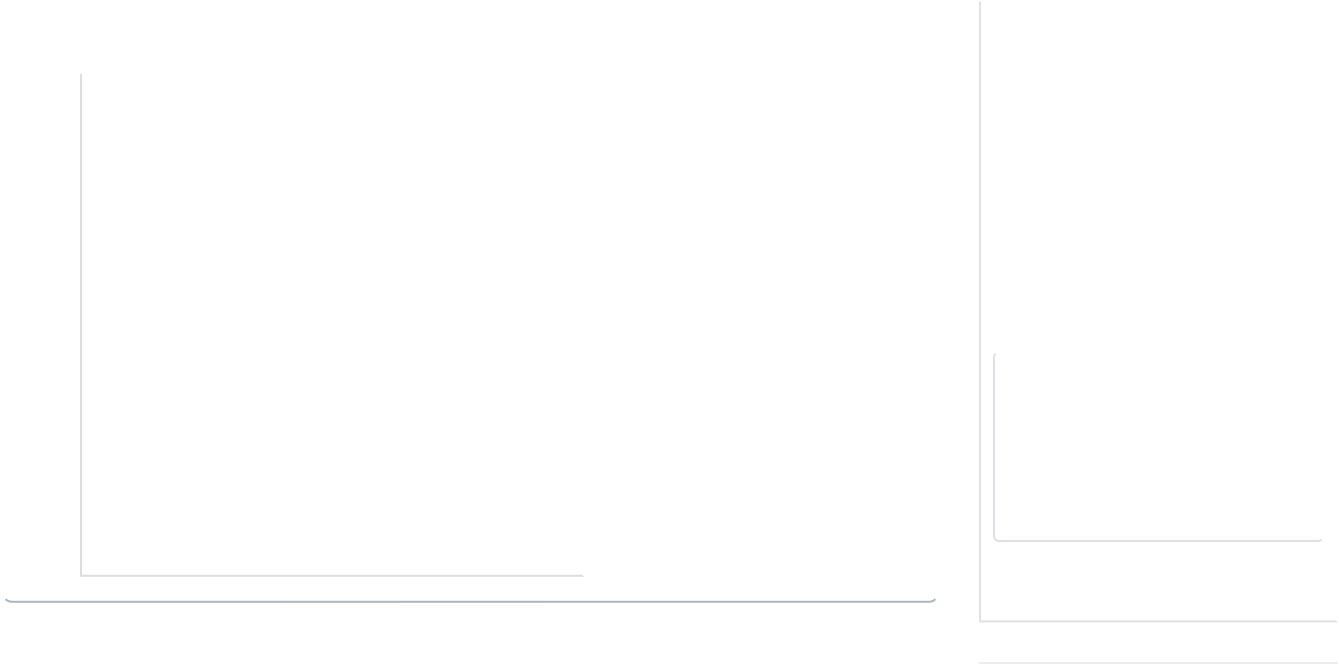# Developer@SICK

DRAFT Developer@SICK

Skill	Relevant SIA Training	Comment
**Developer@SICK	General** general profile for all developers		

Work safety - Laser protection - Electrical safety		Different based on the cluster / area the person in working at There is already one profile "Developer@SICK | Occupational Safety @Autonomous Perception" including: - Protection of artificial optical radiation (Schutz vor optischer Strahlung) - Electrical safety - Working with electrical equipment - Basic (Elektrische Sicherheit)
Agile Project Management	https://sia-online.sick.com/sui/itemDetail/57252 (E-Learning)	
EDB Basic	https://sia-online.sick.com/sui/trainingPlanDetail/53063 (Training plan with E-Learnings and one Virtual classroom)	Development Database (for drawings, electrical plans, …)
Jira	ℹ️ Basics E-Learning coming soon	
Change Management	Product Change management already included in EDB training plan (see above) Change management in general: https://sia-online.sick.com/sui/itemDetail/32001	
Requirements Management / Jama Basics	https://sia-online.sick.com/sui/itemDetail/56507 (2,5 hours, virtual classroom)	
Matlab Basic	e.g.: https://de.mathworks.com/learn/training/matlab-fundamentals.html	Level: optional for Matlab users
Use of AI tools		See blogpost: Use of generative AI tools **Organizational Directive 2023/04** [Training in regards to Artificial Intelligence (AI): https://sia-online.sick.com/sui/trainingPlanDetail/59112 ❓ (E-Learning, 2,5 hours)]

Testing general not specific for hardware (Software /Hardware /System)	https://sia-online.sick.com/sui/itemDetail/46716	
Product Compliance	https://mosaicplus.sick.com/x/8DteAg	
Intellectual Property	Einführung: https://sia-online.sick.com/sui/itemDetail/20288 Auffrischung: https://sia-online.sick.com/sui/itemDetail/79210	

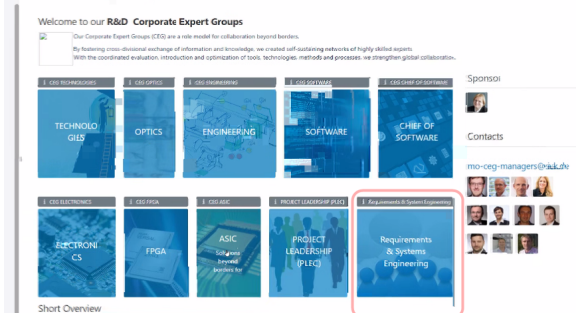| Developer@SICK | Electronics Additional profile for circuit developers		
Xpedition Designer – Basics	https://sia-online.sick.com/sui/itemDetail/60339	Level: mandatory for all hardware developers This training is designed to provide participants with an overview of Xpedition Designer's features, as well as Xpedition's EDB2 integration.
Xpedition Designer - Advanced	https://mosaicplus.sick.com/x/3ygHV	Level: optional for all hardware developers Use Xpedition Designer extensions and features for efficient and productive schematic design.
Xpedition Designer – Constraint Manager	https://sia-online.sick.com/sui/itemDetail/56567	Level: optional for advanced hardware developers In this training the participants will get an overview of the Xpedition Constraint Manager and its possible applications. In addition to the connections with the schematic and design application, useful practical applications for developers will be demonstrated using concrete design examples.
Xpedition - Hyperlynx	external training, please contact RD /HDS for details	Level: optional for advanced hardware developers
Safety Instruction EMC Laboratory	https://sia-online.sick.com/sui/itemDetail/24881	Level: mandatory for all developers wanting to perform EMC tests on their own Since this is a mandatory training, this training must be repeated every 12 months, otherwise the access authorization will expire. You will receive an automatic reminder from SIA after 11 months.
EMC for Developers	https://mosaicplus.sick.com/x/1bMPH	Level: strongly recommended for all hardware developers
EMC for PCB Design	https://mosaicplus.sick.com/x/1bMPH	Level: optional for all hardware developers …

LTSpice - Basic	https://mosaicplus.sick.com/x/fYs3Lg	Level: optional for all analog hardware developers Traning provided on request by Analog Devices, coordinated by CEG Electronics.
LTSpice - Advanced	https://mosaicplus.sick.com/x/fYs3Lg	Level: optional for advanced analog hardware developers Training provided on request by Analog Devices, coordinated by CEG Electronics.
Developer@SICK | FPGA/ASIC Additional profile for FPGA / ASIC designer		
Version Control (GIT)	https://sia-online.sick.com/sui/itemDetail/51767 (Git Intro & Overview, 1 day training)	Mandatory for FPGA/ASIC Developer, depending on skill level
Docker	https://sia-online.sick.com/sui/itemDetail/79143 (1 day training)	Recommended for FPGA/ASIC Developer, depending on skill level
HDL Basics (VHDL / Verilog)	e.g. https://plc2.com/training/professional-vhdl_pw/ https://plc2.com/training/compact-verilog_wo/	Mandatory for FPGA/ASIC Developer, depending on skill level
Python	e.g. https://www.doulos.com/training/scripting-languages-and-utilities/python/	Mandatory for FPGA/ASIC Developer, depending on skill level
FPGA/ASIC Verification	e.g. https://plc2.com/training/professional-vhdl-testbenches-and-verification-with-osvvm_pw/ https://trias-mikro.de/ausbildung/modelsim-questa-core-hdl-simulation/ https://trias-mikro.de/ausbildung/modelsim-questa-core-advanced-topics/	Mandatory for FPGA/ASIC Developer, depending on skill level
General Trainings on AMD FPGA, Languages, Tools & Methodologies	https://plc2.com/training/	Optional / up on request SICK has a general agreement with PLC2. If any training out of PLC2 program is desired please contact the ChipDesign group of Global R&D
Developer@SICK | Engineering Additional profile for mechanical engineering		

ISO GPS System: Level 1	https://sia-online.sick.com/sui/itemDetail/88001	Basics
ISO GPS System: Level 2	tbd	drawing reader
ISO GPS System: Level 3	tbd	drawing creator
EDB 2.0 Full Training	https://sia-online.sick.com/sui/trainingPlanDetail/53063?context=8	Produkt Änderungsmanagement, EDB 2.0 Create & Release, Stammdaten im SICK Konzern
glu-eing@SICK	https://sia-online.sick.com/sui/trainingPlanDetail/76054?context=1&catId=77762&asId=0	Lerninhalte (Gesamtdauer: 15 h) — Kleben@SICK – Modul 1: Grundlagen des Klebens & Vorbehandlung (3 h); Kleben@SICK – Modul 2: Tuning (Klebstofftyp, Parameter) (3 h); Kleben@SICK – Modul 3: Grundlagen der Klebstoffauswahl (3 h); Kleben@SICK – Modul 4: Konstruktion von Klebeverbindungen (3 h); Kleben@SICK – Modul 5: Klebstoffverarbeitung (3 h)
Siemens NX	tbd	Siemens NX training will be supportet by CD/RDCAX
FloEFD Grundlagenschulung	https://sia-online.sick.com/sui/itemDetail/69138?context=1&catId=56234&asId=0&tpId=0&tpeId=0	thermal simulation SW
Ansys basic training	tbd	structural mechanic simulation
Developer@SICK | Optics Additional profile for optics developers		
Optikdesignsoftware Zemax - Basic	Inhouse Training https://www.tuerck-ing.de/neuigkeiten/	Basics
Optikdesigns oftware Zemax - Advanced	Inhouse Training https://www.tuerck-ing.de/neuigkeiten/	Basics

Optikdesignsoftware Speos	Inhouse Schulung initiiert durch CEG Optics https://www.cadfem.net/de/de/shop/weiterbildung/seminare-elearning/elektromagnetik/simulation-optischer-systeme-mit-ansys-speos-18322.html	Empfohlen
Weiterbildungsseminar "Optische Systeme: Design und Simulation"	https://photonicsbw.de/veranstaltungen/veranstaltung/weiterbildungsseminar-optische-systeme-design-und-simulation-1586/	Optional
Further Training Seminar "Advanced Lens Design"	https://photonicsbw.de/veranstaltungen/veranstaltung/further-training-seminar-advanced-lens-design-1678/	Optional
Weiterbildungsseminar Beleuchtungsoptik: Entwicklung und Anwendung	https://photonicsbw.de/veranstaltungen/veranstaltung/weiterbildungsseminar-beleuchtungsoptik-entwicklung-und-anwendung-1454/	Optional
**Developer@SICK	Software** Additional profile for all software developers		
Software Design	x	mandatory Examples für externe Schulungen: https://www.oose.de/seminar/methodisches-softwaredesign-fuer-entwickler-mit-uml/
Software Architecture	https://sia-online.sick.com/sui/itemDetail/64403 (4 days training)	
Software Testing	x	Grundlagen, z.B. ISTQB Certified Tester Foundation Level
Version control (Git)	https://sia-online.sick.com/sui/itemDetail/51767 (Git Intro & Overview, 1 day training)	

Gitlab Basics Certification	x	Übersicht: https://levelup.gitlab.com/pages/certifications Empfehlenswert: https://levelup.gitlab.com/courses/gitlab-with-git-essentials-certification-exam Kostenlose Kurse (ohne Zertifikat): https://levelup.gitlab.com/catalog?labels=%5B%22Type%22%5D&values=%5B%22Course%22%5D
Cybersecurity Basics	https://sia-online.sick.com/sui/itemDetail/39408 (1 day training)	
Docker	https://sia-online.sick.com/sui/itemDetail/79143 (1 day training)	
Kubernetes	https://sia-online.sick.com/sui/itemDetail/62813 (4 hour training)	
**Developer@SICK	System Engineer**	Additional profile for all System Engineers (PEP 4.0)	
(System/Hardware) Testing	x	
System Engineering	https://sia-online.sick.com/sui/itemDetail/55451	
Requirements Engineering	Short intro: https://sia-online.sick.com/sui/itemDetail/55451 (3 hours) Full training: https://sia-online.sick.com/sui/itemDetail/54916 (3 days)	
Cybersecurity Basics	https://sia-online.sick.com/sui/itemDetail/39408 (1 day training)	
Jama Advanced	https://sia-online.sick.com/sui/itemDetail/81586	

Focus Corp.Expert Groups

Meeting notes 04.10.

Attendees: Kay Fürstenberg, Simon Brugger, Bahram Torabi, Carmen Gläser, Anna-Lena Reichenbach

- In das General Profil nur die Skills rein, die wirklich für 80-90% der Entwickler relevant sind, siehe oben grün markiert
    - Profil mit Additional Skills für die weiteren (optionalen) Skills
    - Arbeitssicherheits-Themen werden nicht in das übergreifende Profil mit aufgenommen, da sehr individuell
- Die Spezial-Profile (Hardware, Software, System) werden direkt mit den Corporate Expert Groups abgestimmt

R&D Corporate Expert Groups

- Hardware: Welcome to the Corporate Expert Group Electronics - Dirk Eyfrig
- Systeme: Corporate Expert Group Technologies - Romain Mueller, Christoph Menzel
- Software: Corporate Expert Group Software - Roland Krzikalla

- ☐ Carmen Glaeser Info an Corp.Exp.Group
    - ☐ Dirk Eyfrig 09.10.2023 Feedback zu Hardware Profil bis Ende Oktober
    - ☐ Romain Mueller Christoph Menzel WebEx Info am 18.10.2023
    - ☐ Yvonne Wermuth Verantwortliche Corp.Exp. Group Chief of Software kurze Abstimmung (ggf globales Profil um Produktionslinie abzustimmen) RPCs (Devops Experts - Developement and Operations Expert) RPCs- SoftwareEntwickler, CyberSec., AEs, ggf PMs (Singapore SafeLock)

Meeting notes 18.10.

Carmen Glaeser Christoph Menzel Romain Mueller Roland Krzikalla Anna-Lena Reichenbach

- kurze Intro zu SkM
- spezifische Themen nötig, aktuell noch kein Inhalt oder Schulungen nur früher vorhanden , zB. Grundlagenausbildung | Optic basic von Hr. Gimpel wer kann dies übernehmen?
- Würde es grundsätzlich innerhalb R&D Trainer geben ?
- Externe Schulungen nötig (Einkaufen oder extern schulen)
- Teilnehmer schauen über die vorhandenen Profile drüber und ergänzen

-

Developer@SICK

- Die Inhalte sollen übergreifend gelten für alle Entwickler der Business Cluster.
- Weitere Unterscheidungen für Software Developer, Hardware Developer,....

Meeting Notes CEG-Electronics, 2023-10-24

Fragen:

Werden Skills wie Ex-Schutz, Functional Safety, etc. separat gemanagt, oder müssen diese auch in die Entwicklerschulungen aufgenommen werden?

z.B. "Entwicklung sicherer Elektronik nach 61508" "Functional Safety Engineer - Hardware" (aus GBC07) etc. (nachfragen bei ex. RD/SMI)

Umgang mit Normenschulungen (elektrische Sicherheit, EMV, Optik, etc.)? auf Projekt/BU-Ebene

"Processes in electronics hardware development" Hängt noch an Prozessänderungen in Verbund mit EDB 2.0, danach Aufbau einer Schulung sinnvoll

EDB - Introduction of new components -> mit Marc Bühler klären

- [ ] Dirk Eyfrig 26.10.2023 Carmen Gläser ansprechen zu Konzept.

- [x] Filip Brinkmann hier die Seite für ihre Entwicklerübersicht, gerne den aktuellen Stand gerne bearbeiten wie besprochen dann können wir einen ersten Draft (Meckergrundlage) erstellen. In der Tabelle können auch neue Themen eingefügt werden.
- [x] Irina Hoefflin gerne deinen Input zur Rolle Developer@SICK hier in unsere "Meckergrundlage" eintragen (wenn nötig auch unterscheiden in Hardware/Software etc...) Basis ist die ApplicationEng. Rolle
- [x] Irina HoefflinFilip Brinkmann Input zu existierenden SIA Trainings (incl. link) in die Tabelle fügen, Neue Skills definieren(auch wenn es noch nichts dazu gibt) wie zum Beispiel Zugriff auf externe Plattformen oder Frameworks, Weitergabe der Seite/Info an andere für Input welche Skills benötigt werden.