



HL7 FHIR Connectathon

2-3 Days | Virtual Event

An HL7 Fast Healthcare Interoperability Resources (FHIR[®]) Connectathon features hands-on FHIR development and testing. This is a chance to get your hands dirty and learn by helping evolve the FHIR specification!

Whether the format is virtual or in-person, implementers and developers can gain experience developing FHIR-based solutions and exchange data with other FHIR interfaces.

Participants select one of several tracks based on level of readiness and area of interest, and can engage in hands-on, heads down development and testing. There is an opportunity to work directly with other FHIR developers and senior members of the FHIR standards development team, and participants are expected to write some software intended to demonstrate FHIR connectivity.

EVENT DATES

January 10–12, 2022

May 7–8, 2022

September 17–18, 2022

FOR MORE INFORMATION

[HL7.org/events/fhir-connectathon](https://hl7.org/events/fhir-connectathon)

Applied FHIR for Designers

February 15–17, 2022 | 6 hours (online class)

This class will help participants understand where and how FHIR might fit into their healthcare interoperability environment. It will look at existing FHIR solutions and explore a number of the aspects of FHIR that should be considered when designing FHIR solutions.

INSTRUCTOR

Lloyd McKenzie, FHL7: Co-Editor, HL7 FHIR Standard; Co-Chair, HL7 FHIR Management Group, Co-Chair, HL7 FHIR Infrastructure Work Group

For more information

[HL7.org/LearnNow](https://hl7.org/LearnNow) | education@hl7.org

HL7 FHIR for Healthcare Information Analysts

4 Days | 12 Hours (online class)

This course teaches participants how they can leverage HL7 FHIR for their interoperability use cases and how to map their system data to FHIR. Designed for business analysts, functional experts, clinical subject matter experts and HL7 integration team members dealing with FHIR resources and mapping.

COURSE DATES

March 28–29 & March 31–April 1, 2022

October 15–16 & 22–23, 2022

INSTRUCTOR

Aditya Joshi: Member, Education Advisory Council, HL7 International; Chair, Education Committee, HL7 India; Certified, V2.5/V2.6 Control Specialist; Certified, FHIR R4 Proficiency

HL7 FHIR Intermediate

6 Weeks | Self-paced

This intermediate level, six-week course for developers provides an overview on how to program FHIR clients and servers. It also features an introduction to the most relevant implementation guides in the healthcare IT market: Argonaut, IPS, SMART on FHIR and CDS Hooks. Hands-on exercises are included on how to implement HL7 FHIR, using widespread open source libraries for C#, Java and JavaScript.

Participants will learn:

- How to navigate the Argonaut and IPS implementation guides
- What is involved in programming a FHIR client using Java, C# and JavaScript
- How to create a FHIR façade to integrate a legacy application
- How to use SMART on FHIR to integrate apps with EHRs
- How to use CDS Hooks to integrate clinical decision support to an app

Prior experience with FHIR is required. Background in software development using Java, C# or JavaScript is required to complete the course assignments. Completing the HL7 FHIR Fundamentals course is highly recommended.

COURSE DATES

February 17–March 31, 2022
June 2–July 14, 2022
September 15–October 27, 2022

INSTRUCTOR

Fernando Campos, FHL7: Chair, HL7 Argentina; Creator & Educator, HL7 Fundamentals, FHIR Fundamentals and FHIR Intermediate; Software Engineering Department Chief, Hospital Italiano de Buenos Aires; Author

Diego Kaminker, FHL7: Affiliate Director, HL7 International; Creator & Educator, HL7 Fundamentals, FHIR Fundamentals and FHIR Intermediate; Member, HL7 Argentina

HL7 FHIR Exam Prep

4 Weeks | Self-paced

The Comprehensive HL7 FHIR Proficiency Exam Preparation Course is a four-week, self-paced course that will prepare participants for taking the HL7 FHIR R4 Proficiency Exam.

Participants will learn:

- A solid knowledge of the concepts required to pass the HL7 FHIR R4 Proficiency Exam
- The test format and types of questions found in the exam
- Appropriate test taking strategies to deduce the correct answers in the exam
- How to practice thoroughly for exam by taking 150+ objective quiz questions

Participants are expected to have a good understanding of FHIR concepts.

COURSE DATES

March 3–31, 2022
June 16–July 14, 2022
September 29–October 27, 2022

INSTRUCTOR

Aditya Joshi: Member, Education Advisory Council, HL7 International; Chair, Education Committee, HL7 India; Certified, V2.5/V2.6 Control Specialist; Certified, FHIR R4 Proficiency

*Recorded classes are available
at HL7 On Demand
www.pathlms.com/HL7

HL7 FHIR Fundamentals

This introductory, four-week course provides an overview of HL7 FHIR. This course features hands-on exercises on how to implement HL7 FHIR, led by expert instructors and supported by tutors.

Participants will learn:

- How to navigate the HL7 FHIR specification
- What HL7 FHIR resources are and how they are structured
- Business case for HL7 FHIR adoption
- Advanced FHIR topics

Prior experience with FHIR or other HL7 standards is not required. Familiarity with XML or JSON and some background in software development is recommended.

COURSE DATES

March 31–April 28, 2022
July 14–August 11, 2022
October 27–November 24, 2022

INSTRUCTOR

Fernando Campos, FHL7: Chair, HL7 Argentina; Creator & Educator, HL7 Fundamentals, FHIR Fundamentals and FHIR Intermediate; Software Engineering Department Chief, Hospital Italiano de Buenos Aires; Author

Diego Kaminker, FHL7: Affiliate Director, HL7 International; Creator & Educator, HL7 Fundamentals, FHIR Fundamentals and FHIR Intermediate; Member, HL7 Argentina

HL7 FHIR Bootcamp

3 Days | 12 Hours (online class)

This session is LIVE! Solve FHIR assignments in real time, in groups, guided by your instructor. This three-day, nine-hour online class will provide an in-depth overview of HL7's Fast Healthcare Interoperability Resources (FHIR®) standard. No previous FHIR experience necessary!

DAY 1: BASE STANDARD

- Getting around the FHIR core standard
- FHIR Resources
- FHIR RESTful API
- Searching with FHIR

DAY 2: FHIR BEYOND REST

- FHIR beyond REST: Paradigms of exchange: transactions, operations, messages, documents, services, batch, bulk transfer and storage
- FHIR conformance, constraints, extensions, implementation guides and terminology

DAY 3: IMPLEMENTATION GUIDES

- Relevant implementation guides: US CORE R4, International Patient Summary (IPS), Da Vinci, CARIN
- Briefly exploring some relevant implementation guides

Prerequisites

- A computer with Postman installed is required
- No FHIR Experience required
- XML/JSON experience recommended

COURSE DATES

April 12–14, 2022
November 8–10, 2022

INSTRUCTOR

Diego Kaminker, FHL7: Affiliate Director, HL7 International; Creator & Educator, HL7 Fundamentals, FHIR Fundamentals and FHIR Intermediate; Member, HL7 Argentina

Applied FHIR for Software Developers

April 26–28, 2022 | 6 hours (online class)

Get an in-depth look into the infrastructure sections of the HL7 FHIR specification. This class will provide insight on how to design, develop and test software that uses the FHIR interoperability standard – all the way from the wireformat up to validation and storage.

As new concepts are introduced, participants will get to use FHIR “hands-on” for what they have learned previously and for some of the more advanced concepts introduced in this course. Exercises are performed with XML or JSON tools and a REST client e.g. Postman.

INSTRUCTOR

Rik Smithies; Consultant, NProgram Ltd.; Technical Chair, HL7 UK

HAPI FHIR

May 24–26, 2022 | 6 hours (online class)

This session introduces the HAPI FHIR framework for developing applications in Java. Covered topics will include the data model and parser/serializer framework, and how to build both FHIR clients and FHIR servers using HAPI FHIR.

INSTRUCTOR

James Agnew: Project Lead, HAPI; Chief Technology Officer, Smile CDR; Standards Advisor, Center for Global eHealth Innovation

HL7 FHIR DevDays

June 6–9, 2022 | Cleveland, Ohio (hybrid)

HL7 FHIR DevDays is the largest FHIR event in the world! It is an opportunity for health IT professionals (whether new to FHIR or with previous experience) to learn in a collaborative environment. Participants will have a chance to work with FHIR surrounded by others doing the same thing, side by side with experts to answer any questions.

The event delivers a combination of focused hackathons, tutorials, keynotes and networking opportunities. Top FHIR experts from around the world will instruct, guide and discuss the further improvement of the FHIR standard.

For more information, visit www.devdays.com/us/

SMART on FHIR & CDS Hooks

June 21–23, 2022 | 4.5 hours (online class)

This class will demonstrate how HL7 FHIR can enable EHR systems to incorporate apps, decision support and other external content to provide more configurable solutions that can be customized to support clinician needs. Exercises and applied tutorials are included so that attendees will gain hands-on experience building functional SMART on FHIR and CDS Hooks applications and services.

INSTRUCTOR

Bryn Rhodes: Editor, Clinical Reasoning Module in FHIR; Co-Chair, HL7 Clinical Decision Support Work Group; Member, CDS Hooks PMC; Chief Technology Officer, HarmonIQ Health Systems Corporation

HL7 FHIR Security & Privacy

July 12–14, 2022 | 4.5 hours (online class)

Learn how to protect a FHIR server (through access control and authorization), how to document what permissions a user has granted (consent), how to enable appropriate access by apps and users and how to keep records about what events have been performed (audit logging and provenance).

HL7 FHIR does not mandate a single technical approach to security and privacy; rather, the specification provides a set of building blocks that can be applied to create secure, private systems.

INSTRUCTOR

John Moehrke: Co-Chair, HL7 Security Work Group; Co-Chair, IHE IT Infrastructure Planning Committee; Standards Architect, By Light Professional IT Services Inc.

*Recorded classes are available
at HL7 On Demand
www.pathlms.com/HL7

HL7 FHIR Profiling

August 30–September 1, 2022 | 6 hours (online class)

HL7 FHIR provides a set of building blocks from which interoperability solutions can be created. Profiles combine those blocks into solutions, serving a similar purpose to implementation guides, templates, archetypes and detailed clinical models associated with other HL7 standards.

This class will demonstrate how to use profiles to shape the FHIR core specification for use in a specific national, regional or organizational context.

INSTRUCTOR

Lloyd McKenzie, FHL7: Co-Editor, HL7 FHIR Standard; Co-Chair, HL7 FHIR Management Group, Co-Chair, HL7 FHIR Infrastructure Work Group

Clinical Quality & Decision Support on FHIR

October 4–6, 2022 | 4.5 hours (online class)

Clinical quality improvement is an important aspect of healthcare delivery and relies on the ability to both measure and influence clinical care.

This class will look at how the FHIR Clinical Reasoning module can be used to share computable clinical knowledge, and how that knowledge can be incorporated in a continuous quality improvement cycle.

INSTRUCTOR

Bryn Rhodes: Editor, Clinical Reasoning Module in FHIR; Co-Chair, HL7 Clinical Decision Support Work Group; Member, CDS Hooks PMC; Chief Technology Officer, HarmonIQ Health Systems Corporation

Applied Questionnaire & Data Capture

November 1–3, 2022 | 4.5 hours (online class)

HL7 FHIR provides basic support for using forms to capture and display data. The new version of the Structured Data Capture Implementation Guide provides significantly increased capabilities, including enhanced rendering and control, the ability to automatically populate forms with existing data and extract information from completed forms into FHIR resources.

This class will help students use FHIR questionnaires in ways that reflect the capabilities often demanded of paper and PDF forms in the healthcare space, while leveraging the data-integration capabilities FHIR provides.

INSTRUCTOR

Lloyd McKenzie, FHL7: Co-Editor, HL7 FHIR Standard; Co-Chair, HL7 FHIR Management Group, Co-Chair, HL7 FHIR Infrastructure Work Group

HL7 FHIR Terminology

November 29–December 1, 2022 | 6 hours (online class)

Terminology is a required foundational component for interoperable data exchange in HL7 FHIR and other clinical data standards.

This class takes an in-depth look at the use of standard terminologies within FHIR artifacts (data types, resources, profiles, etc.). The structures and use of the primary FHIR terminology resources, operations and coded data types are covered, including how these terminology artifacts and capabilities are used in support of coded elements in other FHIR resources and profiles.

INSTRUCTOR

Rob Hausam, MD, FHL7: Co-Chair, HL7 Orders and Observations Work Group; Co-Chair, HL7 Vocabulary Work Group; Vocabulary Facilitator, HL7 Orders and Observations Work Group; Principal, Hausam Consulting LLC

V2, CDA & C-CDA

Online Classes & Webinars

C-CDA & C-CDA on FHIR

August 2–4, 2022 | 6 hours (online class)

Consolidated Clinical Document Architecture (C-CDA) on FHIR is an HL7 implementation guide that expresses the core C-CDA use case using HL7 FHIR resources.

This class provides a detailed background on the specification, explains how C-CDA builds on Clinical Document Architecture (CDA®) to provide highly structured patient summaries and discusses implementation challenges and choices. It will also give an overview of FHIR documents in general, the C-CDA on FHIR profiles in particular and discuss migration strategies when moving from CDA to FHIR and vice-versa.

INSTRUCTOR

Rick Geimer: Co-Editor, C-CDA and other HL7 Implementation Guides; HL7 CDA R2 Certified Specialist; Project Lead, C-CDA on FHIR; Chief Innovation Officer, Lantana Consulting Group

For more information
HL7.org/LearnNow | education@HL7.org

Mapping V2 to FHIR

August 16–17, 2022 | 3 hours (online class)

This interactive session provides an overview of the relevant HL7 FHIR features which can help with a successful integration into Version 2 (V2) environments. Participants will learn advanced aspects of the FHIR specification relevant to the issue of integrating an event-driven, message-based standard with a query-driven, REST-based approach.

INSTRUCTOR

Jean Duteau: Co-Chair, HL7 Modeling & Methodology Work Group; Co-Chair, HL7 Pharmacy Work Group; CDA Management Group Representative, Technical Steering Committee; ; Member, CDA Management Group; Director, Duteau Design, Inc.

More Opportunities

Online Event & Classes

Working Group Meetings

HL7 International working group meetings (WGMs) are held three times per year at varying locations (or virtually) and serve two important purposes:

1. To provide HL7 International work groups a chance to meet to work on the standards as well as the opportunity to network with industry leaders from around the world.
2. To provide an invaluable educational resource for the healthcare IT community.

EVENT DATES

January 18–21, 2022 (virtual)
May 8–13, 2022
September 17–23, 2022 (Plenary Meeting)

HL7 Standards for Interoperability

February 2-3, 2022 | 3 hours (online class)

This session is designed for relative newcomers to healthcare interoperability who are still unsure about how everything fits together. It provides a survey of the healthcare interoperability standards landscape, pointing out the main features of the terrain and how they link together to perform useful functions.

INSTRUCTOR

Virginia Lorenzi, FHL7: Member, HL7 International Board of Directors; Member, HL7 Education Advisory Council; HL7 Volunteer of the Year Award Recipient; Manager, HIT Standards and Collaborations, New York Presbyterian Hospital

HL7 Fundamentals

HL7 Fundamentals is an introductory, 12-week course which covers HL7 standards V2, CDA and HL7 FHIR. This is a self-paced, online course guided by real-world exercises with instructor assistance and tutor support.

Participants will learn about creating and exchanging electronic healthcare information for:

- Pharmacy orders and prescriptions
- Laboratory test orders and results
- Patient administration notifications (admission, transfer, discharge)
- Scheduling
- Continuity of care/discharge summary/referral letter/consultation notes
- Pathology/imaging reports

Prior experience in HL7 is not required.

COURSE DATES

February 10–May 5, 2022
May 26–August 18, 2022
September 8–December 1, 2022

INSTRUCTORS

Fernando Campos, FHL7: Chair, HL7 Argentina; Creator & Educator, HL7 Fundamentals, FHIR Fundamentals and FHIR Intermediate; Software Engineering Department Chief, Hospital Italiano de Buenos Aires; Author

Diego Kaminker, FHL7: Affiliate Director, HL7 International; Creator & Educator, HL7 Fundamentals, FHIR Fundamentals and FHIR Intermediate; Member, HL7 Argentina

Clinical Quality Language (CQL)

March 8–10, 2022 | 4.5 hours (online class)

Clinical Quality Language (CQL) is an HL7 authoring language standard that's intended to be human readable. It is part of the effort to harmonize standards used for electronic clinical quality measures (eCQMs) and clinical decision support (CDS).

Participants will learn about the general architecture of CQL and how it can be used with other data models such as HL7 FHIR and Quality Data Model (QDM).

INSTRUCTOR

Bryn Rhodes: Editor, Clinical Reasoning Module in FHIR; Co-Chair, HL7 Clinical Decision Support Work Group; Member, CDS Hooks PMC; Chief Technology Officer, HarmonIQ Health Systems Corporation

For more information
HL7.org/LearnNow | education@HL7.org

Virtual Corporate Training

HL7 offers customized group training for corporate, government and academia anywhere in the world, in flexible formats that meet your organization's requirements. Your team should learn straight from the source of HL7 standards!

HL7 will provide qualified, knowledgeable faculty and customized material developed by our standards team. Training is tailored to focus on specific areas based on your requirements. We also ensure confidentiality by keeping topics and focus internal.

Learn more at

[HL7.org/training/virtual-corporate-training.cfm](https://hl7.org/training/virtual-corporate-training.cfm)

Education On Demand

HL7's Education On Demand is an online source for professional development and certification preparation resources. Recorded versions of all live online classes, webinars and presentations, as well as study guides and practice exams are accessible at any time.

Users can search by standard, topic or instructor. HL7 members can enjoy free access to past Member Advantage webinars as well as product discounts.

Popular topics include:

- HL7 FHIR courses
- CDA standards training
- Path to certification
- Certification practice exams
- Version 2 standards training

Education On Demand is available 24/7 at
www.pathlms.com/HL7

Certification

Standards Certification



Achieve industry-recognized expertise

HL7 certification helps professionals achieve industry-recognized levels of expertise and gives employers confidence in the individual's specialized knowledge and skills.

HL7 offers certification and proficiency testing to assess the knowledge and competence of its most frequently used health information technology (HIT) standards. Certificates and digital badges are awarded to those who pass the examinations.

Certification & Proficiency Exams:

- HL7 V2.8
- HL7 V3 RIM 2.36
- HL7 CDA®
- HL7 FHIR® (R4)

Learn more at [HL7.org/certification](https://hl7.org/certification)

For more information
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