Optional assessment guidance 2023–24

This guidance is **optional**. You can use this guidance or deliver and assess as outlined in the group award specification.

Group award title and code:	HND in Chemical Process Technology (SCQF level 8) GL6C 16

The approach you take **must** meet the:

- full evidence requirements for graded units
- national standards

Changes to conditions of assessment and/or evidence requirements

The following guidance applies to session 2023–24. No action is required for any units certificated on or before 8 August 2023.

Theory assessments

You can assess all units in the group award outcome-by-outcome. If you use a cut-off score for an examination-based assessment, the cut-off score must be 60% for each assessment. If you assess a single outcome using an examination-based assessment, the cut-off score must also be 60%.

You cannot remediate examination-based assessments. If a candidate does not pass, you must re-assess them using an alternative examination-based assessment.

If selected, you must assess the following units using closed-book assessments:

- Aromatic Chemistry: Theory and Laboratory Skills (SCQF level 8) H92N 35
- Base-Catalysed and Organometallic Chemistry: Theory and Laboratory Skills (SCQF level 8) H92P 35
- Chemical Engineering: Principles (SCQF level 7) H97N 34
- Engineering Mathematics 1 (SCQF level 6) H7K0 33
- Engineering Mathematics 2 (SCQF level 7) H7K1 34
- Engineering Mathematics 3 (SCQF level 7) H7K2 34
- Engineering Mathematics 4 (SCQF level 8) H7K3 35
- Engineering Mathematics 5 (SCQF level 8) H7K4 35

- Fluid Mechanics: Theory and Laboratory Skills (SCQF level 7) HE3E 34
- Fundamental Chemistry: Theory and Laboratory Skills (SCQF level 7) H92X 34
- Heat Transfer Theory and Practical Skills (SCQF level 7) H97T 34
- Industrial Chemicals: Processes and Products (SCQF level 7) HE3G 34
- Inorganic Chemistry: Theory and Laboratory Skills (SCQF level 7) H92Y 34
- Organic Chemistry: Theory and Laboratory Skills (SCQF level 7) H933 34
- Phase Equilibrium and Surface Chemistry (SCQF level 8) H935 35
- Physical Chemistry: Theory and Laboratory Skills (SCQF level 7) H936 34
- Process Operations: Distillation (SCQF level 8) H97R 35
- Process Operations: Heat Exchange, Drying and Evaporation (SCQF level 8) HE3J 35
- Process Safety Engineering (SCQF level 7) HE3F 34
- Thermodynamics and Kinetics: Theory and Laboratory Skills (SCQF level 8) H938 35

If you want to use different approaches to assessment rather than a traditional closed-book examination, you can amend a maximum of **6** optional credits from closed-book to open-book assessment. Examples include, but are not limited to:

- case studies
- group discussions
- investigations
- presentations
- projects
- supervised assessments covering the application of knowledge and understanding and problem solving

If you are using open-book assessments, the following applies:

- You cannot amend any of the units listed above to open-book.
- For any supervised and timed open-book assessments, candidates are restricted to **one page** of summary notes for each outcome, and this must be in their own words.
- You must not use a traditional closed-book examination in open-book supervised conditions.
- The revised assessment task(s) must have the same level of demand as the original assessment.
- You cannot use questions from SQA's assessment support packs (ASPs) in open-book assessments.
- You must split the **6** open-book optional credits into:
  - **3** credits in year 1
  - **3** credits in year 2

Note: some open-book assessments used in previous sessions are no longer valid. You must ensure that all open-book assessments meet the criteria listed above.

Practical experiments

We have introduced an abbreviated pro forma. This should avoid candidates being repeatedly assessed on laboratory reporting skills that they have adequately demonstrated across the range of units in the group award. It also allows more time to further develop practical skills.

You can only use an abbreviated pro forma when a candidate has demonstrated full competence in the required laboratory reporting skills. The revised laboratory reporting requirements for the group award are:

- **Four** laboratory diary entries.
- **Four** pro formas.
- **Six** full laboratory reports (three must be at SCQF level 8).
- All remaining practical experiments can be reported using an abbreviated pro forma, a laboratory diary entry, a pro forma or a full laboratory report.

You can amend the practical requirements for the following units:

- Thermodynamics and Kinetics: Theory and Laboratory Skills (SCQF level 8) H938 35
  — reduce to **one** practical experiment
- Heat Transfer Theory and Practical Skills (SCQF level 7) H97T 34
  — reduce to **one** practical experiment
- Process Water and Steam Services (SCQF level 7) HE3H 34
  — reduce to **one** practical experiment

If you are assessing a multistep practical experiment in the following units, you can amend the practical requirements, as shown:

- Organic Chemistry: Theory and Laboratory Skills (SCQF level 7) H933 34
  — reduce to **one** multistep practical experiment
- Main Group Inorganic Chemistry (SCQF level 8) H932 35
  — reduce to **one** multistep practical experiment
- Aromatic Chemistry: Theory and Laboratory Skills (SCQF level 8) H92N 35
  — reduce to **one** multistep practical experiment
- Base-Catalysed and Organometallic Chemistry: Theory and Laboratory Skills (SCQF level 8) H92P 35
  — reduce to **one** multistep practical experiment

A multistep practical experiment must involve a minimum of **three** steps at SCQF level 7 and **four** steps at SCQF level 8. Examples of steps that could contribute towards a multistep practical experiment are:

- Synthesis (which itself could be more than one step) — providing the steps are substantive, for example preparation of a Grignard reagent followed by its reaction with a carbonyl compound could count as distinct steps

- Purification (for example by recrystallisation)
- Determination of melting point
- Running and analysing IR spectrum
- Thin layer chromatography of product

Additional guidance and information

We have guidance on how to use the abbreviated pro forma on SQA's Understanding Standards website.

You can find more information on HNVQ delivery and assessment approaches for session 2023-24 on SQA's website.