**HL7 FHIR® Online Events & Classes**

**HL7 FHIR Connectathon**

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 13-15, 2021
May 17-19, 2021
September 13-15, 2021

**FOR MORE INFORMATION**

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

**Applied FHIR for Designers**

February 16–18, 2021  |  6 hours (online class)

This online class will help participants understand where and how FHIR might fit into their healthcare interoperability environment. It will also provide them with the tools they need to make judgments about when or if FHIR might be an appropriate solution for their healthcare IT needs. Explore existing FHIR solutions and a number of the aspects of FHIR that should be considered when designing them.

**INSTRUCTOR**

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

**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 18–April 1, 2021
June 3–July 15, 2021
September 16–October 28, 2021

**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

*Classes that are recorded will be available at HL7 On Demand

[www.pathlms.com/HL7](http://www.pathlms.com/HL7)
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 4–April 1, 2021
June 17–July 15, 2021
September 30–October 28, 2021

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 for Healthcare Information Analysts
4 Days | 12 Hours (online class)

The training intent for this course is to teach 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 22-23 & 25–26, 2021
October 16-17 & 23-24, 2021 (weekends)

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 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
April 1—April 29, 2021
July 15—August 12, 2021
October 28—November 25, 2021

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 | 9 Hours (online class)

This session is LIVE! Solve FHIR assignments in real time, in groups, guided by your instructor. The session runs three consecutive days, for three hours each day.

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

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

- **Tools:** A computer with Postman installed is required
- **Previous Experience:** No FHIR Experience required. XML/JSON experience recommended

**COURSE DATES**

- April 13-15, 2021
- July 20-22, 2021
- November 9-11, 2021

**INSTRUCTOR**

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

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**HL7 FHIR for Software Developers**

**May 4–6, 2021 | 6 hours (online class)**

FHIR for Software Developers tutorial takes an in-depth look into the infrastructure sections of the HL7 FHIR specification. It will provide insight on how to design, develop and test software that uses the FHIR interoperability standard – all the way from the wire-format up to validation and storage.

**INSTRUCTOR**

- **Rik Smithies:** Consultant, NProgram Ltd.; Technical Chair, HL7 UK; HL7 International Co-Chair (Clinical Statement); Member, HL7 Standards Governance Board

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**Whirlwind Tour of HL7 FHIR Resources**

**May 12-13, 2021 | 3 hours (online class)**

Take an interactive deeper dive into FHIR by examining how the universe of FHIR resources represent healthcare concepts and their relationships. This class examines the various categories of FHIR resources and discusses their purpose and application. As we explore the resources, we will discuss nuances such as maturity, flags and patterns that can help inform your design choices as you apply FHIR to technology solutions in healthcare.

**INSTRUCTOR**

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

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**HL7 FHIR DevDays**

**June 7–10, 2021 | Virtual Event**

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/](http://www.devdays.com/us/)

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**SMART on FHIR & CDS Hooks**

**June 22–24, 2021 | 6 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.

**INSTRUCTOR**

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

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**HL7 FHIR Security & Privacy**

**July 13–15, 2021 | 4.5 hours (online class)**

The HL7 FHIR Security & Privacy online class describes 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).

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.

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For more information

[HL7.org/LearnNow](http://HL7.org/LearnNow) | education@HL7.org
Clinical Quality & Decision Support on FHIR  
October 5–7, 2021 | 6 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 online class will look at how the HL7 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; Interim Co-Chair, HL7 Clinical Decision Support Work Group; Member, CDS Hooks PMC; Chief Technology Officer, HarmonIQ Health Systems Corporation

HL7 FHIR Profiling  
October 19-21, 2021 | 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

Applied Questionnaire and Data Capture  
November 2-4, 2021 | 4.5 hours (online class)
This class will help participants use HL7 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 30–December 2, 2021 | 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. This includes how these terminology artifacts and capabilities are used in support of coded elements in other FHIR resources and profiles. The class will also discuss how terminology content and capabilities are made accessible and usable within a FHIR terminology service.

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

HAPI FHIR  
December 7–9, 2021 | 6 hours (online class)
This class will cover HAPI FHIR (http://hapi.fhir.io/), the reference implementation of HL7 FHIR for Java developers. Topics will include working with the FHIR data model, client and server development, validation and other related topics.

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

V2, CDA & C-CDA
Online Classes & Webinars

V2 Advanced  
May 6–June 17, 2021 | 6 weeks (self-paced)
V2 Advanced covers all the concepts of the HL7 V2 standard. Apart from core concepts of V2, the training also covers all topics of certification material. It may be especially useful for engineers, business analysts and system designers.

Participants will learn:
• Proficient knowledge of HL7 V2.8 standard
• To read and write V2.x messages
• Understanding of data types and their use
• Understanding of V2.x important & frequently used messages
• Coverage of all V2.x certification topics
• Understanding of integration engine and building interfaces in Mirth Connect

No prerequisites are required.

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
C-CDA & C-CDA on FHIR
August 3–5, 2021  |  6 hours (online class)
C-CDA on FHIR is an HL7 implementation guide that expresses the core Clinical Document Architecture (CDA®) use case using HL7 FHIR resources. This class delivers an overview of FHIR documents in general, the C-CDA on FHIR profiles, and discusses migration strategies when moving from CDA to FHIR and vice-versa.

INSTRUCTOR
Rick Geimer: Member, CDA Management Group; 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

Mapping V2 to FHIR
August 17–18, 2021  |  3 hours (online class)
This class provides an overview of the relevant FHIR features which can help with a successful integration into Version 2 (V2) environment. 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; Member, Technical Services Committee; Director, Duteau Design, Inc.

General HL7 & Other

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 11—May 6, 2021
May 27—August 19, 2021
September 9—December 2, 2021

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 30–April 1, 2021  |  6 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; Interim Co-Chair, HL7 Clinical Decision Support Work Group; Member, CDS Hooks PMC; Chief Technology Officer, HarmonIQ Health Systems Corporation
Overview of Interoperability
April 21–22, 2021  |  3 hours (online class)

This online class 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.

The class will consist of three main sections covering:
1. Messaging standards such as HL7 Version 2 and Version 3
2. Clinical document standards such as Clinical Document Architecture (CDA®), Continuity of Care Document (CCD®), Continuity of Care Record (CCR) and IHE XDS
3. Terminology standards such as SNOMED CT and LOINC

INSTRUCTOR
Gora Datta, FHL7: Member, Education Advisory Council; Co-Chair, HL7 Mobile Health Work Group; Group Chairman & CEO, CAL2CAL Corporation

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

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

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

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