T Level Technical Qualification in Healthcare Science

Employer-set project (ESP)

Assisting with Healthcare Science

Project brief

T Level Technical Qualification in Healthcare Science
Employer-set project (ESP)

Assisting with Healthcare Science

Project brief

Contents

Health and safety

All students must be informed and aware of any relevant health and safety considerations that need to be complied with to ensure they carry out their work in a safe manner. Students must be supervised at all times to ensure health and safety practices are observed. Where students are seen to be working in an unsafe manner, at the discretion of the tutor, the student may be removed from the assessment and the remaining time be rescheduled.

Assessment

- you are not permitted to work in groups, except during the discussion in task 3(a), and all work must be your own

- you will have 17 hours and 45 minutes to complete the employer-set project (ESP) – recommended and maximum timings, where applicable, are provided for each task under the heading conditions of the assessment

Assessment objectives

The ESP is a formal assessment that accounts for 30% of the overall core component grade and therefore it is important that you produce work to the highest standard.

You will be assessed against the core knowledge and skills that you have learnt throughout your course of study, in response to a brief set in a rea world situation and validated by employers within the Assisting with Healthcare Science specialism.

The evidence generated for the ESP will be assessed holistically against 5 integrated assessment objectives. These assessment objectives and their weightings are shown in the tables below.

Assessment objective (AO)		AO weighting
AO1	Plan their approach to meeting the project brief	6.25%
AO2	Apply core knowledge and skills to meet quality management objectives	50.00%
AO3	Select relevant techniques and resources to meet the brief	11.46%
AO4	Use English, mathematics, and digital skills as appropriate	15.63%
AO5	Realise a project outcome and review how well the outcome meets the brief	16.66%

Evidence

	AO1	AO2	AO3	AO4	AO5	TOTAL
Task 1						
Research/literature review		15	5			20
English, mathematics and digital				4		4
Task 2						
Quality improvement report	6	14				20
English, mathematics and digital				9		9
Task 3						
3(b) Quality improvement report v2* *task 3(a) is not marked		2	2		5	9
Task 4						
4(b) Discussion with tutor		11			5	16
English, mathematics and digital				2		2
Task 5						
Reflection		6	4		6	16
Total marks:	**6**	**48**	**11**	**15**	**16**	**96**
% Weighting	**6.25%**	**50.00%**	**11.46**	**15.63**	**16.66**	**100**

Guidance for students

Student instructions:

- read the project brief carefully before starting your work

- read the assessment objectives grid, as part of the marks for this assessment will be based on your ability to plan how you will meet the requirements of the brief – you should therefore keep brief planning notes as you work through the tasks for this assessment

- you must work independently and make your own decisions as to how to approach the tasks within the employer-set project (ESP)

- you must clearly name and date all of the work that you produce during each supervised session

- you must hand over all of your work to your tutor at the end of each supervised session

- you must not work on the assessment in between supervised sessions
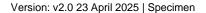
Student information:

- this ESP will assess your knowledge, understanding and skills from across the core content of the qualification

- in order to achieve a grade for the core component, you must attempt both of the external examinations and the ESP – the combined marks from these assessments will be aggregated to form the overall core component grade (A* to E and U) – if you do not attempt one of the assessments, or fail to reach the minimum standard across all assessments, you will receive a U grade

- the maximum time you will have to complete all tasks for this ESP is 17 hours and 45 minutes

  o your tutor will explain how this time is broken down per task and will confirm with you if individual tasks need to be completed across multiple sessions

  o in task 1 and task 2 you may use the internet to access the links provided in the tasks – use of other websites is **not** permitted, except where the link requires you to perform a search and the results take you directly to other websites – you must submit a copy of your browsing history as part of your evidence

  o at the end of each supervised session, your tutor will collect all ESP assessment materials before you leave the room – you must not take any assessment material outside of the room (for example, via a physical memory device)

  o you must not upload any work produced to any platform that will allow you or others to access materials outside of the supervised sessions (including email)

- when completing each task, you should take into consideration the specific assessment objectives and core skills that are being assessed, as outlined in the task instructions where permitted and stated for each task, your tutor will provide you with a copy of previously submitted evidence – this is not an opportunity to make changes to your previously submitted evidence – any notes you wish to include must be made separately as copies of previously submitted materials will be deleted or destroyed upon completion of the relevant task

- you can fail to achieve marks if you do not fully meet the requirements of the task

Plagiarism

Plagiarism may result in the external assessment task being awarded a U grade. For further guidance, refer to your student handbook – plagiarism guidance and maladministration and malpractice policy located on the NCFE website.

Presentation of work:

- all of your work should be completed electronically using black font, Arial size 10 to 14 unless otherwise specified

- any work not produced electronically must be agreed with your tutor, in which case the evidence you produce should be scanned and submitted as an electronic piece of evidence

- all of your work should be clearly labelled with the relevant task number and your student details, and be legible (for example, front page and headers)

- electronic files should be given a clear filename for identification purposes; see tasks for any relevant naming conventions

- all pages of your work should be numbered in the format page X of Y, where X is the page number and Y is the total number of pages

- you must complete and sign the external assessment cover sheet (EACS) and include it at the front of your assessment task evidence

- you must submit your evidence to the supervisor at the end of each session

Employer-set project brief: Assisting with Healthcare Science

The employer-set project (ESP) has been designed as an opportunity for you to demonstrate how you respond to a current need or set of circumstances that has been identified in your sector and is validated by employers.

You should consider how you will approach each task and plan your time to ensure you give yourself the best opportunity to meet the needs outlined in the brief. You should keep short notes on how you approach this, as this can be used to support the completion of a reflection task required at the end of the project.

Incident: wrong blood in tube (WBIT)

You are working within the dialysis unit where patients with renal disease are cared for. Prior to receiving dialysis treatment, patients have blood samples taken to screen for infectious disease (for example, HIV and hepatitis) to prevent spread of infection by use of the dialysis machine.

The department has been notified of an incident of potential mislabelling of samples after some irregular results have been received from the pathology department from one of the patients receiving care in the unit. Mr Johnstone, who has attended the clinic to receive his dialysis treatment for many years, has consistently been antibody/antigen negative for HIV on his blood tests. The consultant managing the patient, Mr Floss, takes a patient history at every appointment. Mr Johnstone has been married to his wife Audrey for 37 years and has not undertaken any high-risk activities which would expose him to infection. His most recent sample has tested positive for HIV. A second sample has been collected and tested to check the result. The second sample has given a negative result.

It is possible that there has been an error in sample collection and labelling and a sample from a known HIV positive patient has been labelled with the incorrect patient details, or the sample has been contaminated in some way.

You have been asked to work with the departments' quality team to identify and suggest changes to current procedure which will improve the safety and quality of current practice. These will be used to update NHS Trust policy on sample collection and labelling to minimise risk of the error recurring.

The department has received a DATIX report to investigate the cause of the error, which includes a summary from the laboratory of their observations.

DATIX report:

Date and time of incident	4:30pm 10/03/20
Description	On retesting patient's bloods to confirm a positive HIV screening result, I noticed that the results on the second sample from Peter Johnstone, date of birth (DOB) 24/08/60, were negative. I retested the first sample which gave a positive result again. I noticed that the patient details had been handwritten on the blood tubes received from that clinic. As the patient is a low risk and previous negative patient with an unconfirmed screening result, it is likely that the HIV positive result is incorrect.
What action was taken at time of incident	I immediately notified the consultant on duty who informed the dialysis unit of the potential error.
What type of incident was this?	Sample labelling incident.
Type of sample	Blood.
Date of sample collection	02/03/20
Where did the incident occur?	Renal dialysis unit.
Incident reviewer	Ward manager.
Was anyone else involved in the incident?	No.
Is this a safeguarding adults concern?	No.
Harm and severity	No harm or injury caused (patient treatment delay).
Person reporting the incident	Linda Jones, Senior Biomedical Scientist.
Person responding to report	Fiona Harris
Response from reviewer	I reviewed the appointments database from 02/03/20 to check the patients who attended clinic that day. On the list there was a patient who was known HIV positive. I interviewed the members of staff who had collected samples that day for an account of events. Both members of staff confirmed they collected blood for testing and placed samples on the sample collection trolley in clinic and then labelled the blood tubes by hand before they were collected by the porter. None of the samples had leaked and the sample tubes were intact.

Reference material list

Quality management system (QMS) in healthcare

Link 1: www.evidence.nhs.uk

NHS clinical governance

Link 1: www.uhb.nhs.uk/clinical-governance-components.htm

Link 2: www.rcn.org.uk/clinical-topics/clinical-governance

Link 3: www.bmj.com/content/330/7506/s254.3

Incident reporting frameworks (DATIX)

Link 1: www.england.nhs.uk/patient-safety/report-patient-safety-incident

Link 2: www.hee.nhs.uk/sites/default/files/documents/Incident Reporting Policy.pdf

Link 3: www.evidence.nhs.uk/search?q=incident+reporting

Healthcare Safety Investigation Branch (HSIB)

Link 1: www.hsib.org.uk

Link 2: www.thebiomedicalscientist.net/science/why-does-wrong-blood-tubes-happen

Serious hazards of transfusions (SHOT)

Link 1: www.b-s-h.org.uk/media/16505/shot-report-summary-2017.pdf

Link 2: www.shotuk.org/shot-reports/report-summary-and-supplement-2019

Link 3: www.pubmed.ncbi.nlm.nih.gov/20738838

Link 4: www.onlinelibrary.wiley.com/doi/full/10.1111/bjh.13137

Task 1: research/literature review

AOs 2, 3 and 4

Using **only** the literature sources listed in the brief, you are required to carry out research on current national guidelines on clinical sample collection, best practice and lessons learned from previous/similar events.

The information gathered will help identify failings in current procedure which may have caused the incident to occur. The findings from your research should be presented in a written literature review, summarising the main points in individual sections.

The research requirements include:

- collation of appropriate and relevant information about current national guidelines and best practice in relation to the issues in the incident report

- application of information gathered to determine what went wrong in the incident described

- data analysis and presentation of data in tables or graphs to illustrate key findings, for example, the frequency of similar incidents

- drawing conclusions and summarising key themes arising from the literature and data analysis

- clear presentation of information in a written report summary

(20 marks)
plus 4 marks for English
(Total marks: 24)

Conditions of the assessment:

- task 1 must be completed in supervised conditions

- you will have access to the internet when completing your work for this task – you must **not** access any other websites when completing task 1, except where the link requires you to perform a search and the results take you directly to other websites – you are required to submit a copy of your browsing history as part of your evidence for this task

- you will have a maximum of 5 hours to complete this task – in addition to this, you will be allowed a single supervised break of a maximum of 1 hour to be decided by your tutor, no earlier than 2 hours after the session has begun

Evidence requirements:

- word processed literature review, to include a maximum of 2000 words

- a copy of your internet browsing history

Assessment objectives

AO2: Apply core knowledge and skills to meet quality management objectives

AO3: Select relevant techniques and resources to meet the brief

AO4: Use English, mathematics and digital skills as appropriate

Core skills

CS1: Research skills

CS4: Problem solving skills

CS5: Reporting and presentation skills

Submission

The following filename convention should be used for all materials produced:

(Provider_number)_(Student registration number)_(Surname)_(First name)_Task1_Literature_Review

Note: Please request your provider and student number from your tutor.

Task 2: quality improvement report

AOs 1, 2 and 4

You have been asked to create a quality improvement report for senior staff to use, which outlines actions required to implement required quality improvements to current process, to minimise wrong blood in tube incidents and build on good scientific and clinical practice.

Use the information provided in the incident report together with your existing knowledge and information from your literature review to complete your quality improvement report using the pro-forma which has been provided. Your report must explain how your quality improvement plan will be implemented and supported by the whole team.

You should reference the information gathered as part of your research in task 1 and the content of the incident report.

(20 marks)
plus 4 marks for English, 2 marks for mathematics and 3 marks for digital
(Total marks: 29)

Conditions of the assessment:

- task 2 must be completed in supervised conditions

- you will have access to your research and the literature sources/links you used in task 1 – you must **not** access any other websites when completing task 2, except where the link requires you to perform a search and the results take you directly to other websites – you are required to submit a copy of your browsing history as part of your evidence for this task

- you will have a maximum of 3 hours to complete this task

Evidence requirements:

- word processed quality improvement report (pro-forma)

- a copy of your internet browsing history

Assessment objectives

AO1: Plan their approach to meeting the project brief

AO2: Apply core knowledge and skills to meet quality management objectives

AO4: Use English, mathematics and digital skills as appropriate

Core Skills

CS2: Communication skills

CS4: Problem solving skills

CS5: Reporting and presentation skills

Submission

The following filename convention should be used for all materials produced:

(Provider_number)_(Student registration number)_(Surname)_(First name)_Task2_Quality_Improvement_Report

Note: Please request your provider and student number from your tutor.

Task 3: peer discussion

AOs 2, 3 and 5

You must discuss your research findings and your proposed quality improvement report with your peers to gather peer feedback, which will be used to further develop your report and any required actions. You will also provide feedback on your peers' reports and ask each of them 1 question. Pro-formas are provided to help you receive and give feedback.

Task 3(a)(i): preparing for peer discussion

Read the quality improvement reports you have been given by your tutor and complete a preparation for peer discussion form for each quality improvement report.

Hand in your completed preparation for peer discussion forms to your tutor.

Task 3(a)(ii): exchanging feedback during peer discussion

Your tutor will put you into your peer discussion groups of approximately 3 students.

You will have access to your own quality improvement report, and your preparation for peer discussion forms completed in task 3(a)(i). You will have 20 minutes to re-familiarise yourself with the report and your forms, before beginning the group discussion.

Each group member will take it in turn to share their quality improvement report and receive feedback from the group.

When you give feedback on other students' reports, you must use the preparation for peer discussion forms completed in task 3(a)(i).

When you receive feedback, you must complete handwritten notes of the feedback you receive from each group member on the feedback from peer discussion form.

(0 marks)

part (a)(i) and (a)(ii) of this task is not marked

Task 3(b): using peer feedback to update your quality improvement report

Use your feedback from peer discussion form and reflect on the feedback that you have received. Use this feedback to write a summary of how you will update your quality improvement report, referencing the feedback received during the peer discussion. Your tutor will provide you with a copy of your submitted report from task 2.

You must justify the feedback that you decided to act on, as well as the feedback that you decided not to use.

(9 marks)

(Total marks: 9)

Conditions of the assessment:

For task 3(a)(i):

- task 3(a)(i) must be completed in supervised conditions

- You will have a maximum of 2 hours to complete this task, which includes any potential further work required following a review of your materials by your tutor.

- You will submit your work to your tutor and only receive feedback if your preparations are not suitable to support a meaningful contribution in the next task.

For task 3(a)(ii):

- the discussion will take place in groups to be decided by your tutor, and you will have access to all your materials from task 2 when preparing for this task

- you will have 20 minutes to prepare for this task, using the information you have developed in task 2, in supervised conditions

- you will have 5 minutes to discuss your quality improvement report

- Each member in your group will have a maximum of 5 minutes each to give you feedback.

- You will also give feedback to each member of your group, taking no longer than 5 minutes each.

For task 3(b):

- task 3(b) must be completed in supervised conditions

- you will have access to your materials from task 2 and task 3(a)(i) – you will not have access to the internet or any other additional resource materials when completing your work for this task

- you will have a maximum of 1 hour to complete this task

Evidence requirements:

- preparation for peer discussion form (pro-forma)

- handwritten or typed up feedback notes, including your questions asked to other group members – if handwritten, this evidence must be scanned prior to submission (pro-forma)

- a written summary of any changes you plan to make to your quality improvement report

Assessment objectives

AO2: Apply core knowledge and skills to meet quality management objectives

AO3: Select relevant techniques and resources to meet the brief

AO5: Realise a project outcome and review how well the outcome meets the brief

Core skills

CS2: Communication skills

CS3: Team working skills

CS6: Reflective evaluation

Submission

The following filename convention should be used for all materials produced:

(Provider_number)_(Student registration number)_(Surname)_(First name)_Task3x_(Additional detail of document content if multiple documents are produced per task)

Note: Please request your provider and student number from your tutor.

Task 4: present an overview of your quality improvement report

AOs 2, 4 and 5

Task 4(a): preparing to present your quality improvement report

You must prepare to present an overview of your quality improvement report for a discussion with your tutor in task 4(b). Your tutor will assume the role of the department manager from the setting referenced in the brief. You must include details of the updates you have incorporated as a result of the peer discussion.

After you have presented your overview, your tutor will ask you questions based on your quality improvement report, which may include aspects of how you decided on this course of action. A pro-forma has been provided for you to support your planning and preparation for this discussion. Your tutor will give you copies of your report including any summary of changes you have made.

Task 4(b): presenting and discussing your quality improvement report

You must discuss, with your tutor, the overview of your report prepared in task 4(a).

As part of task 4(b) you will also be assessed on your communication skills. Your tutor will record the audio from this discussion.

(16 marks)
plus 2 marks for digital skills
(Total marks: 18)

Conditions of the assessment:

- you will have a maximum of 2 hours for part (a)

- for part (b) you will have 5 minutes to present the information referenced in the task and 15 minutes to answer the questions

- the discussion will take place with your tutor, and you will have access to all your materials from previous tasks when preparing for this task

Evidence requirements:

- materials used to present overview (such as, presentation slides or word-processed document (pro-forma)), to include a maximum of 500 words

- tutor's observation notes of the discussion

- audio recording of the tutor discussion

Assessment objectives

AO2: Apply core knowledge and skills to meet quality management objectives

AO4: Use English, mathematics and digital skills as appropriate

AO5: Realise a project outcome and review how well the outcome meets the brief

Core skills

CS1: Research skills

CS2: Communication skills

CS5: Reporting and presentation skills

Submission

The following filename convention should be used for all materials produced:

(Provider_number)_(Student registration number)_(Surname)_(First name)_Task4x_(Additional detail of document content if multiple documents are produced per task)

Note: Please request your provider and student number from your tutor.

Task 5: reflective account

AOs 2, 3 and 5

You must now complete a written reflective account of your experience completing the project. You should reflect on all elements (tasks) involved and you will need to communicate how you have achieved the expected outcomes.

In your reflective account, you will need to provide evidence of your evaluation of your performance when completing the tasks. Explain how your reflections will enhance your professional development and self-awareness.

You should also reflect on how this event would impact others, for example, the patient, in a real clinical scenario, including how your recommendations will bring about improvements to quality of care to patients.

(16 marks)
(Total marks: 16)

Conditions of the assessment:

- you will have a maximum of 2 hours to complete your reflective account, to include a maximum of 500 words

Evidence requirements:

- word processed reflective account

Assessment objectives

AO2: Apply core knowledge and skills to meet quality management objectives

AO3: Select relevant techniques and resources to meet the brief

AO5: Realise a project outcome and review how well the outcome meets the brief

Core skills

CS6: Reflective evaluation

Submission

The following filename conventions should be used for all materials produced:

(Provider_number)_(Student registration number)_(Surname)_(First name)_Task5x_(Additional detail of document content if multiple documents are produced per task)

Note: Please request your provider and student number from your tutor.

Document information

Owner: Head of Assessment Solutions.

Change History Record

Version	Description of change	Approval	Date of Issue
v1.0	Post approval, updated for publication.		January 2021
v1.1	NCFE rebrand.		September 2021
v1.2	Sample added as a watermark	November 2023	16 November 2023
v2.0	Annual review Feb 2025 – amendments to timings on p3 and p5 to allow for larger group size. Further information on timings for Task 3 has been added to the Assessment Conditions section on p14 and p15.	April 2025	23 April 2025