybersecurity Goals	Expert	Awareness
U3.E2 System Design and Vulnerability Analysis	Expert	Awareness
U3.E3 Software Design and Vulnerability Analysis	Expert	Awareness
U3.E4 Software Detailed Design and Cybersecurity	Expert	Awareness
U3.E5 Cybersecurity hardware and firmware design	Expert	Awareness
U.4 Testing Aspects of Cybersecurity		
U4.E1 Cybersecurity Verification and Validation at SW level		Awareness
U4.E2 Cybersecurity Verification and Validation at HW level		Awareness
U4.E3 Cybersecurity Verification and Validation at the System level		Awareness

Schedule

Item		Type			
Unit	**Elem**		**Slides Number**	**Minutes**	**Day + Time**
U1					
	E1	theory	41	90	
	E2	theory	44	90	
	E3	practical	practical work	180	
			360		day 1 9-17
U2					
	E1	theory/examples	95	120	
	E2	practical - 2	79	210	
	E3	theory	20	45	
	E4	theory	21	45	
				420	day 2 8-17
U3					
	E1	excercise	61	240	120+120
	E2	excercise	40	180	60+120
	E3	excercise	60	240	120+120
	E4	excercise	55	210	120+90
	E5	theory	23	45	day 3, day 4
				915	8-17
U4					
	E1	theory	61	120	
	E2	theory	60	120	
	E3	theory	58	120	
	Discussion			60	
				420	day 5 8-17

Training Materials

The training materials include slides, student notes, cybersecurity plan template, cybersecurity interface agreement template, cybersecurity configuration item list template, templates for TARA,

Cybersecurity Item Design, Threat modelling, Cybersecurity requirements, cybersecurity test cases. etc. Additionally the training is supported by an online teaching environment set up on the online EuroSPI academy platform.

Target Group and Prerequisites

Cybersecurity manager, cybersecurity engineer, system architect, software architect, quality engineer, quality manager, project leaders, experienced engineers who are confronted with cybersecurity design. Cybersecurity decisions and design require a background in hardware/electronics and/or software engineering. Also a basic understanding of modelling techniques is helpful. Usually attendees require some minimum 5 years work experience in automotive software or hardware to easily manage the course exercises.

Cancellation

Cancellation is not possible. You may determine a substitute or attend the course at a later date.

Examination and Certification

Exams are organised by the EuroSPI / ASA certification organisation. In case of cybersecurity engineers the exam is based on a set of mandatory exercises to be performed in the course under the observation of the trainers.
The EuroSPI / ASA system allows to register with a job role, upload the exercises and have an assessor in the system assessing the student performance in the practical exercises. The EuroSPI / ASA system generates a unique certification ID and certificate for the attendee.
Every 2 years the certificate will later need to be renewed by attending a short update training of 1 day to learn about the new state of the art developments in functional safety.

The EuroSPI Academy

The training is held in the EuroSPI academy in cooperation with ISCN. The company ISCN is a certified training partner of VDA-QMC and Intacs® for Automotive SPICE (https://www.iscn.com/ressources/PDFs/ISO330xx-intacs-cert-iscn.pdf, https://www.intacs.info/training-center).
The EuroSPI Academy (https://academy.eurospi.net) was founded in 2021 in cooperation with the ASA (Automotive Skills Alliance) and offers an advanced online training environment with mate-

rials, templates and exercises. EuroSPI and ISCN are full partners of the ASA (https://automotive-skills-alliance.eu/#partners).
In cooperation with ASA WG 3.6 (IT in Automotive) and the EU project FLAMENCO this training platform will be further developed in the next years.

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