

openEHR

The open standard for future-proof Electronic Health Records

Design and Implementation of Clinical Databases with openEHR

Supports



Context

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 that developers lack of knowledge and experience on the openEHR specs and methodology, an area that can take years to master.

Objectives and Methodology

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 be designed to put the conceptual knowledge into action, making you face all the stages in the clinical database design process.

Target Audience

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.

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.

Program

Sessions	Contents
Mod 1	<ul style="list-style-type: none">• Clinical data, requirements and usage• Clinical record structure• openEHR Information Model: data and metadata
Mod 2	<ul style="list-style-type: none">• Database implementation technologies comparison• Implementation techniques for openEHR databases
Mod 3	<ul style="list-style-type: none">• Using openEHR archetypes and templates in software• Data validation using archetype constraints
Mod 4	<ul style="list-style-type: none">• Advanced concepts / features: indexing, versioning, audit, data synchronization and ETL
Assignments	<ul style="list-style-type: none">• 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

Modality

The course will be online with four synchronous sessions via Adobe Connect (*). Sessions will be recorded. A Virtual Campus will be available with the materials of the course and a forum to ask questions and share information. After each session, the correspondent assignment will be presented.

(*) Courtesy of Hospital Italiano de Buenos Aires.

Duration

The total duration of the course is six weeks, with four sessions distributed in those weeks.

Evaluation and Certification

The course will be approved based on the evaluation of assignments. Each assignment will have a number of points assigned, according to its complexity. The sum of points of all the assignments is 100. To approve the course 50 points are required.

All the students will receive a Participation Certificate. Those who approve the assignments will receive the Approval Certificate that will show the total number of points achieved from the assignment evaluations.

Enrollment

Please fill this form to enroll into the course when registration is available:

<https://goo.gl/forms/s9bNE37tcMoyyTCG3>

If there is no registration available, please register into our waiting list and we will notify you when there is a new enrollment opening: <http://cabolabs.com/en/training>

Registration fee: 250 USD (*)

Undergraduate students have a 40% discount (a university certificate will be needed to verify you classify for the discount).

(*) payment instructions are shown in the last step of the enrollment form.

About the trainer

The course will be delivered by Pablo Pazos Gutiérrez. He 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 the support of ACHISA.

Ing. Pablo Pazos Gutiérrez

- Member of the openEHR community since 2006
- Qualified member of the Localization, Software and Specification Programs of the openEHR Foundation
- Coordinator of the openEHR community in Spanish
- Creator of the eHealth courses and workshops delivered by CaboLabs
- Creator of open source systems and tools for eHealth
- Director of CaboLabs: Health Information Systems, Standards and Interoperability,

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ACHISA supports knowledge dissemination in the Health Informatics discipline, especially about the available standards and specifications.