openEHR

Clinical Database Design and Implementation with openEHR

the open standard for future proof health information systems

CaboLabs

Healthcare Informatics, Standards and Interoperability

Course objectives

The main goal of this course is to shorten the gap between the specs and the implementation technologies, overturning the experience of many years doing research and development around the openEHR specifications to bring conceptual knowledge and practical experience into one unique course. This includes: the openEHR specs (focused on clinical information), common requirements for clinical databases, clinical database design principles and techniques, and implementation technologies. The assignments for each module will are designed to put the conceptual knowledge into action, making you face all the stages in the clinical database design process.

Why do we need this course?

Clinical databases are complex in their design and difficult to develop. The challenge grows when it is a requirement to standardize the clinical information to enable interoperability and technologic independence, like it happens on most openEHR implementations. Another factor that increases the gap between the standard and a correct implementation on a specific technology is developers' lack of knowledge and experience on the openEHR specs and methodology, an area that can take years to master.

Who is this course for?

The course is aimed at professionals and students from the Information and Communication Technology field, including Software Architects, Software Designers, Developers, DBAs, Tech Leaders, among other roles.
People from other areas can also do the course, please take into account the Recommended Background.

Experience with SQL, relational databases, and a programming language is required for doing the optional assignments (you can assist to the course without doing the assignments).

Experience with openEHR is not required, but it helps to understand the basic concepts.

Java and Groovy programming languages will be used as reference in the course materials.

Syllabus

Here you can find the course modules and the correspondent list of topics.

Module	Topics
1 Introduction	+ Clinical data, requirements and usage + Clinical record structure + openEHR Information Model, data and metadata
2 Technologies and Techniques	+ Database implementation technologies + Pros & cons of each technology + Implementation techniques for openEHR databases

3 Archetypes and Templates	+ Using openEHR archetypes and templates in software + Data validation using archetype constraints
4 Advanced Features	+ Advanced concepts and features: data indexing, versioning, audit, data synchronization and ETL

Assignments with grading

- Design of a simple openEHR database and data queries over EHRs
- Design and implementation of a database for openEHR clinical documents
- Working with openEHR archetypes in software focused on automatic data validation
- Implementation of change control / version tracking for openEHR clinical documents

Modalities

This course is offered online and on-site for companies, organizations and events. To request a quote please contact info@cabolabs.com

It is also offered online with live/synchronous sessions. This modality works in established periods, generally once a year. To get notification when the next enrollment period opens, sign to the Waiting List found here: https://www.cabolabs.com/en/education

For the online editions:

- We have a virtual campus with the materials and a forum
- We have a videoconference tool to provide the live online sessions
- All the session are recorded to watch later
- All the materials needed for each module will be available before the correspondent session

Evaluation and Certification

This course has four optional assignments, with a total score of 100. The course is approved with 50 points.

Two kinds of certificates from CaboLabs will be delivered:

- APPROVAL: for those who got 50 or more points.
- PARTICIPATION: for those who got less than 50 points or didn't deliver the assignments.

Trainer

The course will be delivered by Pablo Pazos Gutiérrez, who designed the course taking into account the openEHR specifications and summarizing years of experiences working with openEHR and clinical repositories.

Bio

Pablo is a Computer Engineer from Uruguay, specialized in the eHealth domain. Director of CaboLabs: Health Information Systems, Standards and Interoperability, and creator of the courses delivered through CaboLabs. With 15+ years of experience in eHealth, 600+ trained professionals from 20 countries.

- Computer Engineer degree, Universidad de la República, Uruguay
- Director at CaboLabs Health Informatics
- Educator at Asociación Chilena de Informática en Salud
- openEHR Ambassador for Latin America
- Coordinator at openEHR community in spanish
- Qualified Member of the openEHR's Specification Editorial Committee

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