General description of the training project

I: General information of the training

Title:	Using Physics Analysis Toolkit (PAT) in your analysis
Internet address of the learning environment:	http://cern.ch/learncms
Last update:	4 December, 2008
Responsible teacher:	Frédéric Ronga (e-mail: frederic.ronga@cernNOSPAMPLEASE.ch)
Tutors:	Benedikt Hegner, Salvatore Rappoccio, Sudhir Malik, Roger Wolf, Benedikt Mura, Charles Plager
Local organization & technical support:	Kati Lassila-Perini (CERN), Sudhir Malik (FNAL)
Teaching level:	post-graduate, further education
Discipline:	software development, data analysis
Estimated number of participants:	10-20

Main goal of the training:
- participants: develop the software needed in his/her analysis using the common tools provided by the toolkit, and learn the computing tools and procedures for the output data handling
- project team: train future experts, get feedback to improve the product and the documentation
Pedagogical approach of the training:
Every participant will have an analysis project and the outcome of the training should be a valid and usable analysis code.
Contents: https://twiki.cern.ch/twiki/bin/view/Sandbox/CMSUserSupportELearningProjectContents
Brief description of the scenario - tasks and expected results:
Phase 1 - Introduction to the basic tools:
- presentation of the working environment for the course
- presentation of the projects- discussion, finding common areas
- get familiar with the software environment and the data formats
- learn the basic functionalities provided by the toolkit and understand why it is convenient to use them
- write the first prototype of the data analysis using the toolkit
- keep logbook of the progress and difficulties encountered
Phase 2 - Understanding the details:
- learn the principles of the different components of the toolkit and understand their functioning through exercises
- understand what the toolkit provides for the project
- improve and complete the prototype of the data analysis using the toolkit
- keep logbook of the progress and difficulties
Phase 3 - Data analysis in practice:
- learn how to access and analyze the data provided by the prototype
- get familiar with the final working environment (data accessed through grid, storing and re-accessing the output data)
Phase 4 - Evaluation:
- summary of the logbooks and the difficulties encountered
- evaluation of the projects by the tutors

II: Organization

Ratio:	Presence/remote 30%/70%
Brief description of the management of the training - tasks and roles:	

Responsible teacher:	present the learning material, guarantee the coherence
Tutors:	help with the exercises, reply to questions
Content providers:	plan a learning module and provide contents
Participants:	prepare a project use-case, complete the exercises, prepare the project, keep logbook
Tools:	web area for links to contents, discussions and logbooks, code repository for exercises, videoconferencing fro transmission and recording
Management tools:	Web site, discussion forum, code repository, e-mail (project team)

III: General roles and tasks

People	Role	Task
Responsible teacher:	Responsible of the pedagogical content and coherence	during planning: intervene in the planning of the learning material by the content providers
	Teacher	Give lectures
Content providers:	Expert on separate learning modules	Provide learning material
Tutors:	Guide the participant in their exercises and in their project	Lead hands-on sessions
		Reply to questions in discussion forum
		Private tutoring
Technical support:	Practical arrangements	Organize the rooms and EVO connections and recordings
	Course-related technical support	Help with technical issues connected to the course (availability of the material, accessibility)
Project management:	Take care of the timely execution of the plan	Plan and manage the project
Participants:		Complete the analysis project integrating the issues learnt
		Give feedback
Interaction between the protagonists:		
- project team: direct contact, e-mail discussion		
- discussion sessions and questions during the lectures		
- discussion forum and logbooks		
Tools for interaction:		
- project description and organization documents (wiki), meetings, e-mail for the project team		
- discussion forum, wiki logbooks for the participants		
Constraints and limits:		
- availability of tutors		

IV: Evaluation modalities

Evaluation criteria of the different activities:	- simple, illustrative exercises evaluated by the result obtained (e.g. histogram)
	- progress followed in the logbook
	- final project evaluated by by tutors by analyzing the structure of the software
Date of the final evaluation:	two months from the start of the training
Feedback:	- on training: discussion and feedback form in the end of the course
	- on the toolkit: discussion, logbook keeping track on the difficulties encountered.

-- KatiLassilaPerini - 06 Nov 2008

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