Operating Instructions for Creation of Outline Content

September 2019   **Version 1.0**

Contents

1   Introduction

Technical Education Reforms

[The report of the Independent Panel on Technical Education](#)[1] (the Sainsbury Report) recommended a new system of technical education to provide a high-quality technical option alongside an academic option for students aged 16 to 19. In the [Post-16 Skills Plan](#)[2] and the [Technical and Further Education Act 2017](#)[3] we committed to these recommendations.

Establishing a technical education system that rivals the best in the world is a core part of the government's ambitious [Industrial Strategy](#)[4]. The Industrial Strategy sets out a long-term plan to boost the productivity and earning power of people throughout the United Kingdom. T Levels are central to the reformed technical education system. They are rigorous, classroom-based, technical study programmes at level 3, designed to support entry to skilled employment in technical occupations at level 3 and above.

T Levels will be available alongside apprenticeships as one half of a high-quality technical education offer, with both based on the same set of employer-designed standards, approved and managed by the Institute for Apprenticeships and Technical Education (The 'Institute').

Technical Education Routes

Both T Levels and apprenticeships will be underpinned by the 15 new technical education routes and will share a common framework of standards.

Occupational maps

An occupational map has been developed for each of the 15 routes to show the occupations that are in scope for technical education, covering both employment based (apprenticeships) and classroom based (T Levels) learning. Rather than grouping occupations according to sector, they group together skilled occupations at different levels that share similar knowledge, skills and behaviours. These occupations are defined as Technical occupations at Levels 2 and 3; Higher Technical occupations at Levels 4 and 5 and Professional occupations at Levels, 6, 7 and 8.

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[1] https://www.gov.uk/government/publications/post-16-skills-plan-and-independent-report-on-technical-education

[2] https://www.gov.uk/government/publications/post-16-skills-plan-and-independent-report-on-technical-education

[3] https://www.legislation.gov.uk/ukpga/2017/19/contents

[4] https://www.gov.uk/government/topical-events/the-uks-industrial-strategy

| Technical education | | Professional occupations |
Technical occupations	Higher technical occupations	
These are skilled occupations at level 2 and 3	These occupations require more knowledge and skills acquired through experience in the workplace, further technical education, or a higher apprenticeship. These occupations typically require qualifications at levels 4 and 5	These occupations are outside of the remit of technical education, but they are included to show degree apprenticeships and potential progression from higher technical occupations

Technical routes

Each route is split into up to three pathways which are further split into clusters. There is likely to be one T Level for each pathway (Annex A shows the different routes and the pathways within each route).

Agriculture, Environmental and Animal Care	Creative and Design	Legal, Financial and Accounting
Business and Administration	Digital	Protective Services*
Catering and Hospitality	Engineering and Manufacturing	Sales, Marketing and Procurement*
Education and Childcare	Hair and Beauty	Care Services*
Construction	Health and Science	Transport and Logistics*

Routes marked* are likely to be apprenticeship only. These routes include occupations that:

- May not be suitable for learners under the age of 18;

- Include a prerequisite for study e.g. a full driving licence;

- Do not have sufficient technical content to require a two year T Level programme in order to perform them successfully; or

- Are not suitable for the majority of learning to be undertaken in a classroom-based setting.

In addition, there may be occupations within the other routes where, for the reasons above, it would not be appropriate for a T Level programme to be developed and should therefore be apprenticeship only.

Standards

Occupational standards are developed by employer-led Trailblazer groups as part of an apprenticeship standard and describe the knowledge, skills and behaviours (KSBs) that an individual needs to be fully competent in an occupation. For most occupations

identified in the technical routes, standards have either been developed or are in development and can therefore be used by the panels as the basis for T Levels.

Where no standards are yet in existence for a particular occupation, the T Level panel will focus on occupations within the pathway for which standards are completed and approved. The Institute will be working with Awarding Organisations to ensure that the content is kept up to date as occupations change and develop over time.

2   T Level programmes

T Levels are new two year, full time technical programmes designed to give young people the skills that industry needs. From 2020, they will give students aged 16 to 18 a technical alternative to A levels and will help them to get a skilled job or progress to higher levels of technical education. T Levels will provide a mixture of technical knowledge and practical skills specific to the chosen industry or occupation.

It is expected that around one in four individuals enrolling on a technical education programme will have special educational needs or disabilities (SEND). We expect all routes to be accessible, inclusive and sufficiently flexible to be adapted for individual needs and to support social mobility, equality and diversity.

The majority of 16 year old school leavers who want to engage in technical education are expected to progress directly to a T Level or apprenticeship. The Department for Education is developing a transition offer for those not able to progress to level 3 at the age of 16, to make sure that as many students as possible can complete T Levels.

Each programme will consist of four components that must be achieved to pass and receive certification:

- A Technical Qualification, of beween 900 and 1400 Guided Learning Hours, comprised of 'core' content relevant to the route and 'specialist' occupational content;
- An industry placement;
- Level 2 English and maths or entry level 3 for learners with SEND that have an Education, Health and Care (EHC) plan (this aligns with the requirements for a level 3 apprenticeship);
- (Only if specified by the T Level panel) Mandatory Additional Requirements (MAR) that are needed for entry to employment or to commence an industry placement.

T Level programmes will also include employability, enrichment and pastoral (EEP) provision as required in all 16-19 study programmes.

3   T Level panels

The government is clear that employers and industry professionals are best placed to advise on the content needed for technical education programmes. Therefore, to ensure that T Levels have real currency and credibility, we have appointed T Level panels ('panels') to advise on the content and design of T Levels.

All panel members have been recruited for their insight into, and experience of, the competences required for either a specific occupation or range of occupations in the relevant technical education pathway. The majority of panel members will be experienced practitioners themselves or manage others, although some will come from wider representative bodies or provide training for the occupation.

Each panel will consist of approximately 10 to 15 professionals, depending on the number of occupations in scope. There will be one panel for each pathway within a route. Where necessary, additional members may join the panel e.g. if the panel chair or their Relationship Manager identifies the need for additional expertise or representation to provide greater insight into the design of specialist content. The appointment of new members is subject to approval by the Relationship Manager.

Alongside panel members, each panel will have a(n):

Relationship Manager: working with the panel chair, the Relationship Manager (RM) will agree the work plan, schedule of meetings and key milestones for the panel. The RM will also provide a single point of contact and act as the conduit between the panel, the Institute and Department for Education (DfE), offering advice on policy, process and, where needed, participating in meetings to resolve issues so that panels are able to meet key milestones.

Panel Chair: working closely with the Relationship Manager and Education Advisor, the panel chair will provide strategic vision and leadership to the panel, including responsibility for ensuring active participation from all members (including those that are underperforming) and collaboration between panel members, wider industry and Higher Education providers to ensure outcomes are delivered on time and the government's policy objectives are achieved.

Education Advisor: the Education Advisor (EA) will provide the panel with advice on qualification and assessment design, development, approval and delivery and will draft the outline content once the panel has identified the relevant knowledge and skills. The EA will work with the panel to ensure that the outline content developed is in a format consistent to other panels and provide advice to ensure it is in line with policy; e.g. related to the relative proportions of the core and occupational specialisms.
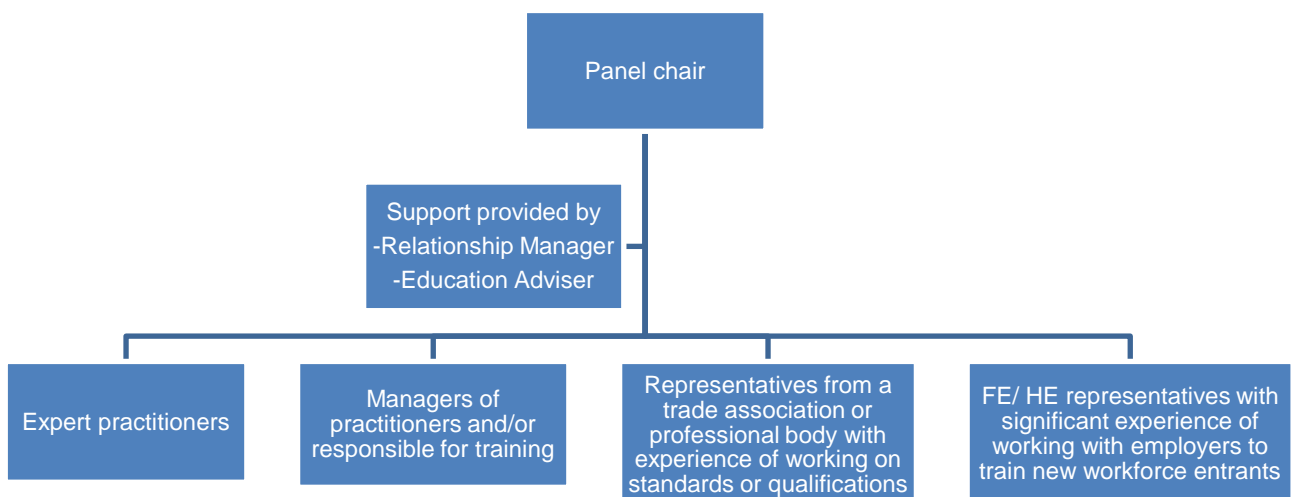
In addition to the T Level panels, there are a number of other organisations, employer groups and panels working on different aspects of the technical education reforms:

Institute for Apprenticeships and Technical Education: a Crown non-departmental public body, established in April 2017. The Institute is responsible for technical education functions in England, including ensuring the quality of and approving apprenticeship standards (occupational standards, end point assessments and funding bands), ensuring that quality assurance for apprenticeship end point assessments is carried out and approving the content developed by panels for T Levels.

Trailblazer Group: groups of employers that develop apprenticeship standards. The occupational standard describes the occupation and the outcomes needed to achieve full occupational competence. An apprentice must achieve the outcomes in the standard in order to be certified. The T Level Technical Qualification will be based on these same standards.

Route Panels: panels of industry experts who review and make considered determinations on whether or not to approve new or revised apprenticeship standards and T Level outline content and technical qualifications. They bring a strategic, employer perspective across each route, ensuring that occupational maps contain all the occupations suitable for technical education. The Route Panels are convened by the Institute for the review of proposed occupations and apprenticeship standards. Their recommendations feed into the Institute's Approval and Funding Committee who make final approval decisions. The Route Panels perform a similar role for T Levels and are responsible for recommending whether the outline content developed by the panels and qualification specifications produced by Awarding Organisations should be approved by the Approvals and Funding Committee within the Institute. In addition, the Route Panels have oversight of the occupational maps that relate to each route, and can recommend prioritising the development of technical education for certain occupations, using the Institute's power to convene trailblazer groups.

4   The work of the T Level Panel

T Level Panels are tasked with achieving a number of related objectives:

A. To develop the T Level structure (also called a wireframe) which sets out the structure for the Technical Qualifcation;

B. To develop outline content for the Technical Qualification;

C. To advise on English, maths and digital requirements required as part of the T Level;

D. To make recommendations for what the industry placement should offer; and

E. To advise on Mandatory Additional Requirements (MAR).

A. Developing the T Level structure (wireframe)

It is a legal requirement (in the 2017 Technical and Further Education Act) that the Technical Qualification (TQ) must assess technical skills as close to full occupational competence as possible.

The panel will consider which occupations (from the occupational map) students should have the opportunity to develop competence to a level sufficient to enter skilled employment. The panel will make a recommendation to the Route Panel on that basis, through the submission of a structure document (wireframe) that sets out the proposed structure of the T Level. A template for this is included at Annex B.

Where an occupational standard has not yet been developed for an occupation, T Level panels will focus on developing the structure across occupations for which standards do exist.

The panel will work with the RM and Education Advisor to determine whether each occupational standard:

- contains a level of technical knowledge and skills that a student would be able to acquire within 2 years, alongside the core, assuming no specialist prior knowledge;

- is predominantly made up of skills that can be acquired in a classroom setting rather than the workplace; that is whether the occupational content is better suited to be delivered through an apprenticeship;

- should be split into different specialisms or amalgamated to support coherence;

- has a clear and distinct future in the industry, that is, whether it should be left out of the T Level as it is soon to become obsolete.

For each identified occupational specialism, the panel working with the RM and Education Advisor will also:

- propose a title for the specialism which corresponds to the relevant standard;

- identify the high level performance outcomes (see page 12) which describe what the student will be able to do as a result of successfully completing each occupational specialism.

The Education Advisor will complete the structure indicating the occupational specialisms agreed by the Panel. This will be submitted to the Route Panel for consideration, and approval from the Approval and Funding Committee.

B. Developing the outline content of the new Technical Qualifications

The panels are responsible for determining and agreeing the proposed 'outline content' of the new study-based technical qualifications, which will provide the outline for awarding organisations to develop full the qualification specification (see Annex C).

Panels will draw directly on the relevant occupational standards, the structure (as explained above) and other information relevant to a route or pathway to determine the

outline content. To assist in this, the RM will provide each panel with detail of the standards in scope for each pathway, and access to each standard that currently exists.

Panels will work with the Education Advisor assigned to them to develop the outline content and to present it in a succinct format consistent with other panels. They will also produce a number of documents outlining the thinking behind the development undertaken:

- a mapping document, demonstrating the content that has been directly drawn from standards and that content which has been left out, along with the rationale for that decision;

- an audit log to demonstrate the changes made to the content over time to reflect testing with employers, providers and through an online publication;

- an introduction to the outline content from the panel Chair and Education Advisor, explaining key decisions the panel have taken and the rationale for those.

Course vs qualification

In setting the outline content, it is important not to conflate the course or curriculum (designed by training providers) with the qualification (designed by Awarding Organisations based on outline content). The outline content needs to set the 'outcomes' i.e. **what** a student knows, understands and is able to do as a result of completing the T Level. In other words the content should be considered in terms of 'exit capability'; that is what the student knows and can do by the end of the course, and so what is needed for employment and progression into higher technical training.

The course design is about **how** the student will achieve the outcomes and it will be the providers' job to work out the best sequence of learning for their students. For example, for occupational skills, the course may start off introducing a discipline at a very basic level (which may be below level 2) but through repeated application and practice, the student learns how to apply the skills to a standard expected at level 3, to achieve the outcomes required for a specific occupation.

The development of outline content will need to reflect the purpose and common features of technical qualifications set out in the 'Ofqual Handbook: Technical Qualifications'[5]. Panels will develop outline content for the two components that all new technical qualifications will feature: core component and occupational specialism(s).

i.   Core Component

The core component, which is expected to make up 20-50% of the Technical Qualification Guided Learning Hours (GLH), relates to the whole route, and the pathway that the Technical Qualification covers. This content will vary depending on the

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[5] https://www.gov.uk/guidance/ofqual-handbook-technical-qualifications

requirements of the route and the pathway or occupations covered by the scope of the Technical Qualification.

The core content focuses on students' knowledge and understanding of contexts, concepts, theories, principles and core skills relevant to the T Level. This could include, where appropriate, assessment of knowledge, understanding and skills relevant to the route and the pathway. This breadth of content will help to ensure students are able to apply their skills in a variety of contexts and for a variety of different purposes.

The Core compontent has two parts:

- Core knowledge and understanding;

- Employer-set project.

Core knowledge and understanding

This includes content relevant to the route and pathway. This may include contextual understanding and underpinning knowledge. The following lists are just examples, panels are free to determine the most appropriate content based on the requirements of occupational specialisms.

Contextual Understanding. For example:

Careers	The breadth of roles in an industry; how they relate, and which roles are currently in most demand
International	The significance of the industry to the UK nationally and internationally
Commercial	How organisations in the sector typically generate income, incur costs and the competitive nature of the market(s) in which they operate
Security	The importance of maintaining privacy and confidentiality of company information, as well as that of customers and colleagues
Sustainability	How organisations in the industry manage their impacts on the environment and society
Diversity and inclusion	The value of difference and being sensitive to others needs, especially when they are different from ones' own

Underpinning knowledge. For example**:**

Facts	Documented information known to be true
Concepts	Known ideas and propositions relevant to the industry
Theories	Tested propositions that can be used to explain phenomena
Principles	Guiding parameters which govern how things are done

Processes	Typical workflow, methods, procedures

Employer-set project

This focuses on developing students' overall employability, and assesses how well they can apply a minimum breadth of core skills and maths, English and digital skills, to achieve occupationally relevant purposes in contexts relevant to that T Level.

These core skills are assessed through an employer-set project, so that they are developed and applied in context rather than in isolation.

In specifying core employability skills care should be taken to ensure that they do underpin the occupational specialisms and they are sufficiently contextualised. For example:

- Apply a logical approach to solving problems, identifying and fixing flaws/bugs and proposing software solutions;

- Work with others to plan and provide activities to meet children and young people's needs.

The Education Advisor will develop the draft list of core employability skills for the employer-set project for the panel to review. They will draw on the framework included in Annex E for this work.

ii. Occupational Specialisms

Occupational specialisms, which are expected to make up 50-80% of the technical qualification, ensure learners develop the knowledge, skills and behaviours necessary to develop competency to a level needed to secure skilled employment.

Achievement of an occupational specialism signals that a learner is well-placed to develop full occupational competence, with further support and development, once in work (including an apprenticeship).

The knowledge and skills for each occupational specialism are included because they are necessary to achieve one or more 'performance outcomes'. These indicate what the student will be able to do as a result of learning and applying the specified knowledge and skills. For example, (extract from outline content for Digital Production, Design and Development pathway):

Performance Outcome 2: Design, implement and test software	
Knowledge	**Skills**
Design: - *an understanding of* architecture and design including tools, models, patterns and standards e.g. *patterns of enterprise, gang of four*	Implement secure code in at least two appropriate languages of different types which is maintainable, readable, functional. Design software solutions to meet a requirement using tools and techniques, *such as waterfall and agile.*

• an understanding of cultural awareness and diversity*, e.g. Timezones and localisation, including Calendars, date and number formats, daylight saving, leap seconds* • self-documenting code, including purpose and structure • interface design, including User and API • an understanding of databases and database design • an understanding of networks the interface between the software and the network, e.g. gaming • an understanding of Platforms *e.g. operating system, server, infrastructure, programming language stack, virtualisation, mobile, web* • an understanding of performance constraints e.g. *network bandwidth, processor limitations* • an understanding o*f* data dictionary/librar*y e.g. data types for currency, decimal, floating point, signed/unsigned integers, big and little endian numbers, lists, stacks, maps* • an understanding of data types and structures.	Demonstrate how to work in a shared codebase, practice, etiquette, tools, *such as modularity, data definition.* Use code organisation techniques, including classes, methods, sub-routines, re-factoring, open source, functions, modules and for e.g. checking small commits frequently. Integrate code which meets the functionality of the task, complies with the required standards and includes appropriate code documentation. Implement systems including User Interface, Database, Service, Persistence, Web, Simple, Layered systems. Apply testing principles, types, techniques and tools to ensure that software meets specified requirements and can successfully operate in all the anticipated environments with the required usability and security.

Correspondence with standards

Where a standard is identified for inclusion within a T Level, it does not necessarily follow that there will be a single occupational specialism developed. Nor (as above) does it follow that every single standard should be included in an occupational specialism, recognising that there may be grounds for omitting some standards. In some cases, the content of one standard might be merged with others, taking account of what could reasonably be covered within the available teaching hours. If the knowledge and skills contained within a standard are deemed to be essential to all occupations within a T Level, the associated content might be incorporated within all occupational specialisms.

Breadth, depth and level of occupational skills

Panels will avoid setting outline content which operates as a 'taster' or introduction to occupationally specific skills; perhaps set in an attempt to make sure that students can try out disciplines before selecting their occupational specialism(s).

This is because an 'introductory' level of skills application will inevitably be lower than the level of occupational competence expected to enter skilled employment.

Importantly, providers may devise courses which ensure students can try out different occupationally specific skills before choosing their occupational specialism. This is a matter for providers, and does not require formally assessed qualification content.

Level 2 content

Panels may identify a level 2 standard with content that it would be appropriate to include in the T Level because, for example, the T Level would be incoherent or incomplete without it. This may be appropriate in cases where it allows a student to build up and then build on more basic levels of skills and should be considered with the proviso that the final assessment (and so content specified) will demonstrate the student's overall level of occupational competence at level 3.

Same knowledge and skills across occupational specialisms

It is clear that sometimes the same knowledge and skills are required in different occupational specialisms within a pathway, for example communication with customers.

Where the same knowledge is identified for more than one specialism, panels may decide this is better assessed through the core component, or they may decide it is integral to the occupation and best assessed alongside the occupationally specific skills.

Where the same skills are needed across occupational specialisms these should be specified separately in each occupational specialism. This may of course mean the specialisms are relatively large and that students will only have sufficient time to take one specialism. The 'shared skills' should not be separated out into a separate generic component as this will mean they may not be applied in an occupationally specific context, and so do not explicitly contribute to evidence of competence in a defined occupation; i.e. defined by the component title. If the student still has time to do more than one specialism, the shared skills must, as far as possible, be contextualised to the occupation so that the assessment evidence requirements will be different.

Testing outline content

To ensure the content has the widest possible support and applicability across relevant industry sectors and occupations, before submitting draft outline content to the Route Panel, it will be shared with providers, and wider employers to ensure that it is deliverable, assessable and fit for purpose. This should include testing with providers whether the outline content will meet with parameters for the overall size (900-1400 GLH) and the relative proportions of the core (20-50%) and occupational specialisms (50-80%).

RMs will work with their panels to identify and work with professional and trade bodies and other relevant organisations to achieve this and to extend their reach into the sector.

Once the outline content has been widely tested, it will be be submitted to the Route Panel for consideration, and approval by the Approvals and Funding Committee (see Annex D for the Institute's approvals criteria). As part of this approval of final content, it will be published online for wider views.

C. To advise on English, maths and digital requirements required as part of the T Level

The General Competency Frameworks (Annex F) have been developed by the Department for Education to assist panels in determining which English, maths and digital skills they expect students to evidence where these skills are implicitly within the knowledge and skills statements of the outline content. Education Advisors will be on hand to support panels in using the competency frameworks, and these will be considered by Route Panels and the Approvals and Funding Committee alongside the outline content.

As a minimum, students must also achieve level 2 English and maths (either GCSE or Functional Skills) in order to pass their T Level, but T Level panels may recommend a higher exit requirement. It is important to note that by setting higher English or Maths requirements for a T Level, colleges and other providers may raise the entry requirements, which may restrict the number of individuals applying for and being accepted on to T Levels.

The alternative exit requirement for leaners with SEND that have an Education, Health and Care (EHC) plan is to achieve entry level 3 in English and Maths.

D. To make recommendations for what the industry placement should offer

The learning aims of the industry placement will ensure students develop the specific occupational skills the student needs to work in the particular field. Industry placements should also allow learners to develop employability skills, attitudes and behaviours, focussing particularly on those skills which cannot be applied in a provider setting. T Level panels will make recommendations about learning placements to ensure that these are high-quality and fit for purpose. However, these will not form mandatory requirements.

E. To advise on Mandatory additional requirements (MAR)

In addition to determining the content of the new technical qualifications that sit at the heart of each T Level programme, the panels also have a role in advising on other requirements that will ensure T Levels have currency with employers.

We would expect any mandatory additional assessment or certification outside of the Technical Qualification to be kept a minimum, but should be considered where separate

certification is needed alongside the Technical Qualification for entry to employment or to commence an industry placement. Given this, panels should consider the impact of building in additional requirements and only propose them where they are essential for entry to skilled employment and can be achieved by a T Level learner. Any additional requirements suggested by panels will be considered by Route Panels and the Approvals and Funding Committee alongside the outline content.

5. Work schedule / sequencing

T Level panels will be provided with a range of information to assist them with the process of advising on the requirements for outline content and the wider programme. This will include:

- A delivery plan and process timeline;

- An induction pack which will also include information to assist with the set-up of the panel and delivery of its objectives (including further guidance on the approvals process, template documents, Terms of Reference, guidance on occupational maps and copies of the standards within scope of the T Level).

Following approval by Route Panels, panels may be consulted by awarding organisations for their views on the draft qualification specification prior to its approval by the relevant Route Panel. This involvement would take place after the panel has disbanded, and links would be brokered by the Relationship Management Team. It is expected that each panel would meet with the Awarding Organisation selected to deliver the T Level at least once prior to their submission of the Technical Qualification specification, ahead of the Awarding Organisation's first contractual milestone.

6. Contact information

If you have any questions about the role and responsibilities of T Level panels please contact the Relationship Management Team within the Institute at: Employer.PANELS@education.gov.uk.

Annex A: Framework of the 15 Routes and pathways within them

T LEVEL ROLLOUT

T Levels for 2020 delivery
T Levels for 2021 delivery
T Levels for 2022 delivery
T Levels for 2023 delivery

Agriculture, Environmental and Animal Care Route	Business and Administrative Route	Catering and Hospitality Route	Construction	Creative and Design Route
Agriculture, Land Management and Production	Human Resources	Catering	Building Services Engineering	Craft and Design
Animal Care and Management	Management and Administration		Design, Surveying and Planning	Cultural Heritage and Visitor Attractions
			Onsite Construction	Media, Broadcast and Production

Digital Route	Education and Childcare Route	Engineering and Manufacturing Route	Hair and Beauty Route	Health and Science Route	Legal, Finance and Accounting Route
Digital Business Services	Education	Design, Development and Control	Hair, Beauty and Aesthetics	Health	Accountancy
Digital Production, Design and Development		Maintenance, Installation and Repair		Healthcare Science	Financial
Digital Support Services		Manufacturing and Process		Science	Legal

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Annex B: Guidance on completion of the T Level Structure (wireframe)

T Level Technical Qualification Wireframe Guidance

Please delete this page before submission

Element	Guidance
Version	0.1 Whilst in draft, 1.0 when final.
Date	As at date
T level Title	Name of panel
Name of Occupational Specialism	T Level Panel defined specialisms
Performance Outcome	T Level Panel defined performance outcomes "can dos"
Aligned to Apprenticeship Standard	Name of apprenticeship standard mapped to occupational specialism: performance outcome.
Rationale	**Suggested examples** • The T Level Occupational Specialism fully aligns to the Apprenticeship Level 3 Standard • If T Level panel want to add a specialism for which there is no standard 　　No standard exists for this occupation at L3, but T Level panel are clear that this occupation should be within scope of the T Level • If T Level panel want to amalgamate a number of standards into one occ specialism

	T Level panel propose to amalgamate these standards into one specialism within the T Level to ensure greater currency within the sector
	• If T Level panel want to leave out integral chunks of the standard The X bit of the Y standard is not suitable to be included because of the nature of the T Level programme / age of learners etc. • This is for the case of there being specialisms drawn out in the T Level that exist as options within the standard The standard has a number of options within it; the T Level panel propose to draw these out as specific specialisms within the T Level

Approved standards in the occupational map which the T Level panel do not consider appropriate for a T Level:

Name of L3 Standard	Rationale for exclusion from the T Level
Name of standard	Rationale

T Level Technical Qualification Wireframe Template

Structural Analysis (Wireframe) Version 0.0   **Date xxxx**

T Level Title: xxxxxxxx

Name of Occupational Specialism	Performance Outcomes	Aligned to apprenticeship standard	Rationale
Name of occ specialism	**Up to 5-6 POs**	Name of standard	
Name of occ specialism		Name of standard one	
		Name of standard two	
Name of occ specialism		Name of standard	
Name of occ specialism			

Approved standards in the occupational map which the T Level panel do not consider appropriate for a T Level:

Name of L3 Standard	Rationale for exclusion from the T Level
Name of standard	Rationale

Annex C: The Technical Qualification purpose and structure

The purpose of the level 3 Technical Qualification is to ensure students have the knowledge and skills needed to progress into skilled employment or higher level technical training relevant to the T Level.[6]

To achieve this, each level 3 Technical Qualification must:

- provide reliable evidence of students' attainment in relation to:

  o the core knowledge and skills relevant to the route and occupational specialisms covered by the qualification;

  o the knowledge and skills required for at least one occupational specialism relevant to the qualification.

- be up-to-date, ensuring the knowledge and skills needed for the occupations have continued currency among employers and other end-users;

- ensure maths, English and digital skills are developed and applied where they are essential to achieve occupationally relevant outcomes;

- ensure the minimum pass grade standard for occupational specialisms attests to a level of competence, meets employer expectations, and is as close to full occupational competence as possible;

- allow the accurate identification of students' level of attainment and the effective differentiation of their performance;

- provide a clear and coherent basis for development of suitably demanding high-quality level 3 courses, which enable students to realise their potential;

- provide students with the opportunity to manage and improve their own performance;

- support fair access to attainment for all students who take the qualification, including those with SEND.

The Technical Qualification will be based on the outline content developed by the T Level panel.

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[6] The Institute may only approve the qualification "if satisfied that my obtaining the qualification a person demonstrates that he or she has attained as many of the outcomes set out in the standards as may reasonably be expected to be attained by undertaking a course of education" (sA2DA(3) of the 2009 Act).

Technical Qualification structure

T Level programmes will differ in length to reflect the requirements of different occupations, but are expected to last 1800 hours over two years (on average).

To accommodate legitimate differences in content across T Levels, we propose that the total time for the Technical Qualification:

- will fall within a defined range of between 900 and 1400 hours;
- is no less than 50% of the time for the T Level programme as a whole; and
- is no more than 75% of the total time for the programme as a whole.

Component	Content	Assessment	Grading	Planned Hours
Core Students complete one component which covers all the core content	Knowledge and understanding of contexts, concepts, theories and principles relevant to the T Level Ability to apply core knowledge and skills, through a project, to meet employer-set requirements	Assessed through an externally set test and an employer-set project	Six point scale plus ungraded (U) A* – E and U	Between 20% and 50% of the qualification time
Occupational specialisms Students must complete at least one, or more depending on the minimum requirements specific to the qualification	Knowledge and skills required to achieve a level of competence needed to enter employment	Synoptic assessment of performance outcomes, to determine whether a student meets the minimum competence requirements	Three point scale plus ungraded (U) Distinction, Merit, Pass and Ungraded	Between 50% and 80% of qualification time

Annex D: Institute for Apprenticeships Approvals Criteria

The information below forms part of the agreed ways of working across the Institute's Relationship Management Team and Approvals Team.

Approvals criteria for outline content

1. **Format.** The documents need to be concise and clear. This is to ensure the documents are accessible to employers, Awarding Organisations and other stakeholders, both during consultation and once the documents are published.

2. **Alignment with apprenticeship standards.** The Outline Content should be based on the same standards as apprenticeships and be able to get the learner as close to full occupational competence as possible. Where it is necessary for the Outline Content to deviate from the standard, rationale should be provided for the change.

3. **Threshold competence** is described as '*the Level of knowledge and skill needed to get a skilled job'* and further defines this as '*The Level of competence deemed by employers as sufficient to secure employment in roles relevant to an occupational specialism. Achievement of threshold competence signals that a learner is well-placed to develop full occupational competence, with further support and development, once in work*.'
The Outline Content should get the learner as close to full occupational competence as possible. Threshold competence will vary across different routes and is assessed in a number of ways:

   - the extent of the knowledge and skills that need to be learned on the job;
   - the current duration of the respective apprenticeship; and
   - the knowledge and skills that have been omitted from the Outline Content due to the duration of the T level.

   The specialism within the Outline Content should ensure that the learner can achieve, at minimum, 60% of occupational competence. The judgement of whether threshold competence will be obtained is made on the basis of how much additional training the learner will require to be fully occupationally competent. This translates as:

   - 60% occupational competence is likely to require at least a year of on-the-job training.
   - 75% occupational competence is likely to require at least 6 months of on-the-job training.
   - 90% occupational competence is likely to require at least 3 months of on-the-job training.

   Where several standards have been merged into one occupational specialism, the knowledge and skills within the Outline Content must be sufficient to achieve threshold competence in all of the occupations.

4. **Avoiding overlap**. The Outline Content must show a clear distinction between the route core, pathway core and specialised content. Where there is a need for the content to be similar, the contextual differences should be clearly justified.

5. **Level of detail.** Each specialism should contain detail that is distinct and relevant to the respective occupation.

6. **Balance**. The route core content must be relevant to all occupational specialisms and provide the learner with an overall understanding of the route. The pathway core content must be relevant to the respective specialisms. In both instances, the respective occupations should be evenly represented across the core, pathway and specialism.

7. **Level 3.** A T Level is equivalent in size to 3 A Levels. The content of the T Level must align with the relevant Level descriptors for Level 3 as published by the Institute.

8. **Include maths, literacy and digital skills.** The Outline Content for Technical Qualifications will include maths, literacy and digital skills that are specific for each T Level. These will be approved by the Institute's Route Panels and embedded in each Technical Qualification. These skills are implicitly taught and are in addition to the minimum maths and English requirements for the overall T Level.

Annex E: Employability skills

Integrating Employability Skills

"As well as occupation-specific requirements, many employers demand similar workplace skills which enable individuals to thrive in a modern economy, regardless of specific occupations. For example, skills such as communicating, working in a team and solving problems are essential in a 21st- century workplace." Post 16 Skills Plan (July 2016).

Our approach to employability skills (listed below) is to integrate them as far as possible into the technical content such that they are fully contextualised and cannot be taught in isolation. There are three ways employability skills can be supported through T Levels.

1   Employer-set Project

This focuses on developing learners' core employability skills, and assesses how well they can apply a minimum breadth of core employability skills and maths, English and digital skills, to achieve occupationally relevant purposes.

In specifying core skills it will be important to ensure that they do underpin the occupational specialisms and the way they are expressed is sufficiently contextualised. For example:

- Apply a logical approach to solving problems, identifying and fixing flaws/bugs and proposing software solutions.

- Work with others to plan and provide activities to meet children and young people's needs.

2   Occupational specialisms

The knowledge and skills for each occupational specialism are included because they are necessary to achieve one or more 'performance outcomes'. These indicate what the student will be able to do as a result of learning and applying the specified knowledge, skills and behaviours.

Employability skills, numeracy, literacy and digital skills should only be included in occupational specialisms (i.e. outside the core component) if they are essential to achieving a performance outcome.

3 Industry Placement

The learning aims of the industry placement will ensure students develop the specific occupational skills the student needs to work in the particular field. Industry placements should also allow learners to develop employability skills, attitudes and behaviours, focussing particularly on those skills which cannot be applied in a provider setting. T Level panels will be asked to make recommendations about the skills which could feature in Industry Placement learning aims, which will be considered by Route Panels and approved by the Approvals and Funding Committee.

Employability skills

Employability skills, such as the examples listed below, may be needed to achieve performance outcomes, or briefs set for the employer-set project. They draw on the examples of core skills and attributes, attitudes and behaviours also listed separately below. These examples are provided as a guide and panels are not required to use the examples listed, and may identify core employability skills of their own:

Skill		**For example may require**
Working in a team	Working with others with different skills, expertise and experience to accomplish a task or goal. For example to: • develop a business case for a new product	Communicating, self-managing. Perceptiveness, politeness, assertiveness, loyalty.
Solving problems	Apply a logical approach to identifying issues and propose solutions. For example, to: • fix flaws in a prototype	Investigating, analysing, critical thinking, creativity. Perseverance, self-confidence.
Assessing Risks	Assessing a situation, a proposal, a product or process for potential adverse effects. For example to: • to ensure a play area is safe for children	Planning, investigating, analysing, critical thinking, communicating.
Presenting	Conveying information to an audience to stimulate discussion, and/or secure consistent understanding. For example to: • make a relevant presentation to an appropriate audience receiving good feedback	Communicating, planning, leading, recording. Self-confidence, self-awareness, empathy
Negotiating	Secure agreement on a course of action through discussion, in order to achieve mutually beneficial results. For example to: • secure a delivery agreement at a value for money cost	Communicating, analysing, critical thinking. Empathy, self-awareness, self-confidence.

	• plan and agree (including the cost) for a hospitality event	
Designing	Develop the form of an artefact or system to achieve a defined function. For example to: • produce designs for a new building	Creativity, Investigating, Communicating.

Core Skills

The need for these will vary depending on the nature of the core employability skills. They may also be specified separately in the occupational specialisms and employer-set project. The list below should be treated as indicative examples, and panels may come up with their own.

Planning	identifying discrete steps, estimating time and resources, prioritising, coordinating, sequencing activity
Analysing	identifying common features, organising into types, discerning patterns, deconstructing, classifying, ordering
Critical thinking	questioning, evaluating pros and cons, using logic and reasoned argument, synthesising and concluding
Communicating	active listening, use of visual, oral and written methods, engaging an audience, sharing, building rapport, adapting style and tone
Investigating	identifying sources, developing search criteria/queries, interrogating data, designing and carrying out tests
Decision making	clarifying logical choices, identifying likely impact, using evidence and advice, justifying, substantiating, concluding
Creativity	lateral thinking, making novel connections, handling ambiguity, taking acceptable risks, forming ideas iteratively, future-proofing
Self-managing	monitoring, reflecting and inviting feedback on own performance, managing time, setting personal goals, referring to others for advice
Leading	inspiring others, setting direction, taking responsibility, modelling appropriate behaviours
Recording	transcribing, noting, capturing, saving, storing

Physical dexterity	precise and controlled movement, agility, co-ordination, delicacy, appropriate application of force
Evaluating	considering and appraising process and evidence, making recommendations
Observing	situational awareness, monitoring

Enabling attributes, attitudes and behaviours (indicative examples)

The list below is indicative and is included to illustrate the kind of attributes, attitudes and behaviours that employers regard as important. They may be developed through the Industry placement and developed with support from providers, as a result of applying employability skills in context. Panels are not expected to include these in outline content.

Reliable	Persistent	Independent	Flexible
Perceptive	Self-Controlled	Integrity	Committed
Self-confident	Self-aware	Socially adept	Adaptable
Empathetic	Professional	Enterprising	Tolerant
Takes initiative	Enthusiastic	Honest	Resilient
Responsible	Assertive	Reflective	Helpful
Attention to detail	Focussed	Responsive	Respectful
Inclusive	Polite	Punctual	

Annex F: General Competency Frameworks for T Levels: Articulation of Embedded English, Mathematical and Digital Competencies in the Outline Content for T Levels

General English Competencies

The General English Competencies outline a framework of six General Digital Competences, with no prioritisation or interpretation of order intended:

1. Convey technical Information to different audiences

2. Present information and ideas

3. Create texts for different purposes and audiences

4. Summarise information/ideas

5. Synthesise information

6. Take part in/lead discussions

Further detail and their descriptors can be found in Appendix A.

General Mathematical Competencies

The General Mathematical Competencies outline a framework of ten General Mathematical Competences, with no prioritisation or interpretation of order intended:

1. Measuring with precision

2. Estimating, calculating and error spotting

3. Working with proportion

4. Using rules and formulae

5. Processing data

6. Understanding data and risk

7. Interpreting and representing with mathematical diagrams

8. Communicating using mathematics

9. Costing a project

10. Optimising work processes

Further detail and their descriptors can be found in Appendix B.

General Digital Competencies

The General Digital Competencies outline a framework of six General Digital Competences, with no prioritisation or interpretation of order intended:

1. Use digital technology and media effectively

2. Design, create and edit documents and digital media

3. Communicate and collaborate

4. Process and analyse numerical data

5. Be safe and responsible online

6. Code and program

Further detail and their descriptors can be found in Appendix C.

General English Competencies Descriptors

1. Convey technical information to different audiences

In workplace situations, the ability to explain technical information to others both orally and in writing in a clear and unambiguous way is essential. When communicating orally people with this General English Competency (GEC) take into account the purpose of the communication and the experience of the audience and use different registers and styles with ease; they may need to explain technical information to a non-technical audience, a client/customer a colleague. They use technical language correctly with explanations supported by graphics and other tools to aid understanding.

They may ask questions to test understanding and they respond to questions confidently. They present their ideas logically and coherently and use appropriate grammar and choice of vocabulary including technical terminology.

When writing they convey technical information using correct technical language and appropriate format and structure. They may support their explanations with images to aid understanding. They use correct spelling, both technical and non-technical, grammar and punctuation.

2. Present information and ideas

In the workplace, there is often the requirement to present technical and non-technical information and ideas orally to peers, managers or individuals from outside or within the organisation. The presentation may be in response to a brief or a summary of a project or other piece of work. The presenter presents information and ideas clearly using appropriate non-digital and digital tools and the presentation may be accompanied by supporting documentation. They organise ideas and information logically and speak clearly and confidently using appropriate tone and register that reflects audience and purpose. They listen carefully to feedback from colleagues/clients and customers and interpret and respond to non-verbal cues. They respond confidently to questions choosing correct technical language.

3. Create texts for different purposes and audiences

This GEC focuses on the ability to create texts for different purposes and audiences. Examples of texts could include routine emails, letters, memos, reports, blogs, vlogs, presentation notes, creative writing. Complex information is supplemented by supporting data, diagrams, images; creative work may be presented in different formats, for example as a storyboard. The style of writing reflects the type of communication and the purpose, for example formal, informal, internal or external communication, creative in response to a brief.

This GEC also encompasses the ability to draft standard technical documents for the particular sector using precise terminology and agreed formats. Material is organised coherently to suit length and purpose of writing and they express ideas clearly and concisely. Texts are carefully proofread to ensure accuracy, applying agreed workplace practices.

4. Summarise information/ideas

Summarising is an essential skill in the workplace. It can be summarising key information from written texts, for example from technical documents or outcomes from oral interactions including formal meetings. People with this GEC can summarise concisely in a style appropriate to audience and purpose. They separate fact from opinion and use technical terms correctly where required.

They listen actively in meetings or during discussions and request clarification where appropriate. They are familiar with note taking conventions including minutes and succinctly record key points including actions agreed and actions required.

5. Synthesise information

Synthesising information is an essential skill in the workplace where there is a requirement to gather information from different sources. People with this GEC select the appropriate sources to reflect the particular purpose. They read, understand and synthesise the information in a way that suits the audience and purpose. They recognise the difference between fact and opinion and recognise bias in a source.

6. Take part in/Lead discussions

In many workplace situations, there is a need to take part in and/or lead discussions relating to both technical and non-technical topics. For a discussion to be of value participants must listen actively to the contributions of others, make relevant and constructive contributions and ask and respond to questions for clarification and to move the discussion forward. Participants express opinions and support these with relevant and persuasive arguments. They adapt their contribution to the discussion to suit the audience and purpose and may need to intervene to diffuse potential conflict. The person leading the discussion sums up the key points of the discussion. Participants adopt the appropriate tone of voice and pay attention to non-verbal cues throughout discussions.

General Mathematical Competencies Descriptors

1. Measuring with precision

In many workplace situations, measurement is important. People with this General Mathematical Competency (GMC) will be aware of the use to which both raw and processed data will be put to inform what should be measured, as well as the required accuracy and units of measurement.

They will understand how cumulative errors have on subsequent use of values in further processing (such as when used in formulae), and the accuracy, or precision, required for a particular purpose. They will be able to consider appropriate upper and lower bounds.

They will be able to critically interpret calculator or spreadsheet displays for example, understanding calculator "rounding errors" such as 2/3 × 3 = 1.99999998.

They will be able to use ideas of absolute and percentage errors in applied situations.

Where applicable they will be able to address issues concerning the calibration of instruments.

2. Estimating, calculating and error checking

People with this GMC can apply routine skills with confidence and fluency to solve technical problems. They use their knowledge of context to find appropriate and approximate solutions to calculations. In particular, estimations, perhaps using rough rules of thumb, may provide a starting point to 'get a sense of', whereas more accurate calculations may be required at a later stage. They might use specialised notation/representation reflecting industry standard practice, and depending upon specialisation, be particularly good at understanding how to work with very large and/or very small numbers.

As well as understanding estimation, sources of error and approximation they can recognise the impact of these on the accuracy of solutions to problems in applied contexts.

3. Working with proportion

The use of proportion permeates many areas of mathematical application (e.g. other GMCs require the scaling of data, which requires an understanding of the concept of proportionality).

People with this GMC require numerical, graphical and forms of algebraic understanding of this key mathematical concept so that they can move with ease

between different understandings and recognise situations where ideas of direct proportionality and inverse proportion apply (and those where they do not).

They should be able to apply proportional reasoning with fluency to solve problems and model situations. They should be able to generalise proportional thinking in words, forms of algebra/formulae appropriate to vocational specialisms.

4. Using rules and formulae

This GMC is concerned with the use of rules, algorithms and formulae. People with this competency recognise that formulae are represented in different ways in vocational settings including as basic rules of thumb (maybe passed by word of mouth), in words or via numeric 'ready reckoners', in 'spreadsheet algebra' or in formal algebraic representations.

There is often a need to use formulae to process data. They will be able to select appropriate data and paying attention to units/dimensions of quantities. They will be able to manipulate or 'rearrange' formulae, using them to find solutions to problems and/or interpret outcomes in terms of the original problem. They will have a sense of whether solutions may or may not be correct when using formulae.

'Real world' formulae are often presented differently from those typically met in school although also conveying important ideas of structure and relationships of a situation/context. They may have been amended by different people using industry standard or idiosyncratic conventions and/or notation. They will be able to understand such changes and identify and/or remove redundant information or symbols.

5. Processing data

People with this GMC are able to use appropriate technology to carry out the systematic collection, processing and organisation of data into usable forms (e.g. tabular or graphical) in preparation for reporting and/or interpretation.

Depending upon the context, they may need to:

- identify suitable data;

- collect or generate data; and

- systematically organise and recording data prior to any scaling or processing that may be required.

They will be able to use software to scale axes (etc.) to plot the raw or processed data and produce diagrams, graphs and charts that best communicate information to intended audiences and reflect 'industry standard' practice.

They will be able to generate and/or interpret graphical outputs, whether developed by themselves or others (including those produced automatically by technology).

6. Understanding data

Access to primary and secondary data is increasingly common in a range of settings and often using appropriate technology. People with this GMC have critical understanding of, and are able to interrogate, how such data may be summarised in graphs, informatics and summary measures, and how they may be used to make predictions.

They will understand how data are generated, sifted, selected (sampled), and organised and will understand bias and approaches to interrogation.

They will be aware of how summary measures of location and spread, and a range of visual/graphical data display methods may be used with attention to how the data have been processed and scaled.

They will understand that graphical data may require the identification and validation (using technology) of mathematical functions to model the data appropriately.

They will be able to use probability to calculate appropriate uncertainty in making predictions and exploring future risks.

They will be able to critically interrogate and interpret data processing procedures and outputs.

7. Representing with mathematical diagrams

People with this GMC are able to translate situations into appropriate diagrams and representations that highlight key data. They can also interpret such diagrams and representations. Technology is used that is appropriate to the task and they can work with plans/scale drawings, maps, linear programming graphs and other diagrams which may be specific to one or more employment routes.

They are able to select salient features of contexts, their scaling/processing and representation, and the reverse of this process. They can apply industry specific conventions and notation. They will use technology that is appropriate to the task.

Working towards a final output/product will require ongoing interpretation and checking of working and results. This will involve interpreting back and forth between representation and reality. It is likely that a range of different representations of the same situation may be developed/used depending on the intended audience and level of detail and accuracy required.

8. Communicating using mathematics

People with this GMC are able to use mathematical processes (calculations, diagrams and data representations) to support technical arguments and communicate effectively to a range of stakeholders. They can reason with

mathematics, communicate this clearly and draw conclusions that are persuasive within the context of the problem situation.

Communicating with mathematics in this way will rely on other GMCs. They will present the outcomes of working appropriately for the intended purpose and audience. They will use standard industry conventions/notation and be sensitive to the likely background and knowledge of the intended audience.

9. Costing a project

People with this GMC are able to calculate of the 'cost' of a (substantial) project or activity. The costs in question may be financial, but could also be in terms of, or include, quantities of a product, use of space, amount of labour and so on. The scope of the activity could vary considerably from costing quantities of components required for a day's work away from the depot through to costing the total hours required by different workers on a large-scale construction project.

They will be able to:

- identify all relevant factors / components

- calculate the cost of individual parts of the project

- compound these individual components to give an overall cost

They would be able to organise/tabulate calculations, results and the presentation of these systematically, for different audiences and at different levels of detail, using tabular and graphical/visual means.

Those at the higher end of this competency may be able to assist decision making through experimentation using the developed model for costing (for example, when attempting to meet, reason and justify a budget) and/or consideration of probabilities/risk associated with various aspects of the project to provide insight into potential variation in costing

10. Optimising work processes

People with this GMC are able to model in order to organise and optimise a substantial or complex piece of work. For example: ensuring building materials are available at the correct time and place in a construction project; developing a website by bringing together modules of coding; ensuring workers are available according to anticipated demands, and so on.

An organising structure of the modelling cycle may inform activity. They will:

- have a thorough understanding of the context of the work

- identify key factors that will be taken into account

- make assumptions including considering probabilities, risks and so on

Appendix B – General Mathematical Competencies

- develop a solution[7]

- interpret and consider the validity of the solution in light of the context of the work

- communicate a fit-for-purpose solution in an appropriate format.

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[7] developing a solution is dependent on the context of the work/project/programme being organised. For example, it may involve developing a critical path analysis when organising an event, it could be the development of coding for part of a website or computer application and so on. A range of possible solutions may be considered taking into account various probabilities/risks associated with aspects of the work if appropriate.

General Digital Competencies Descriptors

1. Using digital technology effectively

People with this General Digital Competency (GDC) are able to make effective use of digital devices and software to complete occupationally relevant tasks in the workplace. They have sufficient confidence and understanding of digital technology to be able to select, configure and effectively use digital devices to improve their own and their organisation's productivity.

They recognise when a technical problem has been encountered with digital devices and applications, solve simple technical problems, and seek assistance and the support of specialists when unable to solve a technical problem.

2. Creating and editing

People with this GDC know how to create and edit documents and digital media to enhance their work. They can create and (if required) post or publish digital content suitable for a range of purposes and audiences, incorporating a range of information (such as texts, tables graphics and charts) and media (such as images, sound, video).

3. Processing and analysing data

People with this GDC are able to process, manipulate and analyse data to complete tasks and solve problems in the workplace. They will input, process, manipulate, analyse and validate this data.

They are also able to interrogate data sources for specific information and be able to summarise the findings accurately for a range of business uses.

They understand the implications of accessing and processing data, whether personal, professional, social, organisational, and political.

4. Communicating and collaborating

People with this GDC are able to communicate in an appropriate way for their organisation, using suitable modes of online communication for a range of contexts and audiences. They can also use digital collaboration tools to meet with, share and collaborate with colleagues.

5. Being safe and responsible online

People with this GDC are aware that their digital activity leaves a digital footprint that may have implications in the workplace. T

They understand the effects, implications, risks and issues associated with their use and engagement with the internet, and how their use of the internet outside the workplace may come to the attention of their current or future employer.

They understand their rights and responsibilities under data protection law, current practices relating to data collection and use (and its defining influence upon individual lives and the world around them), and the development, operation and influence of algorithms, artificial intelligence, and automation.

6. Controlling digital functions

People with this GDC are able to affect the actions of digital hardware or software through user-friendly coding interfaces. They will not be expected to have significant skills in programming languages (1st to 3rd generation) but are able to setup and control digital functions, understanding the logic and 'input-output' processing underpinning these functions.

They may be expected to use this competency, for example to setup a machine to basic inputs and respond appropriately (for example environmental controls), or to setup software to perform a function (such as a macro to format data more efficiently, or customising the function of existing web tools to process customer interactions).

They are also able to setup 'smart' technology to automate or control other devices remotely as appropriate for their occupation setting.