### Relevant elements of CERN’s formal training programmes

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<th>Type of training</th>
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| **Academic Training** | • 10 series of 3-5 lectures  
• University postgraduate level  
• Particle physics and related fields of applied science |
| **CERN Schools** | • Accelerator School, School of Computing, European School of High Energy Physics, the Latin-American School of High Energy Physics and the Asia-Europe-Pacific School of High Energy Physics  
• Annual events organized in different countries to enhance the relationship between students and senior physicists and engineers |
| **CERN Seminars and Colloquia** | • Regular sessions throughout the year include specialist seminars on detectors, accelerators, electronics, informatics, theory, and the LHC Project; delivered by specialists in each domain |
| **International Workshops and Conferences** | • Organized on specific topics uniting specialists from CERN, other laboratories, institutes, universities and industry, e.g. the annual CERN-sponsored 5-day Topical Workshop on Electronics for Particle Physics; the biannual series of International Conferences on Accelerators and Large Experimental Physics Control Systems (iCALEPCS); the IEEE-NPSS Real Time Conference; the annual international Conference on Computing in High Energy Physics (CHEP). |
| **Leadership, Personal Development & Communication, Technical Management training** | • Extensive curriculum of leadership, personal development and communication, as well as technical management with topics ranging from basic communication to project management and leadership skills.  
98 sessions with 1000 participants in 2013.  
• Several tailor-made workshop have been organized for Marie-Curie Fellows in 2013: “CV writing and interview skills”, “Scientific Writing”, “Introduction to Project Management”, “Post Presentation Skills”.  
• Further tailor-made workshops are being organized for Marie-Curie Fellows in 2014: “Entrepreneurship”, “Knowledge transfer tools and Intellectual property”, “PMP Certification Preparation”, “Scientific presentation”, “Creativity and idea generation”. |
| **Safety training** | • Compulsory sessions for anyone at CERN – compulsory for all new staff, students, fellows, users and industrial contract staff; there were also many specialized safety training courses.  
• Covers hazards and risks for all environments  
• 850 sessions with 7000 participants in 2013 |
| **Language training** | • Language courses, English and French. 91 sessions with 930 participants. |
| **Science & Society Seminars** | • Delivered by leading speakers to raise awareness of the effect of science and research on society, and improve communication with the media. |
| **Summer Student Lectures** | • 6 weeks July & August, 3 hours per day on topics including detectors, electronics, DAQ – lectures are open to everyone on the CERN site. |
| **Technical Training** | • ~270 Technical Training topics include electronics, software & systems technologies, engineering, office software and automation in 230 sessions for 1920 participants.  
• On-demand training via ½ - to 5-day courses, seminars and web-based tutorials |
| **Web-based training** | • Lectures, seminars and courses are recorded and available via the web  
• Some instructor-led topics also available in the form of web-based training |

The seminars and colloquia, which are organized by the CERN Departments for all personnel on the site, provide particularly broad and topical training.

The Technical Training programme provides a rich spectrum of courses including engineering software packages, modern electronics design methods and tools, database technology, software and systems technologies, office automation software, cryogenics, and other topics of interest to CERN engineers and scientists. Currently over 270 technical courses are available in the course catalogue.

For all training programmes, great care is taken to ensure that the quality of the speakers remains very high. The vast majority of the speakers are from other research institutions.