CHANNEL PARTNER

ROQQY
Training & Consulting

exida®

EXIDA SERVICES AND TRAINING CERTIFICATES IN EGYPT

FROM FUNCTIONAL SAFETY ASSESSMENT TO CYBER SECURITY, EXIDA & ROQQY CAN SHOW YOU THE WAY.

Roqqy registered in EGPC
Registration number: 71 in March 2022

EGPC

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EXIDA

YOUR TRUSTED PARTNER

Companies around the world turn to Exida for help and guidance related to functional safety, alarm management, and cyber security. Our team of industry leading consultants have over 400 years of combined knowledge, with extensive experience in Chemical, Oil & Gas, Subsea, Metals and Mining, Pharmaceutical, Pulp & Paper, Power Utilities and Machinery applications. This unique combination of technical depth and hands on experience enables Exida to provide practical solutions to address your most difficult challenges.

Exida is the choice of leading companies when it comes to implementing and achieving compliance to the global standards relating to the IEC 61508 and IEC 61511 standards for safety; IEC 62443 for industrial control system cyber security; ISA18.2- for alarm management; and IEC 62061 for safety of machinery.

TOPICS	PAGE

ROQQY AND EXIDA IN BRIEF

تعريف بـكلٍ من رقى واكسيدا

Roqqy Training and Consulting Company is the premier provider of technical, engineering and professional skills training in the Arabian region for individuals, businesses, non-profit organizations and government agencies. Roqqy also provides General Trading, Maintenance, Public supplies, Commercial Agencies and consulting services in engineering and non-engineering fields such as:

1. Functional Safety.
2. Process Safety.
3. HAZOP Studies.
4. Instrumentation.
5. Process Control.
6. Industrial Data Communications & Networking.
7. Information Technology.
8. Electronic Engineering.
9. Electrical Engineering.
10. Mechanical Engineering.
11. Finance and Project Management.

Roqqy is the representative of both exida and IDC companies in Egypt and provides all their training and consultancy activities as follows:

Exida Training and Consultancy fields:
Alarm Management, Cybersecurity and Functional Safety.

IDC Technologies was founded in 1991 and specialises in engineering training courses in the field of Instrumentation, Process Control, Industrial Data Communications & Networking, Information Technology, Electronic Engineering, Electrical Engineering, Mechanical Engineering, Finance and Project Management.

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قامت شركة رقى للتدريب والإستشارات بالتعاون مع شركة اكسيدا العالمية بتنفيذ عدد من الكورسات مثل كورس السلامة الوظيفية للممارسين (FSP) وكورس السلامة الوظيفية للمديرين (FSM) , وعدد من الشهادات المعتمدة مثل شهادة السلامة الوظيفية للمحترفين (CFSP) وشهادة السلامة الوظيفية للخبراء (CFSE) لعدد من شركات الـ Oil & Gas سياتى ذكرهم لاحقاً.

exida Academy

Founded in 1999 by several of the world's top reliability and safety experts, Exida is the world's leading product certification and knowledge company specializing in automation system safety, alarm management, cyber security, and availability. With over 20 locations worldwide, Exida's global presence ensures there is always someone close by ready to help your team be successful.

EXIDA AND ROQQY REFERENCE INSIDE EGYPT

Twenty Companies Got Training Courses in Egypt As Well As Exida's Consulting Services.

- حصلت عشرون شركة على دورات تدريبية في مصر بالإضافة إلى خدمات الاستشارات من Exida.
- كما يمكنكم متابعة كل الندوات المجانية من خلال هذا الرابط بالاسفل للتعرف على اكسيدا و خدماتها.

Exida free live webinars: www.exida.com/Webinars

COMPANIES ENROLLED IN EXIDA & ROQQY TRAINING AND CONSULTING SERVICES

ROQQY & EXIDA TRAINING SCHEDULE IN EGYPT

الجدول الزمنى للتدريب بمصر

	COURSE	CODE	NUMBER OF DAYS	START DATE	COURSE FEES $
MAY 2022	IEC 61511: Functional Safety Analysis, Design, and Operation	FSE 100	4	22 - 25	1850
	CFSE / CFSP Exam	—	1	Book It Online	—
	PHA Leaders (Hazop Chairman)	FSE 222+	5	29 - 2	2350
	Process Hazards Analysis (PHA) Using HAZOP	FSE 222	2	29 - 30	1150
JULY 2022	Industrial Automation Control Systems (IACS) IEC 62443 Cybersecurity Lifecycle	CS 102	4	2 - 5	1150
	Fundamentals of Alarm Management for the Practitioner: How to Apply ISA18.2- / IEC 62682	ALM 102	2	6 - 7	1150
	CACE / CACS Exam	—	1	Book It Online	—
SEPTEMBER 2022	IEC 61511: Functional Safety Analysis, Design, and Operation	FSE 100	4	4 - 7	1850
	CFSE / CFSP Exam	—	1	Book It Online	—
	PHA Leaders (Hazop Chairman)	FSE 222+	5	11 - 15	2350
	Process Hazards Analysis (PHA) Using HAZOP	FSE 222	2	11 - 12	1150

	COURSE	CODE	NUMBER OF DAYS	START DATE	COURSE FEES $
NOVEMBER 2022	Industrial Automation Control Systems (IACS) IEC 62443 Cybersecurity Lifecycle	CS 102	4	5 - 8	1150
	Fundamentals of Alarm Management for the Practitioner: How to Apply ISA18.2- / IEC 62682	ALM 102	2	6 - 7	1150
	CACE / CACS Exam	—	1	Book It Online	—
JANUARY 2023	IEC 61511: Functional Safety Analysis, Design, and Operation	FSE 100	4	8 - 11	1850
	CFSE / CFSP Exam	—	1	Book It Online	—
	PHA Leaders (Hazop Chairman)	FSE 222+	5	15 - 19	2350
	Process Hazards Analysis (PHA) Using HAZOP	FSE 222	2	15 - 16	1150
FEBRUARY 2023	Industrial Automation Control Systems (IACS) IEC 62443 Cybersecurity Lifecycle	CS 102	4	4 - 7	1150
	Fundamentals of Alarm Management for the Practitioner: How to Apply ISA18.2- / IEC 62682	ALM 102	2	8 - 9	1150
	CACE / CACS Exam	—	1	Book It Online	—
MAY 2023	IEC 61511: Functional Safety Analysis, Design, and Operation	FSE 100	4	7 - 10	1850
	CFSE / CFSP Exam	—	1	Book It Online	—
	PHA Leaders (Hazop Chairman)	FSE 222+	5	14 - 18	2350
	Process Hazards Analysis (PHA) Using HAZOP	FSE 222	2	14 - 15	1150

JUNE 2023

COURSE	CODE	NUMBER OF DAYS	START DATE	COURSE FEES $
Industrial Automation Control Systems (IACS) IEC 62443 Cybersecurity Lifecycle	CS 102	4	3 - 6	1150
Fundamentals of Alarm Management for the Practitioner: How to Apply ISA18.2- / IEC 62682	ALM 102	2	7 - 8	1150
CACE / CACS Exam	—	1	Book It Online	—

ROQQY
Training & Consulting

exida

GREG CHANTLER

BSC. ELEC ENG, PRENG, CFSE, FS EXPERT

FIELDS OF COMPETENCE

- Process Safety Management.
- Quantitative Risk Analysis.
- Process Hazards Analysis.
- SIL Determination.
- SIL Verification.
- Fault Tree and Event Tree Analysis.
- SLC Process and Procedure Definition.
- Safety Instrumented System Design.
- Project Management and Execution.
- Failure Modes Effects and Diagnostics Analysis.
- Reliability Engineering.
- Electrical and Electronics Engineering.
- Control System Vulnerability Assessments.
- Alarm Management.

EXPERIENCE SUMMARY

Mr. Greg Chantler has over 25 years of professional experience in consulting and engineering design of safety related systems within the process industry. Formerly a lead engineer of a safety system vendor, he was responsible for the application of the FSC Safety Shutdown systems in a suite of typical mainstream industries (Refining, Pulp and Paper etc). Subsequently, he worked for a company that provides advanced control solutions to the industry, including being actively involved in the design of the Pebble Bed Modular Reactor. Subsequently working for a consulting company, he provided consulting services based on the IEC functional safety standards mainly within the Southern African and Middle East region, and has established a big network within the companies operating in this area, becoming an expert in all aspects of the functional safety standards, including HAZOP and SIL Selection facilitation, SRS development, SIL Verification calculations and development of operations and maintenance procedures, and has conducted several Control System Vulnerability Assessments on petro chemical facilities. He has extensive knowledge of the ISA18.2, IEC 62682 Alarm Management standards, as well as presenting numerous.

CREDENTIALS

- B.Sc. Electrical Engineering, University of the Witwatersrand, 1987 Professional Engineer (Reg. No. 1994, (940277 Certified Functional Safety Expert, (CFSE 007 091103).
- TÜV Functional Safety Expert (TÜV Rheinland, # 15/245, SIS, PH&RA).
- Conducted numerous functional safety project for the Australian Mining and Oil and Gas industries.
- Conducted Control System Vulnerability Assessments on several petro chemical facilities.
- Conducted numerous training certificates on Alarm Management for companies in the region and possess a working knowledge of the Alarm Management standards ISA 18.2 and IEC 62682, as well as the EEMUA 191 Guideline and BP Group Practice GP 47-30.

PROFESSIONAL PROFILE KEY ASSIGNMENTS AND PROJECTS

- Responsible for the execution and final deliverables for many SIL Selection, SIF conceptual design, SIL Verification studies and startup and commissioning aspects for the Oil & Gas, hydrocarbon processing, chemical, nuclear and mineral beneficiation processing industries within the sub-Saharan African and Australasia regions.
- Design and implantation of aspects of the Pebble Bed Modular Reactor, including the Helium Test Facility.
- Application of a SIL 3 certified Safety PLC in a suite of typical mainstream industries (Refining, Pulp and Paper etc) where they are used to safeguard potentially hazardous processes.
- Test Lead for the V& V of the new Safety Management PKS system in Holland which was developed according to IEC61508.
- Responsible for the Safety Lifecycle aspects of the New Multi-Product pipeline between Durban and Johannesburg.
- Presenting the functional safety engineering certificate leading to CFSE/P or TÜV FS Engineer certifications training certificates on the subject. He has acted as chairman for a AMHAZ workshop in Abu Dhabi and South Korea. Presently residing in Abu Dhabi and working for exida Middle East, he continues to execute projects related to functional safety, including SIL Assessments, cyber-security risk assessments and SIL Verification projects.

EXIDA CERTIFICATES

IEC 61511: Functional Safety Analysis, Design, and Operation

Process Hazards Analysis (PHA) Using HAZOP

Process Hazards Analysis (PHA) Leaders (Hazop Chairman)

Earn the Integrated Lifecycle Professional Plaque when you successfully complete the AMP (ALM 102), CSP (CS 102) and FSP (FSE 100) Process exams.

Industrial Automation Control Systems (IACS) IEC 62443 Cybersecurity Lifecycle

Fundamentals of Alarm Management for the Practitioner: How to Apply ISA18.2- / IEC 62682

IEC 61511: FUNCTIONAL SAFETY ANALYSIS, DESIGN, AND OPERATION

COURSE DESCRIPTION

- This course provides an overview of process industry safety engineering from the point of view of the Risk Analyst, Process Safety Coordinator, and Control Systems Design Engineer.It delivers a complete overview of the functional safety lifecycle. The course reviews Process Hazard Analysis (PHA), Consequence Analysis, Layer of Protection Analysis (LOPA), Safety Integrity Level (SIL) Target Selection, Safety Requirements Specification (SRS) generation, failure rates, device and system reliability, SIF verification, SIF detailed design and Operations requirements.
- The FSE 100 course forms a broad review in preparation for the Certified Functional Safety Expert (CFSE) and Certified Functional Safety Professional (CFSP) process industry application engineering exams.

FSP

FSE 101

SKILLS YOU WILL LEARN

- Develop a thorough understanding of the IEC61511 Safety Life Cycle requirements.
- Establishing tolerable risk and the ALARP concept.
- Hazard and risk analysis techniques.
- Layer Of Protection Analysis (LOPA) techniques.
- SIL determination techniques.

COURSE TOPICS

- Introduction to Safety Instrumented Systems.
- Principles of Risk Management.
- The Safety Lifecycle.
- Process Hazard Analysis.
- Consequence Analysis.
- Likelihood Analysis.
- Layer of Protection Analysis.
- Tolerable Risk.
- SIL Target Selection.
- Safety Requirements Specification.

FSE 102

SKILLS YOU WILL LEARN

- Review the fundamental concepts of reliability engineering.
- Safety Instrumented System failure modes.
- Develop a thorough understanding of the IEC61511 Safety Life Cycle requirements.
- SIS design from requirements analysis and documentation.
- Safety Instrumented System analysis techniques.

COURSE TOPICS

- Safety Instrumented Systems Failure.
- From Failure Rate to SIL.
- Single Devices to System.
- Redundant Architectures.
- Requirements to SIF.
- SIF Design and Verification in the Safety Lifecycle.
- SIF Detail Design.
- Operations.

TRAINING MATERIALS PROVIDED

Handout (bound manual)

- FSE 101 Slides.
- Exercises.
- Exercise Answers.
- Terms and Abbreviations.

TRAINING MATERIALS PROVIDED

Handout (bound manual)

- FSE 102 Slides.
- Exercises.
- Exercise Answers.
- Terms and Abbreviations.

WHO SHOULD ATTEND

- Potential CFSE application exam candidates.
- Control Engineers and their Management.
- HSE engineering and management.
- Loss Prevention Professionals .
- Plant Risk Analysts.

COURSE CERTIFICATE

All attendees will receive a Course Completion certificate at the conclusion of the course. On completion of the course, the delegates will write a short exam.
If successful, the delegates will receive an exida Academy Functional Safety Practitioner certificate.

PROCESS HAZARDS ANALYSIS (PHA) USING HAZOP

COURSE DESCRIPTION

- This two day course provides sound and detailed instruction into how to carry out an effective HAZOP study and where PHA methods fit into the overall process safety management work process and the IEC 61511 safety lifecycle.
- As part of performing a HAZOP, the importance of process safety information, risk criteria, and documentation will be covered.
- The course will acknowledge many hazard identification techniques, but will focus on HAZOP, providing students the opportunity to work through hands on exercises in detail to gain the skills needed to facilitate a HAZOP study.
- These exercises will demonstrate how any hazard identification technique provides a foundation for other more advanced activities designed to estimate risk.
- Coverage of PHA documentation allows the student to see how the technical foundation they help develop is used throughout the life of the facility.

SKILLS YOU WILL LEARN

- Ability to explain the overall PHA work process and how it fits into the overall PSM work process.
- Ability to explain importance of process safety information.
- How to document process safety information.
- Ability to explain risk criteria with respect to use within a HAZOP & the difference with LOPA.
- Ability to plan, manage, facilitate and scribe for a HAZOP.
- Guidance for transitioning from HAZID (qualitative) to HAZAN (quantitative).
- Understand how cyber risk can impact traditional HAZOPs.
- How to document a PHA.

COURSE TOPICS

- Applicable Terminology.
- PHA preparation.
- HAZOP Methodology.
- Risk Criteria.
- HAZOP Guidelines.
- Team Roles.
- Effective Teamwork.
- Documentation.
- Hands on Workshop Problems.

WHO SHOULD ATTEND ?

- Process Safety Engineers.
- Operations Personnel.
- Process Control Engineers.
- Safety Instrumented Systems Engineers.
- Process Engineers.
- Reliability Engineers.
- Project Engineers.
- Pressure Vessel, Piping, Mechanical Engineers.
- Machinery Engineers.
- Electrical Engineers.

THE FSP EXAM (PROCESS HAZARD ANALYSIS USING HAZOP SPECIALTY)

The exida Functional Safety Practitioner (FSP) program is a certificate program that provides confirmation that an attendee shows competency by retaining the knowledge presented in this course. The FSP program also provides an analysis of where the candidate's strengths and weaknesses lie, helping participants judge their competency level if interested in obtaining a certification like the CFSE or CFSP. The exam will be given at the conclusion of the training course, and is optional. Therefore if you wish not to participate, please let your instructor know. The candidate must achieve a minimum of %80 on the exam in order to receive their FSP certificate.

PROCESS HAZARDS ANALYSIS (PHA) LEADERS (HAZOP CHAIRMAN)

Exida will lead a five day PHA workshop for the purposes of coaching PHA leaders in the techniques required to successfully facilitate PHA studies.

The first three-days will consist of Process Hazards Analysis training certificate (FSE222) at the client's offices in Egypt. This training certificate provides a comprehensive explanation of the concepts and various methodologies relating to Process Hazards Analysis, (PHA) The certificate will cover various PHA methodologies suitable for steady-state, (continuous) and non-steady-state processes.

Over and above the technical skills required for PHA, a number of management skills are necessary when guiding a team of discipline experts through the methodology and emerging with the most accurate results in terms of hazard risk and operability issues.

Workshop attendees will be made aware of and provided with techniques for the following challenges:

- Time management.
- Managing vested interests.
- Managing team dynamics, (dominant members; getting team consensus; maintaining motivation; fatigue etc).
- Ensuring high quality of PHA information captures and report documentation.

As input information for the PHA workshop it is assumed that the client will provide example hazard scenarios together with the relevant P&ID's, process description and pertinent process safety information.

INDUSTRIAL AUTOMATION CONTROL SYSTEMS (IACS) IEC 62443 CYBERSECURITY LIFECYCLE

COURSE DESCRIPTION

- A recent global security survey showed that %90 of automation systems in critical infrastructure applications experienced a damaging cyberattack within the last two years. Cybersecurity has quickly become a major priority for automation systems of all types and sizes, especially for Safety Instrumented Systems.
- This course provides an overview of the automation cybersecurity lifecycle. The course reviews cybersecurity risk assessment, developing zones and conduits, cybersecurity requirement specification (CSRS), designing secure systems, Security Level Determination and Verification, detailed design considerations, and operations requirements. Detailed workshop problems are used to provide students with practical cybersecurity experience.

SKILLS YOU WILL LEARN

- How a lifecycle approach improves cybersecurity readiness.
- How to conduct cybersecurity risk assessments to match risk profile.
- How to effectively segment automation systems.
- Actionable steps to “harden” your automation system today.
- How to perform Security Level Verification.
- How to implement a cybersecurity management program for continuously improving security.
- How to monitor cybersecurity during the operations and maintenance phase.
- How to align cybersecurity with existing automation lifecycles.

- This course forms a broad review in preparation for the Certified Automation Cybersecurity Expert (CACE) and Certified Automation Cybersecurity Specialist (CACS) automation application exam.
- This course contains extensive workshop case studies to further cement the learning in a practical nature.

COURSE TOPICS

CS 101 (Days 2 & 1)

- ICAS Cybersecurity Introduction.
- Industry Standards.
- IEC 62443 Certification.
- Principles of Risk Management.
- Types of Attacks.
- Types of Threats.
- Integrated Lifecycle.
- CSMS.
- Cyber Hygiene.
- High-Level Risk Assessment.
- CVA & DLRA.

CS 102 (Days 4 & 3)

- Secure System Design
- SL Verification
- Implementation
- Maintain Security
- Incident Response
- Backup and Recovery
- Management of Change
- What’s Next

THE CSP EXAM (AUTOMATION SPECIALTY)

- The exida Cybersecurity Practitioner (CSP) program is a certificate program that provides confirmation that an attendee shows competency by retaining the knowledge presented in this course. The CSP program also provides an analysis of where the candidate’s strengths and weaknesses lie, helping participants judge their competency level if interested in obtaining a certification like the CACE or CACS.
- The exam will be given at the conclusion of the training course, and is optional. Therefore if you wish not to participate, please let your instructor know. The candidate must achieve a minimum of %80 on the exam in order to receive their CSP certificate.

WHO SHOULD ATTEND

- Control systems engineers and managers.
- IT engineers and managers industrial facilities.
- Plant managers.
- Plant Safety and Risk Management.
- Maintenance technicians & engineers.

TRAINING MATERIALS PROVIDED

- Course Notes

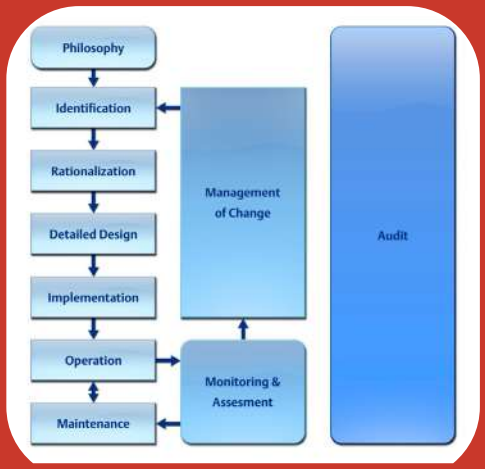
COURSE CERTIFICATE

All attendees will receive a Course Completion certificate at the conclusion of the course. On completion of the course, the delegates will write a short exam.
If successful, the delegates will receive an exida Academy Cyber Security Practitioner certificate.

FUNDAMENTALS OF ALARM MANAGEMENT FOR THE PRACTITIONER: HOW TO APPLY ISA18.2- / IEC 62682

COURSE DESCRIPTION

- Effective alarm management is a pre-requisite for process plants that want to be successful in today's global marketplace. It impacts the bottom line by minimizing unplanned downtime, reducing insurance premiums, preventing process safety incidents, and enabling operational excellence. To deliver these benefits to the bottom line requires personnel who have been trained on industry best practices and how to apply the ISA18.2- / IEC 62682 alarm management standards. This course is designed to help personnel develop the skills and knowledge to drive effective alarm management practices within an organization.



- The course is structured around the alarm management lifecycle; reviewing the key requirements / activities of each stage along with industry best practices. It focuses in-depth on the engineering, design, implementation, and operational and improvement tasks that would be led by the practitioner; rationalization, basic alarm design, HMI design, dynamic alarming, designed alarm suppression, alarm shelving, implementation of alarm response procedures, evaluation of alarm system performance, and use of alarms as process safety safeguards and layers of protection. Human factors principles are introduced to show how they impact effective operator performance. Exercises are designed to demonstrate key principles applied in real situations. "Lessons learned" are shared from numerous successful alarm management projects around the world and from being an "insider" during the development of the standards.
- Examples are shown from different control systems including: Emerson DeltaV, Siemens PCS 7, Rockwell PlantPAx, Honeywell Experion, ABB System 800xA, and Yokogawa Centum / CAMS.

SKILLS YOU WILL LEARN

- How to create and structure an effective alarm philosophy document.
- Establishing objective criteria for determining what is a valid alarm vs. an alert, prompt, or message.
- How to rationalize alarms to ensure every alarm is meaningful to the operator and results are documented in a Master Alarm Database (cause, consequence, corrective action, time to respond).
- Effective alarm prioritization based on potential consequences of inaction and allowable time to respond.

- Establishing alarm setpoints based on design constraints, operating boundaries, process dynamics, and safe operating limits.
- Effective use of alarm classification for administration, reporting, testing, performance evaluation, and MOC.
- Similarities and differences between alarm rationalization and process hazard analysis (PHA); when to leverage PHA results during rationalization.
- How to treat system / instrument diagnostic alarms and alerts.
- Effective design and implementation of safety (related) alarms.
- How to apply alarm deadband and on / off delays to prevent nuisance alarms.
- Applying human factors to improve the operator's response through improved HMI design and use of alarm response procedures.
- Best practices for implementing conditional alarming, state-based alarming, and alarm flood suppression.
- Keys to effectively implement / allow operators to manually suppress alarms (alarm shelving).
- How to evaluate alarm system performance vs KPIs.
- How to identify and resolve common alarm management issues (e.g., nuisance alarms and alarm floods).
- Implementing an effective and useful management of change process.
- Alarm system maintenance.

TRAINING MATERIALS PROVIDED

- Course Notes

WHO SHOULD ATTEND

- Process engineers.
- Operators and their supervisors.
- Control system engineers.
- Safety, risk management, and environmental personnel.
- Maintenance technicians & engineers.

COURSE CERTIFICATE

All attendees will receive a Course Completion certificate at the conclusion of the course. On completion of the course, the delegates will write a short exam. If successful, the delegates will receive an exida Academy Alarm Management Practitioner certificate.

EXIDA CERTIFICATIONS

CFSP & CFSE

Introduced in 2000, CFSE was the first personnel functional safety certification program in the industry, and remains the longest running program to this day .Since then, other certification programs have been introduced, but CFSE remains the “gold standard” of all programs.

It has remained so because of its unmatched consistency and integrity as well as its unwavering focus on developing the knowledge and skills to be successful. The focus of the program has always been on developing usable knowledge and skills, rather than just passing a test.

It is the only program that is standardized globally, which means that the same certification criteria and exams are used in every country. Another element unique to CFSE is that training and grading of exams are done completely independently, which ensures that there is no conflict of interest in the certification / audit process as required per IEC 17024.

CFSE is governed by a board of directors from several independent companies in order to make sure the program evolves to meet the needs of its members.

CACE & CACS

IEC 62443 PERSONNEL CERTIFICATION

The Certified Automation Cyber security Expert (CACE) and Certified Automation Cyber security Specialist (CACS) program was developed in response to the growing demand to secure industrial automation control systems (IACS) and SCADA systems by providing a means for people to develop and demonstrate competence in understanding and applying security standards and best practices.

WHY BECOME AN IEC 62443 CACE OR CACS?

Participation in the CACE / CACS certification program can provide many benefits to you and your company. CACE / CACS certification allows individuals to demonstrate their competency in a specialized field that is growing and in high demand. Attaining certification will make you a more valuable employee and can open the door to career advancement. CACE / CACS certified staff helps companies demonstrate their organization’s expertise and
their commitment to providing best-in-class services to their customers.

WHY IS CACE / CACS CERTIFICATION UNIQUE?

Control system cyber security is an emerging, highly specialized field of engineering. Its goal is to assure a systematic, lifecycle approach is used to assess, design, implement, and monitor methods to protect critical infrastructure from attack. The field of industrial automation and control system cyber security combines disciplines of basic control system engineering, risk assessment; safety system engineering, software (e.g. Microsoft) platforms, industrial networking, and IT network security. While several programs exist for training and certification of each of these individual disciplines, there is no program today that focuses on the intersection of these disciplines as it applies to control system cyber security. The CACE / CACS focuses on the practical application of security practices and principles, not on knowledge of theory.

EXIDA CONSULTING SERVICES

خدمات إستشارية في مجال السلامة الوظيفية بمصر

Exida Consulting is the specialist safety, risk and engineering consultancy of exida. We have a broad range of experience gained in the power generation, mining, oil & gas, process, transport and related industries. The services of exida Consulting encompass process, functional and machinery safety and include all aspects of functional safety support (preparation of functional safety management systems & plans, HAZOP, hazard & risk analysis, SIL Assessment, SRS preparation, SIL Verification, Functional Safety Assessments & auditing), cyber security, and assisting companies achieve regulatory compliance, including safety case preparation. We also provide in-house and public training courses on all aspects of IEC 61508, IEC 61511 including the Functional Safety Engineering Course, leading to the CFSE/P certification.

Exida can guide you through the complex issues of functional safety, cybersecurity, and alarm management. exida provides qualified customers with certification to a number of functional safety and security standards, such as IEC 61508, IEC 61511, ISO 26262, ISO 13849, IEC 62061, and the ISA Security Compliance Institute (ISCI). exida has certified more process safety devices to IEC 61508 than any other agency worldwide.

As a result of its involvement in key safety committees, exida is at the forefront of the industry in developing training, tools, and knowledge resources to help you better understand and measurably improve the safety, security, and reliability of your processes and automation systems.
Our highly specialised consultants & engineers have a practical focus and come from a wide range of industries including automotive, automation & communications, process, mining, machinery safety, defense, research, nuclear, oil & gas and aerospace.

Time spent analysing the safety-related systems and safety loops should be seen as an investment as it ensures that the most cost-effective solutions are designed into the project from the outset. Often low CAPEX options offered by contractors incur a significant penalty in ongoing maintenance and testing. exida Consulting has the experience to identify such problems and ensure your lifecycle costs are optimised. We can assist you with aligning your processes with the relevant functional safety standards and help document safety lifecycle activities, allowing you to demonstrate due diligence and discharge your duties under the legislation. We can perform functional safety audits and assessments both during projects and periodically to ensure that you maintain the integrity of your safety systems and achieve an asset that is functionally safe.

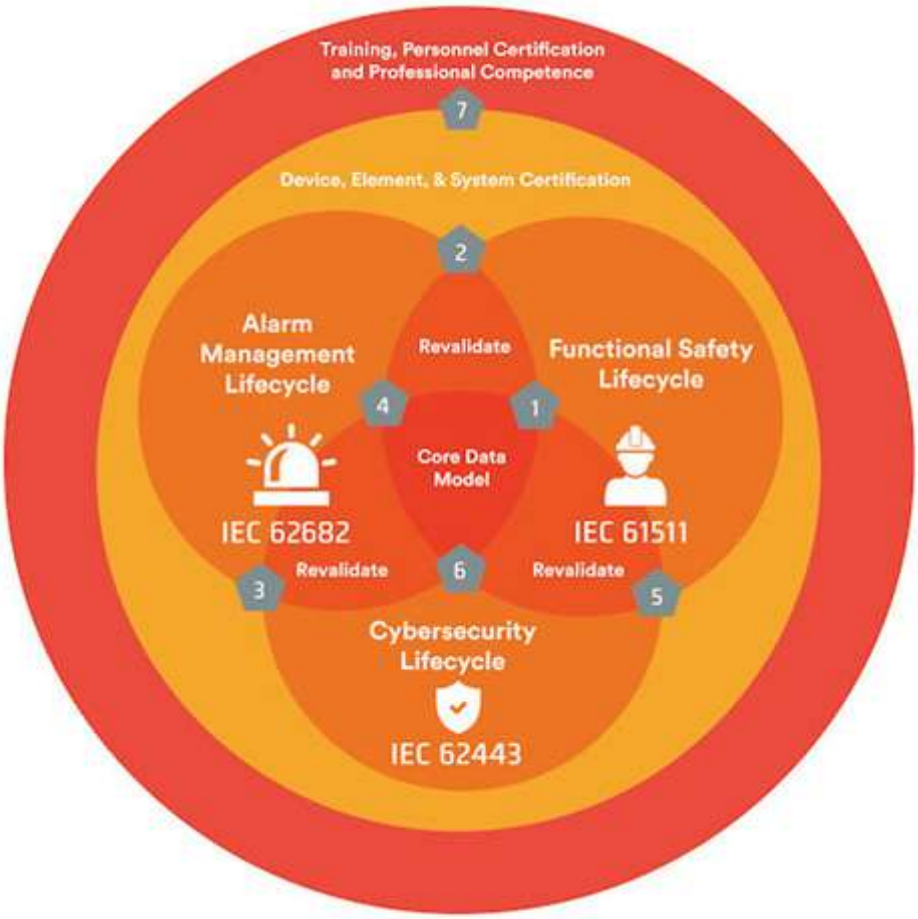
PRACTICE AREAS

Ensuring that operations are safe, equipment is available, and operational goals are met is exida's mission. We work closely with our customers to achieve high-impact, cost-effective solutions for their Alarm Management, Cybersecurity, and Functional Safety needs. As experts in safety, availability, and security, we bring a valuable perspective to the problems they are facing.

EXPERTISE AND INSIGHT

Clients rely on exida to provide deep technical expertise, which assures correct solutions to even the most challenging problem. As important to getting the answer is having the insight to implement it in the optimal way — one that is affordable and sustainable. By combining expertise and insight, exida will help you chart the right course and stay on track to meet your goals.

Our unique perspective enables us to offer the groundbreaking 3D Gap Analysis: a comprehensive review of functional safety, alarm management, and cybersecurity lifecycle implementation within your organization or plant. We also provide a complete offering of lifecycle services, IEC 61508 and IEC 62443 certifications, as well as the market-leading exSILentia software suite.



Functional Safety

Helping the process industry cost-effectively implement the requirements for safety and security standards.

Exida offers these areas of focus when it comes to the functional safety discipline:

- 3D Gap Analysis.
- Functional Safety Assessment.
- Process Hazard Analysis (PHA).
- PHA Revalidation.
- Layer of Protection Analysis (LOPA).
- Consequence Analysis.
- SIL Selection.
- Safety Requirements Specification (SRS).
- CHAZOP, HAZOP and HAZID facilitation.
- SIL Determination.
- SIL Verification.
- Proof Test Generation.
- HIPPS Studies.
- Final Element Validation or Assessment.
- Functional Safety Auditing.
- Independent safety assessment and peer review
- Functional Safety Management Systems and Plans Development of Safety Requirement Specifications.
- Conceptual Design.
- Developing safe system architectures Fault Tree Analysis (including technical, environmental and human error) modelling.
- System Reliability Studies, FMEA, FMECA, FMEDA.
- Process safety support such as risk assessments, consequence analysis, fire and explosion analysis, QRAs, bow tie analysis and safety case preparation.
- Developing and reviewing safety management systems.
- Developing and reviewing quality management systems.

FUNCTIONAL SAFETY

- Supplier assessment (for the complete supply chain).
- Developing maintenance and operation concepts.
- Developing installation and commissioning concepts.
- Verification and Validation strategies for hardware, software, safety and system lifecycles.
- Verification and Validation technique implementation including safety critical software assessment.
- Change and configuration management over the full project lifecycle.
- Validation planning and execution.
- Development of operation & maintenance plans.
- Development and assessment of proof test procedures.
- Developing requirements for data collection to support functional safety during the operations phase.
- Assessment of the safety of machinery, including compliance to IEC62061 and ISO13849.

HAZOP Facilitation

HAZOP stands for Hazard and Operability study. HAZOP is a process hazards analysis procedure originally developed by ICI in the 1970s. The selection and design of appropriate safety instrumented systems hinges on an analysis of the risk due to the hazards at your plant. The full power of the HAZOP technique, now universally accepted as a vital tool for process risk analysis, can only be realized with skillful leaders and trained participants.

Exida's staff are seasoned and highly regarded HAZOP facilitators, guiding you through the preparation, execution, and follow-up to make HAZOP successful and efficient. exida will guide you through the most common HAZOP methodologies including the enhanced HAZOP/LOPA method, show the pitfalls to avoid, and demonstrate how a good HAZOP acts as a springboard for other safety lifecycle activities.

The exSILentia® PHAx™ software is used to efficiently conduct the HAZOP study, using smart deviations and a data core based library of causes, safeguards, recommendations, etc.

CHAZOP Facilitation

Control Hazard and Operability Study (CHAZOP) is a procedure for carrying the safety and reliability analysis of existing or planned Control and Computer systems. The technique is similar to and has been adopted from the Hazard and Operability analysis (HAZOP) procedure that is widely used and is very successful for process plants. The execution of a CHAZOP can take several forms depending on the focus and goal of the study. A CHAZOP can be performed to support the overall process hazard analysis or to determine the reliability of the control system, in addition it can be executed with several different techniques. The variety of choices can be managed by careful preparation and setting clear objectives.

Exida's staff are effective CHAZOP facilitators, guiding you through the preparation, execution, and follow-up to make your CHAZOP successful and efficient. The exSILentia® PHAx™ software is used to efficiently conduct the CHAZOP study, using smart deviations and a data core-based library of causes, safeguards, recommendations, etc.

PHAx guides users through the HAZOP process, effectively focusing the user on the task at hand, identifying hazards, hazardous events, and associated sequence of events, using a non-traditional approach.

PHAx allows the user to document the relevant and important facts.

IACS Cybersecurity

exida helps mitigate security risks and assists in delivering intrinsically secure products.

Exida staff has over 30 years of experience in industrial automation and control system safety and/or cybersecurity design, implementation and assessment. exida has experience in assessing and developing cybersecurity solutions in the Transportation, Oil & Gas, Electric Utility, Chemical, Water & Waste Water and other industries that rely heavily on the use of industrial automation and control systems.

Exida offers these areas of focus when it comes to the Cybersecurity discipline:

- Cybersecurity Workshop
- IEC 62443 Gap Analysis
- High-Level Risk Assessment
- Detailed Risk Assessment
- Cybersecurity Vulnerability Assessments (CVA)
- Cybersecurity Requirements Specification (CSRS)
- Security Level (SL) Verification

ALARM MANGEMENT

Improve the performance of your operators through effective Alarm Management.

Having effective operators in a process plant is critical to maximizing production efficiency, product quality, and plant reliability.

During a single shift , operators make numerous decisions that affect plant profitability. These include actions to avoid unplanned upsets or to mitigate events that could lead to plant outages. A well-designed and highly-functional alarm system can add to the operator's decision-making ability.

Exida offers these areas of focus when it comes to the Alarm Management discipline:

- Alarm Philosophy Development
- Alarm Rationalization Ready
- Alarm Rationalization
- Advanced Alarm Design & Implementation

exSILentia®

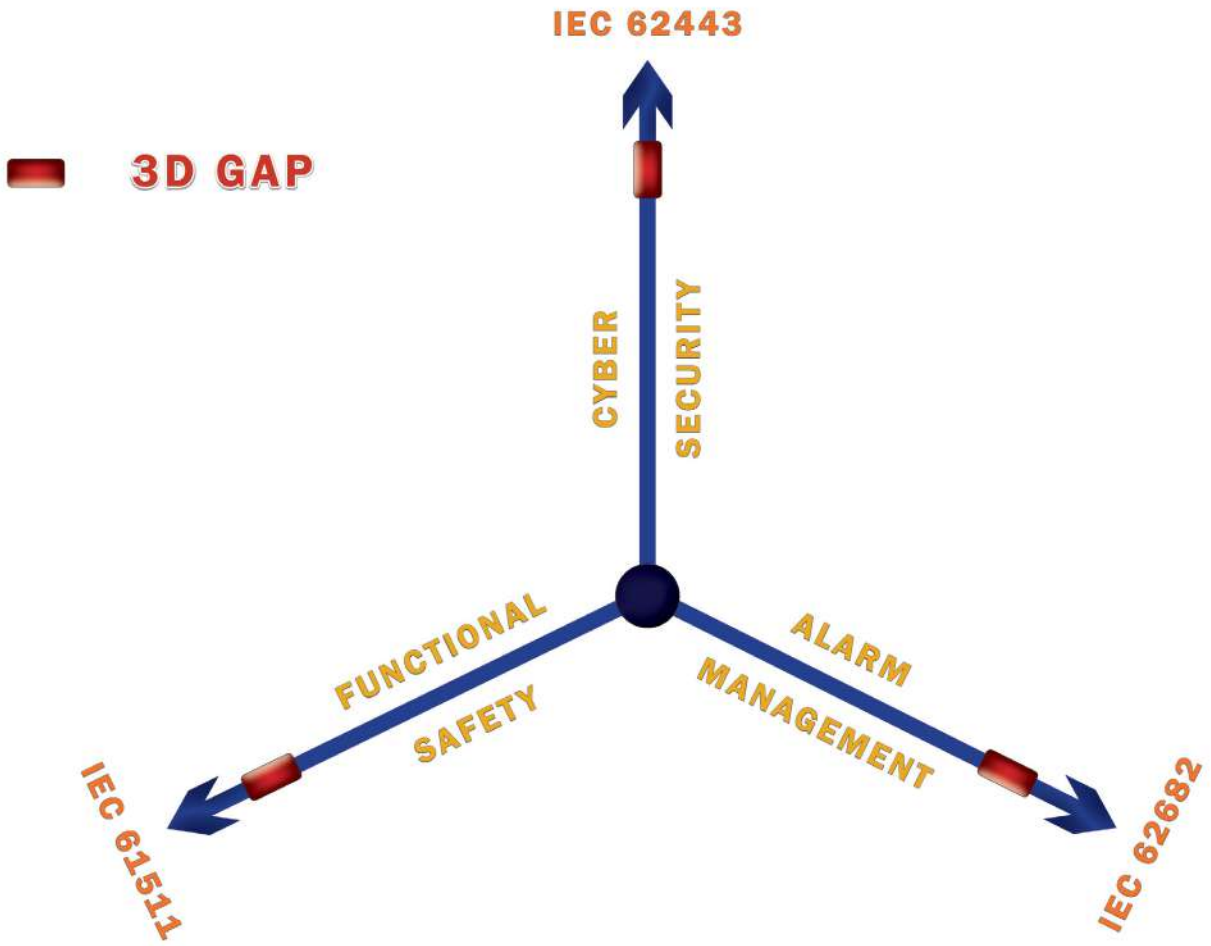
VERSION 4

exSILentia® v4 is a completely integrated suite of engineering software tools designed to support the Process Safety Management (PSM) work process and the Safety Instrumented System (SIS) Functional Safety Lifecycle. exSILentia v4 enables data to be seamlessly shared between different lifecycle steps.

Cause-consequence pairs identified during the Process Hazard Analysis (PHA) can be grouped in Hazard Scenarios.

High risk hazard scenarios can be flagged for further evaluation using Layer of Protection Analysis (LOPA). Causes are automatically identified as the initiating events in LOPA, safeguards related to the cause-consequence pairs are the starting point of the protection layers to be considered in the LOPA.

The hazard scenario accident frequency that results out of the LOPA is an input into the SIL target selection. If the accident frequency is higher than the consequence based tolerable frequency this will lead to a risk reduction requirement for, for example, a Safety Instrumented Function (SIF). exSILentia v4 makes it possible to directly assign a risk reduction requirement to a SIF in the LOPA. In both cases this risk reduction requirement and the need for a SIF lead to the creation of a Safety Requirements Specification (SRS). Information from the PHA, LOPA, and SIL target selection will feed directly into the SRS.


IEC 62443
3D GAP
CYBER
SECURITY
FUNCTIONAL
SAFETY
ALARM
MANAGEMENT
IEC 61511
IEC 62682

IEC 61511 CERTIFIED INTEGRATOR

The 61511 integrator certification program's design is tailored to address the specific safety engineering tasks that will be executed by the integrator / engineering company. This means if your company specializes in the design and engineering of the SIS application then the certification program will reflect this. The program is customized for each company based the selection of tasks (chosen a la carte) from the selection below:

☑	ACTIVITY / TASK	CLAUSE (IEC 61511)
☐	Hazard Identification	8
☐	Consequence Analysis	9 a
☐	Identify Protection Layers, Likelihood Analysis	9 b
☐	SIL Selection	9 c
☐	SRS Development	10
☐	SIS Design & Engineering	11
☐	Application Software	12
☐	Factory Acceptance Testing (FAT)	13
☐	SIS installation and commissioning	14
☐	SIS safety validation / Site Acceptance Testing (SAT)	15

- Tailorable to address the safety lifecycle tasks performed by your company

ASSESSMENT & CERTIFICATION SERVICES – OVERVIEW

CORE PROGRAM:

- Review existing integration procedures and identify gaps to achieve compliance.
- Audit deliverables created for an actual project to verify compliance was demonstrated.
- Publish certification report / certificate.
- Annual audit / renewal fee or project-based fee.

OPTIONAL SERVICES:

- Training / Books.
- IEC 61511 Procedure Templates.
- Support for creation of project-specific IEC 61511-compliant procedures.
- Safety Lifecycle Design Tools (exSILentia).
- Case Study.

CFSE certification or equivalent is required as a pre-requisite

BENEFITS OF THE INTEGRATOR CERTIFICATION PROGRAM

END USER

- Ensure competence of engineering contractors.
- Criteria for hiring of contractors.
- Needed to fulfill requests for "SIL-x systems".

INTEGRATOR

- Market differentiator.
- Leverage exida's experience/reputation in the safety world.
- Indicates competence for engineering a safety project to follow the standard.
- Provides credibility for breaking into the safety market.

CHANNEL
PARTNER

exida®

ROQQY
Training & Consulting

* Reservation: 4 weeks before starting date
* Adress: 48 Hesham Labib St., from Mostafa EL-Nahas St., Nasr City. 11762 Cairo, Egypt
* Duration: 9:00 AM - 5:00 PM
* Special Prices for On-Site/In-House courses
* For more information or to book a seat: Send your requests to info@roqqy.com
Or fax: +202 22876215
* Payment: 100% in advance
* Mob: +201099573730
Tel. +202 22876213
www.roqqy.com