

ALICE LS2 Safety

K. BARTH, LEXGLIMOS ALICE



Outline

- Minimum Safety requirements to access and work during LS2 at ALICE, P2
- RP issues and requirements during LS2

- New Training Interface “Learning Hub”



Upgrade LS2

Version : 0.0.0.0
10/24/2018
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Subsystem: Technical Coordination
Category: Safety - Installation

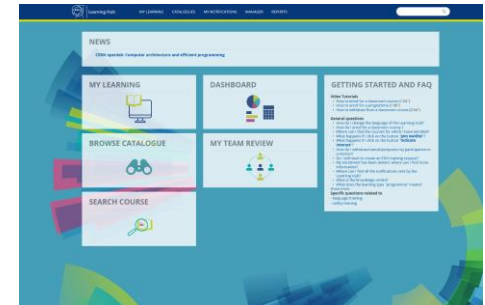
Work and Safety Coordination Plan (WSCP) ALICE upgrade LS2

Specifications and requirements

This 'Work and Safety Coordination Plan (WSCP)' describes the minimum safety requirements that are to be followed by all 'operating entities' (CERN groups, Institutes, contractors) during the upgrade work operations for ALICE during the long shut-down 2 (LS2).

Keywords: ALICE upgrade, work site organization, work package safety analysis, work package procedure, work package safety plan, safety coordinator, Technical Coordinator.

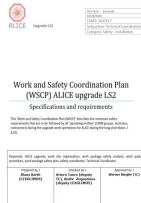
Prepared by : Klaus Barth (LEXGLWDS)	Checked by : Arturo Tesoro (deputy TC), Andre Augustinus (deputy LEXGLWDS)	Approved by : Werner Riegler (TC)
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Minimum Safety requirements to access and work during LS2 at ALICE, P2



- requirements and recommendations given in the CERN Safety Regulation SR-WS 'WORKS AND SERVICES' (EDMS 1440243v1)
- in accordance with the above SR-WS, and the WSCP for ALICE, each and every 'Operating entity' (CERN group, Institute, contractor) is required to comply



- A designated CERN 'Safety Coordinator' will assist the TC in coordinating safety during the design and execution phase of the works associated with LS2

ALICE LS2 Technical and Safety Coordination Team



6.1 ALICE LS2 Technical and Safety Coordination Team

ALICE Technical Coordination:



Werner RIEGLER, EP-AIO Tel.: 78042 / 162986, Werner.Riegler@cern.ch



Arturo TAURO, EP-AIO, Tel.: 73252 / 162529, Arturo.Tauro@cern.ch (FGO, ~~Dep.~~ RSO)

ALICE Safety Coordination:



Klaus BARTH, EP-AIO, Tel.: 62908 / 163204, Klaus.Barth@cern.ch (LEXGLIMOS, RSO, TSO)



Andre AUGUSTINUS, EP-AID, Tel.: 76294 / 163534 Andre.Augustinus@cern.ch (~~Dep.~~ LEXGLIMOS)

CERN Safety Contacts for ALICE



Michel BONNET, EN-ACE-OSA, Tel.: 166347, michel.bonnet@cern.ch (EN Safety Coordinator)



Mathieu LEMETAYER, HSE-OHS-SI, Tel.: 164531, mathieu.lemetayer@cern.ch (HSE Safety Coordinator)



Robert FROESCHL, HSE-RP-AS, Tel.: 62727 / 160058, Robert.Froeschl@cern.ch (HSE-RP Studies)



Isabel BRUNNER, HSE-RP-AS Tel.: 72634 / 164401, Isabel.Brunner@cern.ch (Operational RP)

ALICE Engineering and supervision:



Corrado GARGIULO, EP-DT-EO Tel.: 72674 / 160322 corrado.gargiulo@cern.ch



Antonio LAFUENTE MAZUECOS, EP-AIO, Tel.: 63472 / 161852 antonio.lafuente@cern.ch



Elisa LAUDI, EP-AIO, Tel.: 63658 / 166582, elisa.laudi@cern.ch

Common Safety Instructions for workers

Ref	Activity	Safety instruction
0	Work in the surface bldg.'s / areas including CRs 1-5 of PX24 - Declassified conventional area during LS2	Wear appropriate personnel protection equipment: <ul style="list-style-type: none"> • Safety helmet with head light • Safety shoes
1	Work in the underground cavern UX25 - RP supervised area	Wear appropriate personnel protection equipment: <ul style="list-style-type: none"> • Safety helmet with head light • Safety shoes • CERN personal dosimeter
2	Work in UX25 inside L3/FASS - RP supervised area - When L3 doors open, not considered as a confined space	Wear appropriate personnel protection equipment: <ul style="list-style-type: none"> • Safety helmet with head light • Safety shoes • CERN personal dosimeter
3	Work in UX25 in proximity to beam pipe	Obtain prior approval from the PL before the start of work. Follow the specific and agreed precautionary measures to be identified in the specific instructions below.
4	Work at height outside of collective protection (platform, scaffolding)	Obtain prior approval from PL before the start of the work. <ul style="list-style-type: none"> • Ensure workers have received work at height training and are able to use safety harnesses and related equipment • Wear safety harnesses

RP issues and requirements during LS2



- TPC irradiation tests with x-ray source in SXL2 cleanroom during LS2 (evaluation of protective measures ongoing)
X-ray source (20 – 25 keV photons), Dos Rate along axis @ 30 cm: 1 Sv/h
- RP-Zoning and material declassification
UX25 cavern: supervised area
PX24 / Counting Rooms CRx: conventional area
Materials taken out of UX25 to be measured by RP or ALICE RPE for declassification as conventional depends on zoning (beam pipe, adsorber)
- Materials equipment taken out of ALICE detector will have to be verified / measured. Can be done in most of the cases by ALICE RPE

Safety Training

LHC and large experiments



<https://safety-training.web.cern.ch/safety-training/>

	Level code description (Rank)	LHC - TNL	ALICE UX (ALI UX)	ATLAS UX15, USA15	ATLAS US15	ATLAS TOROID	CMS USC	CMS UXC	LHCB-U (UX 85)
ACCESS	10010 - Safety at CERN	X	X	X	X	X	X	X	X
	10200 – Electrical Safety Awareness	X							
	10390 - Self-Rescue Mask	X			X	X	X	X	
	10800 - CERN Beam facilities	X	X	X	X	X	X	X	X
	10810 - LHC Machine	X							
	10084 - ALICE (Level 4I)		X						
	10060 - ATLAS Surface Areas			X	X	X			
	10800 - ATLAS Underground			X	X	X			
	10010 - CMS (ex Level 4C)						X	X	
	10070 - LHCB (Level 4B)								X
	RP Supervised Area							X	
	ATLAS Toroid						X		
	CERN Large experiments		X	X	X	X	X	X	X
Dosimeter	RP Supervised Area	X	X	X	X	X	X		X

(1) = course linked to a valid dosimeter

X New on demand of LEXGLIMOS

The eLearning required to access the ALICE underground cavern **ALICE (Level 4I)** will be replaced in December 2018 by two eLearning modules: **CERN LHC Large Experiments and ALICE - Surface and Underground Areas.**

ALI UX access based on the training rank ALICE (Level 4I) will stay valid until its end of validity date. For renewal, the new eLearning modules CERN Large Experiments and ALICE will have to be done.

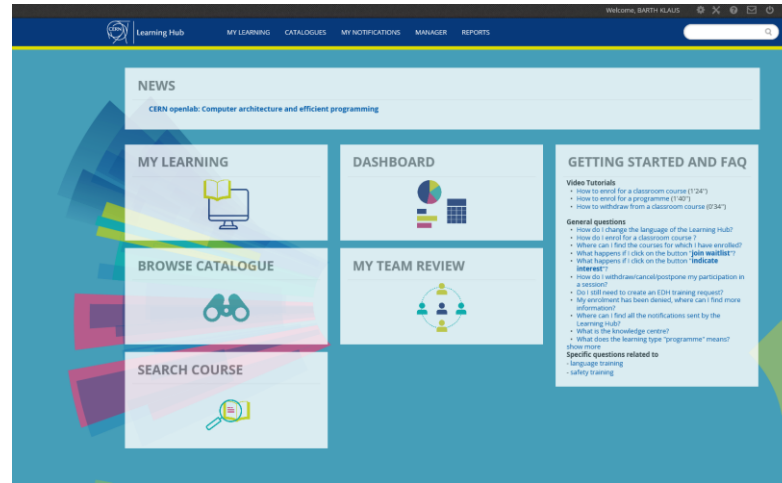
Acknowledgements: T.Otto, M.Tavlet, Lexglimos



Safety Training Interface: <https://lms.cern.ch>



All safety trainings are listed and described in the [Learning Hub](#). The classroom courses take place at the [Safety Training Centre](#) at Prévessin and they typically include both a theoretical and a practical part. The training sessions are held by CERN internal trainers or external training providers. CERN contractors need to consult the [Learning Hub](#) to find out to which classroom courses they are accepted in.



Safety Training - How to find basic eLearning !



The screenshot shows the CERN Learning Hub interface. At the top, the navigation bar includes 'Learning Hub', 'MY LEARNING', 'CATALOGUES', 'MY NOTIFICATIONS', 'MANAGER', and 'REPORTS'. A red circle highlights the 'CATALOGUES' link. Below the navigation bar, the 'CATALOG: TOP' section displays several icons for different categories: CERN Bookboon eLibrary, CERN Schools, Language, Leadership, Personal Development and Communication, Safety, and Technical. A red arrow points from the 'Safety' icon to the 'CATALOG: SAFETY' section. This section features a 'MANDATORY' badge and a grid of safety-related training modules: Basic mandatory, Chemical Safety (CS), Electrical Safety (ES), Environmental Protection (EP), Fire Safety (FS), Installation Specific Safety, Mechanical Safety (MS), Non-ionizing Radiation (NIR), Radiation Protection (RP), Safety and Health (SH), Safety Organisation (SO), and Worksite (WS). A search bar is visible at the bottom left of the interface.

- Login to Learning Hub
- Click on Catalogues
- Click on Browse
- Click on Safety
- Click on Basic mandatory

Safety Training - How to find basic eLearning !



CATALOG: BASIC MANDATORY

[Top](#) > [Safety](#) > Basic mandatory

Catalogue Content

Results 1 - 3 of 3

Title	Learning Type
Emergency Evacuation	Programme
Radiation Protection - Awareness	Programme
Safety at CERN	Programme

Results 1 - 3 of 3



Safety Training - How to find specific eLearning !



The screenshot shows the CERN Learning Hub interface. At the top, the navigation bar includes 'Learning Hub', 'MY LEARNING', 'CATALOGUES', 'MY NOTIFICATIONS', 'MANAGER', and 'REPORTS'. A red circle highlights the 'CATALOGUES' link. Below the navigation bar, the 'CATALOG: TOP' section displays several icons for different categories: CERN Bookboon eLibrary, CERN Schools, Language, Leadership, Personal Development and Communication, Safety, and Technical. A blue arrow points from the 'Safety' icon to the 'CATALOG: SAFETY' section. This section shows 'Top > Safety' and 'Sub Catalogues' with a grid of safety-related icons: Basic mandatory, Chemical Safety (C), Electrical Safety (EL), Environmental Protection (EP), Fire Safety (FS), Installation Specific Safety, Mechanical Safety (M), Non-ionizing Radiation (NIR), Radiation Protection (RP), Safety and Health (SH), Safety Organisation (SO), and Worksite (WS). A search bar is visible at the bottom left of the interface.

- Login to Learning Hub
- Click on Catalogues
- Click on Browse
- Click on Safety
- Click on Installation Specific Safety



Safety Training - How to find specific eLearning !



CATALOG: INSTALLATION SPECIFIC SAFETY

[Top](#) > [Safety](#) > [Installation Specific Safety](#)

Catalogue Content

Results 1 - 20 of 36

< 1 2 Next >

Title	Learning Type
AD - Target Area	Programme
ALICE (Level 4 I)	Programme
ALICE - Confined Space	Classroom
ALICE - Shift Leader in Matters of Safety (SLIMoS)	Programme
ALICE - Underground - Guide	Classroom
ATLAS - Surface Areas	Programme
ATLAS - Toroid Area	Programme
ATLAS - Underground Caverns	Programme
ATLAS - Underground - Guide - Initial	Classroom
ATLAS - Underground - Guide - Refresher	Classroom
AWAKE	Programme
CERN - Beam Facilities	Programme
CERN - LHC Large Experiments	Programme
CHARM	Programme
CMS (Former CMS - Level 4 C)	Programme
CMS - Shift Leader in Matters of Safety (SLIMoS)	Classroom
CMS - Technical Shifter	Classroom
CMS - Underground - Guide - Initial	Classroom
IRRAD	Programme
ISOLDE - B26 - Chemical Store	Programme

Safety Training - How to find RP eLearning !



The screenshot shows the CERN Learning Hub interface. At the top, the navigation bar includes 'Learning Hub', 'MY LEARNING', 'CATALOGUES', 'MY NOTIFICATIONS', 'MANAGER', and 'REPORTS'. A red circle highlights the 'CATALOGUES' link. Below the navigation bar, the 'CATALOG: TOP' section displays several categories: CERN Bookboon eLibrary, CERN Schools, Language, Leadership, Personal Development and Communication, Safety, and Technical. A blue arrow points from the 'Safety' category to the 'CATALOG: SAFETY' section. This section shows 'Sub Catalogues' including: Basic mandatory, Chemical Safety (C), Electrical Safety (EL), Environmental Protection (EP), Fire Safety (FS), Installation Specific Safety, Mechanical Safety (M), Non-ionizing Radiation (NIR), Radiation Protection (RP), Safety and Health (SH), Safety Organisation (SO), and Worksite (WS). A search bar is visible at the bottom left of the interface.

- Login to Learning Hub
- Click on Catalogues
- Click on Browse
- Click on Safety
- Click on Radiation Protection RP

Safety Training - How to find RP eLearning !



CATALOG: RADIATION PROTECTION (RP)

[Top](#) > [Safety](#) > Radiation Protection (RP)

Catalogue Content

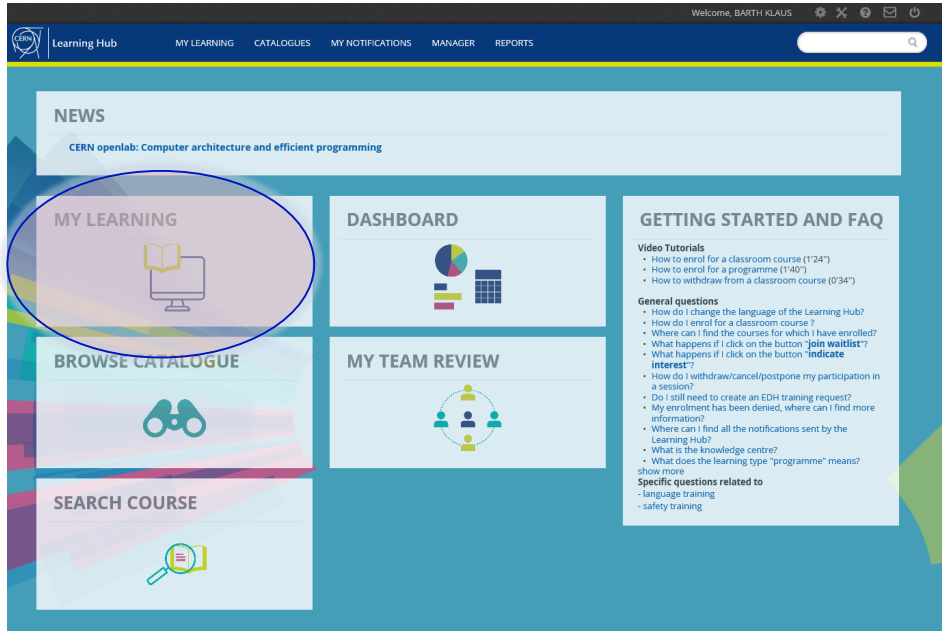
Results 1 - 7 of 7

Title	Learning Type
Radiation Protection - Awareness	Programme
Radiation Protection - Controlled Area - Initial	Classroom
Radiation Protection - Controlled Area - Refresher	Programme
Radiation Protection - Experts (RPE)	Classroom
Radiation Protection - Supervised Area	Programme
Radiation Safety Support Officer (RSSO) - Initial	Classroom
Radioactive Equipment - Traceability - TREC	Programme

Results 1 - 7 of 7

Safety Training

- How to take (enrol for) an eLearning...
- Where can I find the courses for which I have enrolled?





The screenshot shows the ALICE Learning Hub homepage. The navigation bar at the top includes 'Learning Hub', 'MY LEARNING', 'CATALOGUES', 'MY NOTIFICATIONS', 'MANAGER', and 'REPORTS'. The main content area is divided into several sections: 'NEWS' (with a link to 'CERN openlab: Computer architecture and efficient programming'), 'MY LEARNING' (highlighted with a blue circle and containing an icon of a computer monitor with an open book), 'DASHBOARD' (with a pie chart icon), 'GETTING STARTED AND FAQ' (with a list of video tutorials and general questions), 'BROWSE CATALOGUE' (with a binoculars icon), 'MY TEAM REVIEW' (with a group of people icon), and 'SEARCH COURSE' (with a magnifying glass icon).

On the homepage go to 'My Learning'

- The tab 'My course request' contains all your courses pending approval
- The tab 'My current courses' contains all your courses not yet completed
- The tab 'My Training History' contains all your courses for which you have enrolled including their status.






Safety Training

Sort By Due Date

 **ALICE (Level 4 I)** ■ Not Started
Programme, Multi-Language, ⌚ Enrolled On 06-Nov-2018 16:09 CET
 **Description and sessions in English**
ALICE Experiment Safety course (also known as "level 4I") is made of 5 modules.
You have to follow the course and pass a test for every module to be granted safety training level 4I.
Click on the buttons>Show All

[Knowledge Centre](#)

▼Hide Sub-Modules

	1. Introduction 📄 Online, English - (en), ⌚ Enrolled On 06-Nov-2018 16:09 CET, ⚠ Required ■ Not Started
	<input type="button" value="Launch"/> 1 exam(s) ▼
	2. IMPACT 📄 Online, English - (en), ⌚ Enrolled On 06-Nov-2018 16:09 CET, ⚠ Required ■ Not Started
	<input type="button" value="Launch"/> 1 exam(s) ▼
	3. Evacuation 📄 Online, English - (en), ⌚ Enrolled On 06-Nov-2018 16:09 CET, ⚠ Required ■ Not Started
	<input type="button" value="Launch"/> 1 exam(s) ▼
	4. Radiation Protection 📄 Online, English - (en), ⌚ Enrolled On 06-Nov-2018 16:09 CET, ⚠ Required ■ Not Started
	<input type="button" value="Launch"/> 1 exam(s) ▼
	5. Miscellaneous 📄 Online, English - (en), ⌚ Enrolled On 06-Nov-2018 16:09 CET, ⚠ Required ■ Not Started
	<input type="button" value="Launch"/> 1 exam(s) ▼

