



7.3 Using HL7/FHIR messaging

Course Specification

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ADR Consultancy
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Version control

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Approvals

Name	Title	Date	Version
Tony Paget	EQAS Accreditation	26/05/13	Draft

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UK CHIP LTD	Tony Paget	26/05/13	Draft

1. Educational Aims

The module aims to provide the healthcare IM& T students, apprentices and professionals with the understanding and essentials skills to competently understand and use Health Level 7 (HL7).

The module covers the following UK Occupational Standards, Competences and KSF dimensions

UK NOS	Health Informatics HI5.2010 Develop models for processing data and information in a health context HI7.2010 Collect and validate data and information in a health context HI17.2010 Facilitate the implementation of systems to meet health information needs HI2.2010 Assure the quality of data and information in a health context.
UK KSF Dimensions	IK1 Information processing IK2 Information collection and analysis
UK Source	Skills for Health

2. Course Information for CIS UCQ™

SUMMARY COURSE DETAILS	
Title of Course	Using HL7
Course Code	CISUN7.3HL7
Total credits of course	20 Credits on successful completion of the module and a reflective assignment through participating universities.
Level of study	Level 3
Course Leader	
Start date of course	May 2013
Accrediting Body	NCFE
Is the course collaborative?	Yes
If Yes name Partner(s)	NCFE

Mode of delivery and duration	Part-Time	Classroom/e-learning/Pre-reading
Number of intakes per annum	100	
Guided Learning Hours	20 hours	
Assessment Code	CISASSUN3.7HL7	

3. Learning outcomes to be achieved.

The learning outcomes for each unit elements are listed in section 5.

4. Structure

4.1 Module definition by module

Learners must undertake the Foundation unit to achieve credit in this award. Optional modules may also be taken as appropriate to their individual learning requirements.

Element	Title	Target audience	Mandatory/Option	UKCHIP Ref
7.3.1	HL7 Foundation	Informatics students and Health staff new to technology	M	GI14001 - GI15001/2, SI8001/2
7.3.2	HL7 Advanced	Informatics students having achieved Foundation, Informatics professionals	O	SI8001/2

4.2 Indicative delivery structure

Type	Duration	Explanation
Pre reading materials		<p>The students will be provided with literature and other course materials prior to the start of the course (listed below). This will ensure that the student gains a basic understanding of the subject prior to training.</p> <p>Pre-course reading pack including:</p> <ul style="list-style-type: none"> • Learner handbook and appeals (CIS-CAN-12) • Learner Health and Safety (CIS-CAN-05) <p>Health Level Seven International https://www.hl7.org/ http://hl7.org/fhir/?utm_referrer=https%3A%2F%2Fwww.hl7.org%2F</p> <p>NHS interoperability toolkit https://digital.nhs.uk/services/interoperability-toolkit</p> <p>NHSX/NHS Digital www.nhsx.nhs.uk www.digital.nhs.uk</p> <p>NHS Tech strategy https://www.gov.uk/government/news/matt-hancock-launches-tech-vision-to-build-the-most-advanced-health-and-care-system-in-the-world2018</p> <p>NHS Long Term Plan 2019 https://www.longtermplan.nhs.uk/</p> <p>Making IT count@ Harnessing the Power of Information Technology in Health and Care in England (DHSC, 2016) Making IT Work: Harnessing the Power of Health Information Technology to Improve Care in England (publishing.service.gov.uk)</p> <p>Liberating the NHS: An information revolution (DH2010) Equity and excellence: Liberating the NHS (publishing.service.gov.uk)</p> <ul style="list-style-type: none"> • www.cisucq.com <p>Note: Websites should be used as a resource and should be reviewed regularly for the latest information</p> <p>Note for Learners</p> <p>Learners should expect to be familiar with the learning outcomes defined within this module through their understanding of the standards and processes designed</p>

		by the organisation. NHSX and NHSD websites should be used as a resource for nationally driven activities and should be reviewed regularly for the latest information in conjunction with local processes and priorities
Classroom based	145	Structured training sessions will be led by an instructor in small groups of students.
E-learning	Flexible	The courses will be organised in granular level allowing the students to complete the unit at a pace and in stages suitable for them. The medium used may be online, via the web or on a CD.
Assessment	40	The students will be required to produce a workbook/or develop a portfolio to record competency evidence, including a combination of multiple choice questions, observed practical assessments, and witness statements. For the full award learners will be required to complete a reflective assignment.

5. Curriculum including learning outcomes

The module will provide opportunities for students to develop and demonstrate the knowledge and the understanding and other key skills in the following areas:

5.1 Unit 7 Element 7.3.1 –HL7

Learning Outcomes:	
What the candidate must do:	What the candidate must know:
Candidate will be able to demonstrate understanding of the uses and functionality of HL7	1.1.1 How to read and interpret HL7 messages 1.1.2 Identify HL7 message types 1.1.3 Identify and troubleshoot errors in HL7 messages 1.1.4 the waiting lists and functions 1.1.5 HL7 message structure 1.1.6 HL7 and IHE 1.1.7 The ADT message 1.1.8 Introduction to data types 1.1.9 The patient registration message 1.2.0 The acknowledgement message 1.2.1 The order message 1.2.2 The results message 1.2.3 Troubleshooting

5.2 Unit 7 Element 7.3.2 – Advanced HL7

Learning Outcomes:	
What the candidate must do:	What the candidate must know:
	2.1.1 HL7 implementation project

Candidate will be able to demonstrate an advanced level understanding of HL7	2.1.2 HL7 message analysis and Trigger concepts 2.1.3 Messaging formats and Table translation issues 2.1.4 Testing strategies 2.1.5 Message profiles 2.1.6 Conformance documents 2.1.7 XML formatting of HL7 messages
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6 Teaching, learning, and assessment methods to enable outcomes to be achieved and demonstrated

6.1 Teaching and Learning

Competencies and skills acquired during the course is achieved with a range of appropriate teaching practices and methods in order to obtain the learning outcomes as defined in section 5.

These include:

- **Class room based training** – students attend a session whereby a trainer delivers the short course. These sessions would be interactive and ‘hands on’ where appropriate.
- **Exercises** – some classroom training will involve the trainer providing a problem scenario whereby groups of student work together applying the knowledge attained in the sessions.
- **Student presentations** – This is where the students will have to either demonstrate their understanding about a system or on a topic to other students.
- **Group discussions** – The trainer will encourage students to talk about issues facing by their organisations and link this to the learning outcomes of the course.
- **Oral questioning** – The trainer will actively involve participation of the students by encouraging answering questions throughout the delivery of the course to reinforce the learning.
- **Trainer observations** – The trainer may make additional observations throughout the session to comment and record the students’ progress.

6.2 Evaluation and Assessment of competencies and skills

The students will be asses formally using a standardised assessment paper that composes of multiple choice questions (scenario based) and free text open ended question which is used to assess the students understanding of the subject in detail. The students’ participation in group discussion, presentations and oral questioning will also form part of the assessment procedure to demonstrate the student’s competencies in the subject. The trainer may record these and other comments of the student’s progress in separate documents (witness statements) to ensure that all learning outcomes have been met by the student.

6.3 Teaching Materials

The granular structure of the unit allows the use of clear information about course contents, organisation and learning outcomes. Students are provided with useful handouts and summaries to supplement other teaching methods throughout the session. In addition, pre reading

7. Admissions Criteria

Any healthcare professionals, external suppliers and other interested parties who wish to gain a better understanding of the subjects covered by this unit can enrol through their local centre. There are no pre-requisites for this unit.

8. Resources

8.1 Specialist Resources

All supporting teaching course materials and pre reading will be made available through the CIS website at www.cisucq.com
All teaching materials including assessment papers will be made available to authorised teachers in a secure section of the CIS website.

8.2 Franchise delivery/Teaching Staff

The trainers who will undertake the delivery of the course will be listed in the CIS UCQ™ Staff Resources along with their CVs. Trainers must hold (or be working towards) a recognised teaching qualification such as PTLLS, Cert Ed or PGCE and must be a registered member of the UK Council for Health Informatics Professionals (UKCHIP).

9 Quality Management

The CIS UCQ™ programme is maintained using the quality management system as defined for ADR Consultancy in partnership with NCFE. Frequent review sessions consisting of subject matter experts and the CIS panel are regarded as fundamental to the achievement of the CIS programmes objectives, and continuously identifying sources of improvement and implementing the changes. The evaluation of courses are collected via questionnaires (student evaluation, trainer evaluation) from trainers and students to continuously improve the delivery and course contents to ensure that the course is of a high standard.

9.1 Internal Moderation

The student assessments and handbooks are assessed by the local internal verifier who will take a sample of these and ensure that all CIS procedures and policies are being adhered to as well as checking the marking criteria.

9.2 External Moderation

ADR Consultancy will be conducting Franchise visits to organisations running the CIS course and qualifications and will sample the assessments and workbooks. The external verifiers are assigned to each site and they will be in charge of ensuring the quality of the programme at the site adheres to the CIS policies and procedures. The external verifiers will liaise with the trainers, internal verifiers and select students. Upon satisfactory site report as prepared by the external moderators, the candidates will be awarded certifications from NCFE and credits from participating Universities.

10. Regulations

This unit and others are regulated by the overall Care Information Systems Users Quality Competencies (CIS UCQ) policies and procedures. The CIS UCQ™ conforms to agreed quality management Teaching, learning, and assessment methods to enable outcomes to be achieved and demonstrated