HL7 Tutorial Specification

Version: 0.1 Title: **Introduction to HL7 FHIR**

Complete the table below

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| Title | Introduction to HL7 FHIR | This title is unique and friendly it explains what is intended. Make sure that the title makes sense to those who don’t know the topic well. |
| Summary | FHIR is the newest healthcare interoperability standard offered by HL7, providing domain friendly wire formats compatible across the document, messaging, services and RESTful paradigms. This tutorial is aimed at those who want to learn more about FHIR, what it can do and how their organization might best take advantage of it. | Explain what the tutorial is about. Remember this is marketing information about your intended tutorial or information session and should encourage people, and give them a reason to attend. |
| The tutorial will benefit | Analysts, Vendors, Project Managers | This defines the audience |
| Upon completion of this tutorial the students will have obtained the following | * Explain the main principles underlying the FHIR methodology * Describe the characteristics of a FHIR resource and understand the contents of a resource definition * Understand the relationship between FHIR and other HL7 standards such as v2, v3 messaging and CDA * List some of the key FHIR infrastructure resources and explain how they are used to support the 4 FHIR interoperability paradigms * Help their organization to determine if, when, where and how they might implement FHIR | These are the competencies. They are driven by verbs. These verbs include the following, each indicating a higher level skill:  1: know - recall, list, name  2: explain, understand  3: do (perform, use)  4: analyse  5: strategise  (see appendix A) |
| Prerequisites | None |  |
| Skills required to teach | Extensive familiarity with the FHIR specification, some knowledge of other HL7 specifications and standards development processes in general. | Identify the skills needed to present this material |
| Faculty | Lloyd McKenzie, Grahame Grieve,  Jean Duteau (alternates) | Indicate the person prepared to deliver and be responsible for this course |

# Actual Training Plan

See sample below to assist you in completing the training plan.

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| Topic | Competency/Content | Minutes | Resources |
| Introduction & round-table | Introduce presenter, go around the room and identify stakeholder familiarity with material and objectives for the presentation | 10 |  |
| What is FHIR? | Understand the interoperability problem space FHIR addresses | 5 |  |
| Expand the FHIR acronym and explain where FHIR fits in the standards continuum | 2 |  |
| List the artifacts FHIR provides and the paradigms those artifacts can support | 8 |  |
| Explain how the artifacts and paradigms support the interoperability problem space | 10 | What paradigms might you use and when? |
| Explain the main principles underlying the FHIR methodology | 10 |  |
| Describe how FHIR differs from and improves upon prior interoperability approaches | 10 |  |
| What is a Resource? | Explain what makes resources central to FHIR | 5 |  |
| Identify the characteristics of a resource | 10 |  |
| Describe how relationships between resources are handled by different paradigms | 5 |  |
| FHIR Extensions | Explain why extensions are essential to FHIR | 5 |  |
| Describe how extensions are handled within FHIR instances and FHIR systems | 5 |  |
| Identify how risks with the use of extensions are mitigated with FHIR | 5 |  |
| Reading FHIR specifications | List the properties that are defined for each FHIR data element | 10 |  |
| Understand how to read FHIR data elements within a specification | 20 |  |
| Describe the purpose of and understand how to find information in the remaining sections of a FHIR specification | 10 |  |
| Messages and Documents | Explain how the Message and Document resources are used within FHIR | 10 |  |
| Profiles and Conformance | Explain how the Profile and Conformance resources are used within FHIR | 10 |  |
| Implementing FHIR | Describe where FHIR is at in the development life cycle | 5 |  |
| List possible approaches to implementing FHIR | 5 |  |
| Identify considerations for use of FHIR | 5 |  |
| Review | Summarize key aspects of FHIR |  |  |

# Training Plan - Sample

Strategy is to use this training plan for students to critique and provide a blank training plan spreadsheet to support their analysis of their own courses.

Note: Every session (60 minutes or 1.5 hours for quarters of a day) should allow for 15 minutes of questions or ‘settling – arrival / pack up’ time which allows the group to relate and cope with fast and slow learners who have additional questions or needs.

Overhead materials: one slide every 2 minutes is generally considered a fast pace, often too fast for people to take in information. For a 1.5 hour presentation of complex information such as that of HL7 there should be no more than 45 slides, and preferably 30 slides. Additional information may be provided. If you have a course that changes significantly according to the audience needs, the materials should have clear sections or topics and declaration of those topics covered and not covered should be made both to the students and recorded in course feedback information.

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| --- | --- | --- | --- |
| Topic | Competency/Content | Minutes | Resources |
| Introduction | Introduce yourself and explain what the session is designed to provide,  Confirm with learners what they want out of the session | 2 |  |
| General Design of tutorial or information session | 1: understand the need to identify appropriate content and methodology to meet stakeholder need | 5 | Exercise - consider for your area of interest |
| 2: understand development of competencies to meet need | 8 | Sample of competencies for this course, what would be some of the competencies you would identify |
| 3: identify expected background of learners | 2 |  |
| Structure of deliverable | 4: understand what a learning plan needs to contain, breaking content into defined timeslots and identified resources/exercises | 10 | How many slides are in tutorials you provide?  Consider relevance of strategies for flexible learning |
| 5: understand delivery methods and assessment methods and tools | 5 | What alternatives could be used in your situation, what is required to ensure learners achieve required outcomes |
| 6: understand the need to measure assessment and content against competencies | 8 | sample tutorial outline |
| HL7 requirements | 7: prepare proposal for HL7 education | 2 |  |
|  | 8: undertake basic tutorial quality review | 3 | How could you do this in HL7? |
| Questions |  | 5 |  |
|  | TOTAL TIME | 50 |  |
| Speakers are invited to speak as a representative of HL7 and to do a tutorial for HL7. Speakers may indicate their name and their firm’s name on the introduction slides.  Speakers are not allowed to include slides or hold discussions during HL7 tutorials, indicating “our company provides XXX or XXX” or provide ‘infomercials’ on their company, the products they sell, etc.  HL7 will not allow speakers to use the HL7 tutorials as a time for marketing of individual firms. | | | |

Appendix A Bloom's Taxonomy(Bloom, 1956), with Skills Framework for the Information Age (SFIA) (SAIF Foundation) level comparison

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| **Bloom’s Taxonomy** | **Verbs used to describe the levels of tasks an individual at a given level of competency is able to perform.** | **SFIA levels** |
| Knowledge | Arrange, define, duplicate, label, list, memorize, name, order, recognize, relate, recall, repeat, and reproduce state. | 1: Follow |
| Comprehension | classify, describe, discuss, explain, express, identify, indicate, locate, recognize, report, restate, review, select, translate, understand | 2: Assist |
| Application | Apply, choose, demonstrate, dramatize, employ, illustrate, interpret, operate, practice, schedule, sketch, solve, use, write. | 3: Apply |
| Analyse | Analyze, appraise, calculate, categorize, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, question, and test. | 4: Enable |
| Synthesis | Arrange, assemble, collect, compose, construct, create, design, develop, formulate, manage, organize, plan, prepare, propose, set up, and write. | 5: Ensure, Advise  6: Initiate, influence |
| Evaluation | appraise, argue, assess, attach, choose compare, defend estimate, judge, predict, rate, score, select, support, value, evaluate | 7: Set Strategy, inspire, mobilise |

Bibliography

BLOOM, B. (ed.) 1956. *Taxonomy of education objectives: The classificaiton of educational goals: Handbook 1, cognitive domain*: Longmans, Green, New York, Toronto.

SFIA FOUNDATION. 2008. *Skills Framework for the Information Age* [Online]. Available: <http://www.sfia.org.uk/cgi-bin/wms.pl/932> [Accessed 11 Feb 2010].