

City & Guilds T Levels

Technical Advisers

Rob Mallender
BSE and covering OSC

Dom Green & Karen Egan
Management and Administration

Samantha Ashman
Engineering and Manufacturing

Sarah Cocks
Land based

Alison Whittle
Post 16 Technical Adviser (Education)

Building Services Engineering

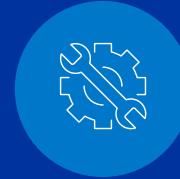
First delivery September 2021 now in the second year.

To understand how the BSE industry will be shaped in the future the core element will cover :

- Design principles
- Project management/stakeholder management
- Innovation and sustainability
- Digital engineering techniques
- Mathematical techniques to solve construction problems
- Building technology principles
- Building services engineering systems

Core

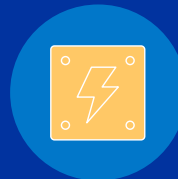
(Assessed by two externally set and marked exams and an employer set project)



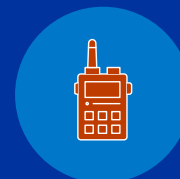
Building Services Engineering

Group A Standalone Occupational Specialisms:

Occupational Specialism, either grouped (bottom set) or single (top set) (Which is assessed by a practical assignment for each Occupational Specialism)



Electrotechnical engineering



Electrical and Electronic equipment engineering



Protection system engineering



Gas engineering

Group B Combination Occupational Specialisms:



Plumbing engineering



Heating engineering



Heating engineering



Ventilation



Refrigeration engineering



Air condition engineering

Onsite Construction

Construction T Level has 3 different routes. C&G have developed the Onsite and BSE routes of the T Level

First delivery September 2021 now in the second year.

To understand how the construction industry will be shaped in the future the core element will cover:

- Health and safety
- Construction science principles
- Building technology
- Digital technology in construction
- Sustainability

Core

(Assessed by two externally set and marked exams and an employer set project)



Onsite
Construction

Group B Combination Occupational Specialisms:

(Assessed by an externally set and moderated practical synoptic assignment)



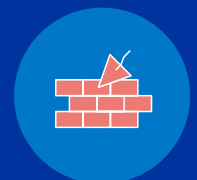
Carpentry & joinery



Plastering



Painting & decorating



Bricklaying

Management and Administration

First delivery September 2022

Core subjects will cover:

- Project management
- Research and analysis techniques
- Approaches to logical problem solving
- Develop effective business communication skills.
- Organisational structures and cultures
- Financial management.

Core:



(Assessed by two externally set and marked exams and an employer set project)

Occupational Specialisms:



(Assessed by a practical assignment for each Occupational Specialism)

Engineering and Manufacturing

First delivery September 2022

Core subjects will cover:

- Essential mathematics and science for engineering
- Electrical and electronic principles
- Mechatronics
- Engineering and manufacturing control system
- Project management
- Materials and their properties
- Stock and asset control
- Quality management

Core

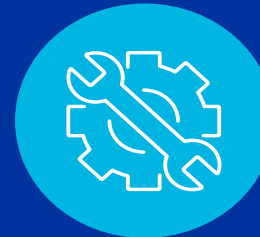
(Assessed by two externally set and marked exams and an employer set project)

Core

Pathways



Design & Development
for Engineering and
Manufacturing



Maintenance,
Installation & Repair for
Engineering and
Manufacturing



Engineering,
Manufacturing,
Processing and Control

+1 Occupational specialism within a pathway from 13 available occupational specialisms

Agriculture, Land Management & Production

First delivery September 2023

Common Core subjects will cover:

- Health and safety
- Sustainability
- Working in the Agriculture, Environmental and Animal Care sector
- Ethics
- Business
- Equality
- Communication
- Relationship management
- Finance
- Information and data

Core Pathway subjects will cover:

- Health and safety
- Sustainability
- Biosecurity
- Supply chain
- Plus other topics relevant to the specific Core Pathway being studied.

Core

(Assessed by two externally set and marked exams and an employer set project)

Core

Core Pathways & Occupational Specialisms

Occupational specialisms



Crop
production



Trees and
woodland
management



Ornamental
horticulture
and
landscaping



Livestock
production



Floristry



Land based
engineering

T Level in Agriculture, Environment and Animal Care: Technical Qualification Structure

T-LEVELS

**Institute for Apprenticeships
& Technical Education**



**Animal Care and
Management pathway**



**Agriculture, Land Management and Production
pathway**

(available from September 2024)

Common Core

(available from September 2023)

**Core
Pathway:**

Animal

**Occupational
Specialism
(OS)**

**Animal
Care and
Management**

**Animal Care
and Science**

OS Pathway:

**Horticulture, Crop Production, Trees
and Woodlands**

Floristry

**Land-based
Engineering**

**Livestock
Production**

**Ornamental
and
Environmental
Horticulture
and
Landscaping**

**Crop
Production**

**Trees and
Woodlands
Management**

Floristry

**Land-based
Engineering**

**Livestock
Production**

Forestry

Arboriculture

Assessment:

- Core + Pathway: Written exam & Employer Set Project
- OS: Synopsis Assignment

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City & Guilds T Levels

Alison Whittle
Post 16 Technical Adviser

- The T model in T Levels
- Approaches to teaching and learning
- Support for exam techniques and theory exam delivery
- Delivering the ESP
- Grading
- Resources and support
- Sector specific break out groups to ask the “experts”
- Networking

Transferrable Professional Skills (Required by employers)

- Sector and industry understanding
- Cross sector technologies and innovation
- Employment and professional skills maths, English and digital

Assessed by core exams, ESP and experience gained in IP

T Shaped Learning model

Technical
Knowledge
and
Experience

Subject and
Technical
knowledge

Practical
knowledge
and
application

Subject and
technical
discourse

Assessed by Occupational Specialism

Transferrable Personal Qualities (Employability)

- Critical thinking & problem solving
- Soft skills employability (personal and enterprise)
- Active leadership and collaboration

Assessed by ESP and experience gained in IP

Approaches to Teaching and Learning all T Levels

- Awarding Organisations role
- C&G Centre Support-delivering the TQ
- Roles of External Stakeholders in T Levels and policy
- Challenges-exams/CP
- Differences-GLH/IP/UMS
- Similarities-Technicals
- Progression-multiple routes



Centre support

Welcome to the Resource and Support Hub for T Level Technical Qualifications.

Here you'll find a range of teaching, learning and planning resources for tutors as well as information and support regarding approval, quality assurance, registration, bookings, timelines, fees and communications for all staff.

THE NEXT LEVEL QUALIFICATION

T LEVELS

→ Employers

→ Providers

→ Learners

→ Transition programmes

→ Resource Hub

→ Events and webinars

→ Podcasts

→ FAQs

Contact us

Quality team:

E: Technicals.Quality@cityandguilds.com

T: 0300 303 5352

Lines open: Monday to Friday 08.30 to 17.00 GMT

Centre Support team:

Approval and quality assurance

Specifications and centre documents

Contact update form

Teaching, learning and planning resources

Registration, bookings and results

Fees

Curriculum delivery planners

Tutor resources

Assessment guidance

Post-results services

Communications archive

Pre-delivery providers: Annual Calendar 2022/23

T Level Technical Qualifications in Engineering and Manufacturing

- Maintenance, Installation and Repair (MIR) for Engineering and Manufacturing (8712)
- Engineering, Manufacturing, Processing and Control (MPC) (8713)
- Design and Development (D&D) for Engineering and Manufacturing (8714)

■ Key dates ■ Events

September '22	October '22	November '22	December '22	January '23	February '23
September ■ H&I guide and learner flyer published on the website	October ■ Quarterly e-bulletin published	14th ■ Network webinar (recorded) T Level familiarisation: high level overview of D&D TQ	December* ■ Network webinar (recorded) Approvals support *Date TBC	January ■ Quarterly e-bulletin published	10th ■ Network event Centre support via MS Teams T Level pathways
September ■ 12-month countdown to first teaching (2023) begins	12th ■ Network webinar (recorded) Introduction to T Levels	17th ■ Network webinar (recorded) T Level familiarisation: high level overview of MIR TQ		18th ■ Network webinar (recorded) Curriculum planning and delivery models	24th ■ Network event Centre support via MS Teams 'Ask the Expert' T Level pathways
		18th ■ Network webinar (recorded) T Level familiarisation: high level overview of MPC TQ			
March '23	April '23	May '23	June '23	July '23	August '23
March* ■ Regional network events *Date and location TBC	April ■ Quarterly e-bulletin published	12th ■ Network event Centre support via MS Teams 'Ask the Expert' MIR Core component & OS	June ■ Exam timetable and key dates schedules published	July ■ Quarterly e-bulletin published	August* ■ Regional network events *Date and location TBC
	19th ■ Network webinar (recorded) Review of Core component	May* ■ Regional network events *Date and location TBC	June* ■ Regional network events *Date and location TBC	7th ■ Network event Centre support via MS Teams 'Ask the Expert' MPC Core component & OS	
	27th ■ Network webinar (recorded) Preparation to teach T Levels		23rd ■ Network event Centre support via MS Teams 'Ask the Expert' D&D Core component & OS		
	April* ■ Regional network events *Date and location TBC				

If you have any questions, please contact us:

E: technicals.quality@cityandguilds.com | T: 0300 303 5352 | W: [cityandguilds.com/tlevels/engineering](https://www.cityandguilds.com/tlevels/engineering)



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 T Level is a registered trademark of the Institute for Apprenticeships and Technical Education.

All T Levels

Core assessments which are externally set and externally marked by Awarding Organisation.

2 theory exam papers each with two parts 2-2 ½ hours each

1 Employer Set Project (ESP) consisting of a series of tasks

Occupational specialism externally set (externally or internally marked depending on sector)

One occupational specialism (BSE if group B 2 Occupational specialisms combined)

The Technical Qualification is the property and is managed by the Institute (IfATE)
Regulation of the TQ (**responsibility of Ofqual**)

Also apart from the Technical Qualification (TQ)

Industry placement (**responsibility of DfE**) Contact NAS by
emailing tlevel.placement@education.gov.uk

English and maths to be continued studying if not achieved level 2 FS or grade 4
GCSE (**responsibility of centre**)

EEP and tutorials (**responsibility of centre**)

Funding of the T Level (**responsibility of ESFA**)

<https://attendee.gotowebinar.com/register/1362427277076256603>

Certification (**responsibility of IfATE /ESFA**)

Theory exam support

Centre support
(pre-delivery and in-delivery webinars)

Sample questions

Question types-what type of response is
the examiner looking for

Command verbs detailed explanation of
what command verb means

Extended response questions –how to
break these down

How to deconstruct exam questions

Samples of questions and indicative
content

Sample papers and marking schemes

Hints and tips you can use for your
learners

Examiners reports when available

candidate barcode label here.

Duration: 2 hours 30 minutes

Candidate name (first, last)

First

Last

Candidate enrolment number

Date of birth (DDMMYYYY)

Gender (M/F)

☐

Assessment date (DDMMYYYY)

Centre number

Candidate signature/declaration*

- If additional answer sheets are used, enter the additional number of pages in this box.
 - Before taking the examination, **all candidates** must check that their barcode label is in the appropriate box. Incorrectly placed barcodes may cause delays in the marking process.
 - Please ensure that you staple additional answer sheets to the back of this answer booklet, clearly labelling these with your full name, enrolment number, centre number and qualification number in BLOCK CAPITALS.
 - All candidates need to use a **black/blue** pen. **Do not** use a pencil or gel pen, unless otherwise instructed.
- If provided with source documents, these documents **will not** be returned to City & Guilds and will be shredded. Do not write on the source documents.

I declare that I had no prior knowledge of the questions in this examination and that I will not divulge
to any person any information about the questions.

Signature for this examination

Onsite paper 2 1 Underpinning Knowledge 0 content overview:

2. Construction science
6. Construction materials
8. Construction in the environment
9. Relationship management
10. Digital technology
11. Construction law

Welcome to the T Level Core
Component Support Session for
the Theory Exam

Building Service Engineering (BSE)
and Onsite Construction

The Webinar will begin shortly



Command verbs 5 minute activity

Log onto to <https://kahoot.com/>

Enter Game PIN

[click this link](#)

https://kahoot.it/challenge/01881932?challenge-id=f80632db-c179-4fe5-af37-7e5f6e6fa239_1676637210176

Command word	Definition	Likely AO(s)
Identify	recognise something, usually from an image, and state what it is	AO1a
Label	add names or descriptions, indicating their positions, on e.g. an image/ drawing	AO1a
List	give as many answers/ examples as the question indicates	AO1a
State	give the answer, clearly and carefully	AO1a
Name	give the (technical) name of something	AO1a
Select	choose (e.g. the correct material/tool for the job) by making careful decisions	AO1a
Define	give the meaning of something, usually of a technical term	AO1a
Describe a...	write what something is like – usually what it looks, tastes, feels, sounds like etc,	AO1a
Describe the process for...	give the steps in a process	AO1a
Compare (...and contrast) (or <i>describe</i> the similarities/differences)	look for and describe the similarities (and differences) between two or more things/ circumstances	AO1b
Differentiate between	show or find the characteristic differences between two or more similar things/ concepts	AO1b
Distinguish between	describe the characteristic differences between two things, or make one thing seem different from another	AO1b
Annotate	add explanatory notes and comments	AO1b
Give example(s) Illustrate/	use examples or images to support, clarify or demonstrate e.g. an explanation	AO1b
Calculate	work out the answer to a problem using mathematical operators and concepts	AO1b
Summarise	give the main/ key points, which give a broad overview of something	AO1b
Explain the...	make clear or easy to understand by giving details and linked reasoning	AO1b

Command word	Definition	Likely AO(s)
Explain why /consequences of/ reasons for...	give the causes of/ rational for something	AO1b, AO2
Explain how...	Give the steps in e.g. a process, clarifying causal relationships	AO2/AO3
Discuss	talk/write about a topic in detail, considering the different issues, ideas, opinions related to it	AO3
Analyse	study or examine usually a complex issue in detail to identify essential elements, causes, characteristics etc	AO3
Give a rationale	Explain why you have taken particular actions/ decisions	AO3
Justify your decisions	Make a case for the decisions/ actions taken explaining why they particularly meet the particular circumstances/ context	AO3
Describe the effect of (e.g. an event).... Describe the effect on	write about what has changed/happened because of the e.g. event	AO2/AO3
Evaluate	Make an analysis about the success/ quality of e.g. end product/outcome – usually systematic, proposing improvements	AO3

Deconstructing an exam question

There are four types of keywords that learners need to consider when deconstructing a question:

- **Command words**- verbs that provide the **instruction** as to what kind of skill they need to apply in the question
- **Concept words**- These refer to **specific syllabus** concepts that are being examined in this particular question e.g words learners will be familiar with e.g **PESTLE** analysis in business.
- **Condition words** -This refers to the conditions, parameters or constraints placed on the learner in their response to the question. E.g you must answer a question '**with reference**' to something.
- **Critical words**-This type of keyword works to refine a response and are typically overlooked by learners e.g describe **how** cement **works** with sand and water.

Example BSE

Command word-list

Condition word
(with reference to)

Q 4	PESTLE factors are used for analysis in building services and construction projects. List these PESTLE factors.			
	Acceptable answer(s)	Guidance	Max marks	Test Spec ref & AO
	1. political, 2. economic, 3. social, 4. technological, 5. legal, 6. environmental.	Award 1 mark for each.	6	4.9 AO1a

Concept word- These refer to **specific syllabus**

Page 74
QHB/syllabus

4.9 PESTLE factors

Range:

PESTLE - political, economic, social, technological, legal, environmental.

What do learners need to learn?

Current examples of PESTLE and how it is used for analysis in building services and construction projects.

The potential impact these factors have on current and future building projects e.g. changes post Grenfell, tax changes for self-employed, augmented reality and impacts of Building Regulations and compliance.

OSC example

As a trainee, you witness an accident involving a colleague on site. They were taken to hospital, with long term injuries as a result of the accident.

Explain your responsibilities, if any, under RIDDOR requirements, as an employee of the same organisation.

Command words

verbs that provide the instruction

Concept words

These refer to specific syllabus

Condition words

This refers to the constraints placed on the learner in their response to the question.

Critical words-This type of keyword works to refine a response and are typically overlooked by learners

Identifiers within exam questions

Land based sector example (animal management)

Preparation for Theory Exam
Spring 2023

Physical examination of small exotic mammals

Context

Item Identifier

12.



Stimulus

Stem or text displayed

Command verb

(a) List three physical checks to assess the health of a small mammal

Answer space indicator

.....
.....
.....
.....

Marks available

(3)

Engineering and Manufacturing activity

- 10 A company wants to chemically etch stainless steel labels with its logo and product details, such as the ones shown in Figure 3.

Describe how the etching process would be carried out.

(4 marks)



Figure 3

Source: www.brunelengraving.co.uk

Item Identifier

Stimulus

Command verb

Answer space indicator

Marks available

Critical word

Context

Mark Scheme	E.g. Using a photosensitive film etching process - Laminate the metal labels with a photosensitive coating [1] - Expose the areas to be etched to ultraviolet (UV) light, masking the required details [1] - Place the labels into hydrochloric acid etchant solution for a specified period of time [1] - Remove the steel labels from the acid and thoroughly clean [1]	Marking guidance 1 mark for each step described, up to a maximum of 4 marks. Accept other appropriate chemical etching processes and their relevant steps.
Total marks	4	
AO	AO1b = 4	

Engineering and Manufacturing activity

Context

10 A company wants to chemically etch stainless steel labels with its logo and product details, such as the ones shown in Figure 3.

Describe how the etching process would be carried out.

(4 marks)

Item Identifier

Command verb

Stimulus

Figure 3
Source: www.brunelengraving.co.uk

Answer space indicator

Critical word

Item identifier- number 10

Stimulus –picture

Command verb –describe

**Answer space indicator-
amount of lines /white
space (8 lines)**

Marks available- 4

Critical word- process

**Context-chemical etching
company**

Mark Scheme	E.g. Using a photosensitive film etching process - Laminate the metal labels with a photosensitive coating [1] - Expose the areas to be etched to ultraviolet (UV) light, masking the required details [1] - Place the labels into hydrochloric acid etchant solution for a specified period of time [1] - Remove the steel labels from the acid and thoroughly clean [1]	Marking guidance 1 mark for each step described, up to a maximum of 4 marks. Accept other appropriate chemical etching processes and their relevant steps.
Total marks	4	
AO	AO1b = 4	

Marks available

Extended Response Questions ERQ (Part B papers 1&2)

Section B

- 18 An organisation is reviewing its business objectives for the year. Its priorities include the launch of a range of new services that it hopes will grow its market share, and there is an overall aim to grow income by 15% on the previous year. The organisation is aware that intelligence has highlighted a volatile marketplace and the growing threat from new competitors.

Analyse how using a business planning strategy can support the organisation to meet its objectives for the year. (9 marks)

Intention:

To allow the learner to analyse how business planning can be used by the organisation to support them in meeting their objectives for the year.

Indicative content

Content of the strategy

- Analysis of internal drivers
- Analysis of external drivers
- Risks presented by external factors
- Setting of key objectives/aims/KPIs
- Implementation of activities/plans
- Dissemination of plans to key stakeholders and internal teams
- Contingency planning

Ability to support

- Supports understanding of what is intended to be achieved, with recognition of key aims (e.g. increase of market share, overall aim of 15% growth)
- Outlines how objectives will be achieved (e.g. the intended approach to launch the range of new services)
- Allows a clear focus on the market and the approaches that will support how to best position the new services
- Identifies the level of risk of competitors/the potential impact they will present on delivering priorities
- Allows the implementation of risk monitoring of competitors, accounting for how the impact of new and emerging competitors changes over time
- Supports the development of contingency planning and mitigations to account for volatile marketplace
- Focuses resources and time to delivering key priorities
- Sets transparency of objectives and how they will be delivered within the team

Band 1 (1 – 3 marks)	Band 2 (4 – 6 marks)	Band 3 (7 – 9 marks)		
<i>For no awardable content, award 0 marks.</i> Applies basic understanding of business planning that shows limited consideration of how it can be used to support the organisation meet its objectives alongside the issues outlined in the scenario. Demonstrates a basic level of analysis of business planning, with limited connections showing how it is applicable to the scenario. The response lacks clarity and is generally poorly structured.	Applies a good understanding of business planning that shows some consideration of how it can be used to support the organisation meet its objectives alongside the issues outlined in the scenario. Demonstrates a good use of analysis of business planning with connections showing how it is applicable to the scenario, offering some chains of reasoning. The response is generally clearly expressed, with some consideration to structure of response.	Applies a comprehensive understanding of business planning that shows how the organisation can be fully supported to meet its objectives alongside the issues outlined in the scenario. Demonstrates comprehensive use of analysis of business planning with connections fully linked to the scenario, offering detailed and accurate chains of reasoning. The response is fully coherent and is articulated using an optimal structure.	9	1.5 AO2 3 AO3 6

Understanding the question

An organisation is reviewing its **business objectives** for the year. Its priorities include the launch of a **range of new services** that it hopes will **grow its market share**, and there is an **overall aim to grow income by 15% on the previous year**. The organisation is aware that intelligence has highlighted a **volatile marketplace** and the growing **threat from new competitors**.

Analyse **how using a business planning strategy can support the organisation** to meet its objectives for the year.

Command verb Analyse - study or examine usually a complex issue in detail to identify essential elements, causes, characteristics etc

What should be included in a business strategy-refer to indicative content

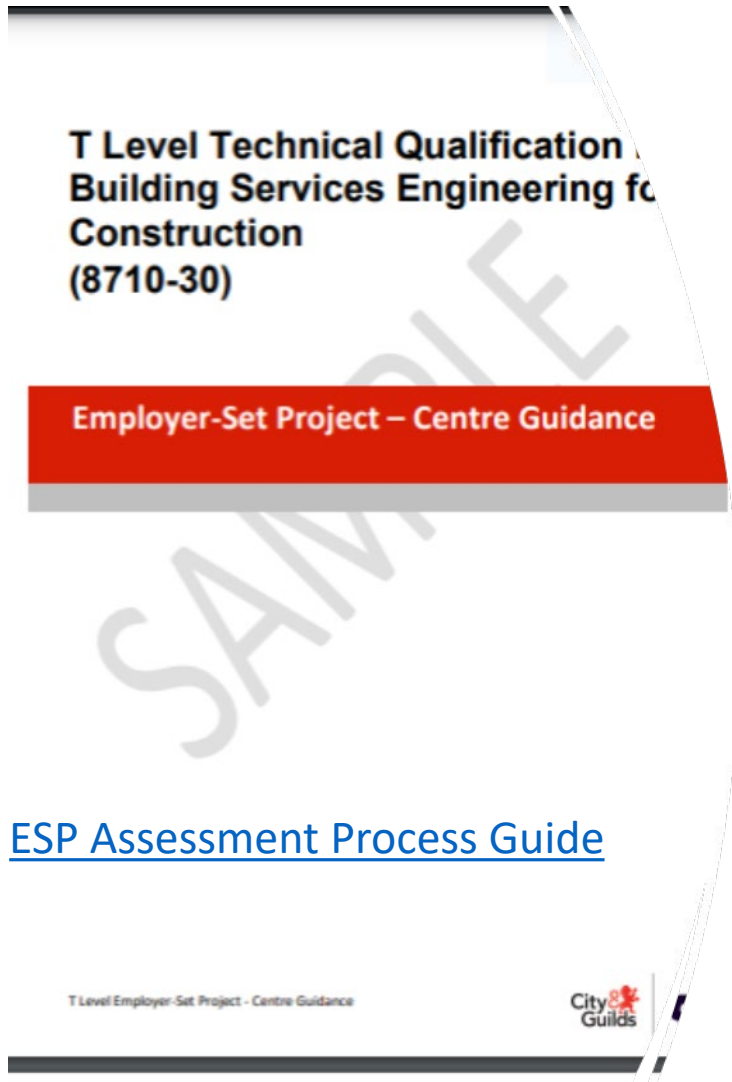
What should be included to support the organisation –refer to key words within the question

Example

- Supports understanding of what is intended to be achieved, with recognition of key aims (e.g. **increase of market share, overall aim of 15% growth**)
- Outlines how **objectives will be achieved** (e.g. the intended approach to launch the **range of new services**)
- Identifies the level of **risk of competitors**
- Supports the development of contingency planning and mitigations to account for **volatile marketplace**

Key to this question is linking the business planning and supporting the organisation to the **scenario**

What is the ESP (across all sectors)



- Classroom based controlled assessment not an invigilated exam
- Consists of a series of timed tasks against an overall brief/scenario.
- Marks allocated for each tasks
- Externally set and marked by C&G (not related to IP)
- Takes place within an assessment window
- A new brief will be produced for each series but number of tasks, types of tasks, timings and marks will remain the same each year.

Employers Set project support (ESP)

Employer-set project mark distribution

This table illustrates how the 100 marks for the employer-set project are distributed against the tasks and mapped to each assessment objective. These have been set by subject matter experts and employers and will support the comparability between versions of the employer-set project over time.

Tasks	AO1	AO2a	AO2b	AO3	AO4a	AO4b	AO4c	AO5a	AO5b	Total
Part 1										
1.1 Investigate the project brief	2	6	6	4	2	0	0	0	0	20
1.2 Project Initiation	4	3	6	4	0	0	0	0	0	17
1.3 Project planning	3	4	4	4	2	0	0	0	0	17
1.4 Presentation	0	3	6	0	0	6	4	0	0	19
Total	9	16	22	12	4	6	4	0	0	73
Part 2										
2.1 Collaborative problem-solving	3	3	6	0	0	0	0	0	0	12
2.2 Evaluation	0	0	3	0	0	0	0	6	6	15
Total	3	3	9	0	0	0	0	6	6	27
AO (%)	12	50		12	14			12		100

- High Level overview pre-delivery
- Deep dive in delivery—breakdown of each task (detail)
- Breakdown of assessment objectives for each task
- How examiners will mark the ESP
- What's assessed and what's not assessed—how to decipher the information
- Evidence needed for submission –recording
- Guidelines for carrying out controlled assessments
- Guidance on ESP document –video formats and sizes etc.

Grading model

- [T Level Notional Grade Boundaries](#)

T Level Qualification Grade				
	Occupational specialism grade			
Core component grade		Distinction	Merit	Pass
	A*	Distinction*	Distinction	Distinction
	A	Distinction	Distinction	Merit
	B	Distinction	Merit	Merit
	C	Merit	Merit	Pass
	D	Merit	Pass	Pass
	E	Pass	Pass	Pass

UCAS tariff points	T Level overall grade	A level
168	Distinction*	A*A*A*
144	Distinction	AAA
120	Merit	BBB
96	Pass (C or above on core component)	CCC
72	Pass (D or E on core component)	DDD

- Nationally recognised certificate which shows their overall grade and a breakdown of what they have achieved. Provided by IfATE .
- The T Level certificate includes:
 - an overall grade for the T Level, shown as pass, merit, distinction or distinction*
 - a separate grade for the core component, using A* to E
 - a separate grade for each occupational specialism, shown as pass, merit or distinction

Allocating T Level grades using UMS Grade boundaries

T LEVELS | Institute for Apprenticeships & Technical Education

T Level Technical Qualification in Engineering and Manufacturing

Theory exam 1 - Maths and Science Principles for Engineering (8714-031)

If provided, enter your candidate barcode label here: _____ Date of exam TBC
Duration: 2 hours 30 minutes

Candidate name (P1, Surname) _____
First _____ Last _____

Candidate enrolment number _____ Date of birth (DDMMYYYY) _____ Gender (M/F) _____

Assessment date (DDMMYYYY) _____ Centre number _____ Candidate signature/initials _____

You should have the following for this examination:

- a pen with blue or black ink
- a calculator

General instructions:

- It should be used as 3/4
- Show all your workings.
- Give your answers to three significant figures, unless otherwise stated.
- The marks for questions are shown in brackets.
- This examination contains 21 questions. Answer all questions.
- Answer the questions in the space provided. Answers written in margins or on blank pages will not be marked.
- Cross through any work you do not want to be marked.

City & Guilds



T LEVELS | Institute for Apprenticeships & Technical Education

T Level Technical Qualification in Engineering and Manufacturing

Theory exam 2 - Engineering in Context (8714-032)

If provided, enter your candidate barcode label here: _____ Date of exam TBC
Duration: 2 hours 30 minutes

Candidate name (P1, Surname) _____
First _____ Last _____

Candidate enrolment number _____ Date of birth (DDMMYYYY) _____ Gender (M/F) _____

Assessment date (DDMMYYYY) _____ Centre number _____ Candidate signature/initials _____

You should have the following for this examination:

- a pen with blue or black ink

General instructions:

- The marks for questions are shown in brackets.
- This examination contains 14 questions. Answer all questions.
- Answer the questions in the space provided. Answers written in margins or on blank pages will not be marked.
- Cross through any work you do not want to be marked.

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T LEVELS | Institute for Apprenticeships & Technical Education

T Level Technical Qualification in Design and Development for Engineering and Manufacturing

Employer-Set Project (8714-033)

UMS (Max 80)		Raw Mark	UI
64	a	a	61
56	b	b	55
48	c	c	49
40	d	d	43
32	e	e	37

Peter Sally



Exam paper 1
raw marks
(actual marks)

Exam paper 2
raw marks (actual
marks)
are combined with
paper 1 and converted
using a uniform mark
scale (UMS)

ESP raw mark is
converted to a UMS

Final core
grade of A*- U
generated

Example of OSC/BSE grades

Grade boundaries

The table below shows the grade mark ranges for the Exam, along with the notional boundaries for Paper 1 and Paper 2 – for the summer 2022 series.

Grade	Mark range	Notional boundaries	
		Paper 1 (8711-031)	Paper 2 (8711-032)
A*	149 - 180	74 - 90	74 - 90
A	128 - 148	64 - 73	64 - 73
B	107 - 127	53 - 63	53 - 63
C	86 - 106	43 - 52	43 - 52
D	66 - 85	33 - 42	33 - 42
E	46 - 65	23 - 32	23 - 32
Unclassified (U)	0 - 45	0 - 22	0 - 22

Grade boundaries

The table below shows the grade mark ranges for the Exam, along with the notional boundaries for Paper 1 and Paper 2 – for the summer 2022 series.

Grade	Mark range	Notional boundaries	
		Paper 1 (8710-031)	Paper 2 (8710-032)
A*	135 - 220	69 - 110	65 - 110
A	120 - 134	62 - 68	58 - 64
B	105 - 119	54 - 61	50 - 57
C	90 - 104	46 - 53	42 - 49
D	75 - 89	39 - 45	35 - 41
E	60 - 74	32 - 38	28 - 34
Unclassified (U)	0 - 59	0 - 31	0 - 27

* Generosity of grading was applied to this series due to disruption to learning with covid-no longer apply for any future exam series.

Progression routes

- Based on the occupational maps –we have mapped out potential progression routes for each T Level [instituteforapprenticeships.org-occupational-maps](https://instituteforapprenticeships.org/occupational-maps)
- Employment-straight to job where full occupational competence is not required and further training within employment is provided.
- Employment via accelerated apprenticeships (level 3)-where full occupational competence is required-exemption documents available BSE. Creating something similar for OSC as soon as apprenticeships go live (exemption provided from IfATE)
- Higher apprenticeships levels 4 and 5
- Higher Technical Qualifications (HTQs levels 4 and 5)
- Higher Education foundation and degree courses where applicable and aligned to each T Level content.

Example of potential progression routes for Management and Administration pathway		
Apprenticeships/HTQs (this list is not exhaustive)	Level	Potential entry requirements
Information manager (+15 additional apprenticeship titles)	4	TBC-5 GCSEs including English and maths–T Level pass overall
Improvement Specialist (+4 additional apprenticeships)	5	TBC-5GCSEs including English and maths T Level pass overall
HTQ's (in development) Coaching Professional Information Manager Learning and development consultant business partner Operations or departmental manager School Business Professional	4/5	Completion and pass of T Level (or level 3 qualification)
Degree courses (this list is not exhaustive)		Each HEP will state their own entry requirements (below are examples of suggested entry requirements)
BSc (Hons) International Business Management with foundation year BSc (Hons) Business Management with Law with foundation year FdA Business management	6	Suggested entry criteria for entry onto Fld year to BSc/ BA - Core component-C/D/E - Occupational Specialism Grade-Pass - Overall T Level Grade-Pass - UCAS points 72-96
BA (Hons) Business and Marketing Management BA (Hons) International Business Management BA (Hons) Business Management with Law BA (Hons) Business and Public Relations BA (Hons) Business Management and Leadership BSc (Hons) Business Management and Sustainability	6	Suggested entry criteria for direct entry to BSc/BA - Core Component-A*/A/B - Occupational Specialism Grade-Distinction/Merit - Overall T Level Grade-Distinction/Merit - UCAS points 120-144

Example of potential progression routes for BSE /Onsite Construction pathways

Apprenticeships accelerated at level 3 or Higher apprenticeships starting at level 4		Level 3/4	Entry requirements will vary
Building Services Engineering Technician (+ 8 additional apprenticeship titles)		4	TBC GCSEs including English, maths and a science –T Level pass overall
Construction Site Engineering Technician		4	TBC-GCSEs including English, maths and a science –T Level pass overall
HTQs			
BEMS (building energy management systems) controls engineer Construction design and build technician Construction quantity surveying technician Construction site supervisor Facilities manager		4	Completion and pass of level 3 (T Level)
Degree courses: BSc (Hons) Construction Management BEng (Hons) Building Services Engineering		6	Each HEP will state their own entry requirements (below are examples of suggested entry requirements) Suggested entry criteria for entry onto F1st year to BEng/BSc • Core component-C/D • Occupational Specialism Grade-Pass • Overall T Level Grade-Pass • UCAS points 72-96
BEng (Hons) Building Services Engineering BSc (Hons) Construction Management		6	Suggested entry criteria for direct entry to BEng/BSc • Core Component-A*/A/B • Occupational Specialism Grade-Distinction/Merit • Overall T Level Grade-Distinction/Merit • UCAS points 120-144

Potential entry requirements for Design and Development Engineering pathway		
Apprenticeships/HTQs	Level	Potential entry requirements
Engineering Technician	4	TBC-5 GCSEs including English, maths and a science –T Level pass overall
Engineer Surveyor	4	TBC-5GCSEs including English, maths and a science –T Level pass overall
HTQs	4/5	Completion and pass of level 3 (T Level)
Degree courses		Each HEP will state their own entry requirements (below are examples of suggested entry requirements)
BEng (Hons) Electrical/Electronic Engineering (Foundation Year) BEng (Hons) Mechanical Engineering (Foundation Year) BEng (Hons) Civil Engineering (Foundation Year)	6	Suggested entry criteria for entry onto Fld year to BEng - Core component-C/D - Occupational Specialism Grade-Pass - Overall T Level Grade-Pass - UCAS points 72-96
BEng (Hons) Aerospace Technology BEng (Hons) Civil Engineering/Structural Engineering BEng (Hons) Mechanical Engineering	6	Suggested entry criteria for direct entry to BEng - Core Component-A*/A/B - Occupational Specialism Grade-Distinction/Merit - Overall T Level Grade-Distinction/Merit - UCAS points 120-144

T-LEVELS



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Questions?
Thank you for attending

February 2023

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