Endorsements by third parties and purpose statements

Qualification Purpose Statements	Qualification	Level/Ofqual Link	Purpose	Str
	IT User Skills in Open Systems and Enterprise	1 [1]	Link [2]	Lin
		2 [5]	Link [6]	Lin
	Open Ptatforms and Digital Skills	2 [9]	Link [10]	Lin
	User Skills and Digital Technologies	2 [12]	Link [13]	Lin
	Cyber Security and Digital Forensics	2 [14]	Link [15]	Lin
	IT User Skills in Cloud Systems and Services	3 [17]	Link [18]	Lin
	Open Systems and Advanced Manufacturing Technologies	1 [20]	Link [21]	Lin
		2 [23]	Link [24]	Lin
	Open Systems Computing	1 [26]	Link [27]	Lin
		2 [30]	Link [31]	Lin
		3 [33]	Link [34]	Lin
	Designing, Engineering and Constructing a Sustainable Built Environment	1 [37]	Link [38]	Lin
		2 [41]	Link [42]	Lin
		3 [44]	Link [45]	Lin
	Smart Product Design and Manufacture	1 [48]	Link [49]	Lin
		2 [51]	Link [52]	Lin
		3 [54]	Link [55]	Lin
	Open Systems IT Management	2 [56]	Link [57]	Lin
		3 (under development)	Link	Lin

Note: Additional qualification endorsements in table below.

This table provides links to various letters of support. Below it there are descriptions of the purpose of each qualification we offer.

Organisation	Download letter of support	Qualifications explicitly supported
Academies Enterprise Trust [60]	Letter [61]	601/1[illegible] 4/8 [6 601/1[illegible] 5/X [6

(function(i,s,o,g,r,a,m){i['GoogleAnalyticsObject']=r;i[r]=i[r]||function(){ (i[r].q=i[r].q||[]).push(arguments)},i[r].l=1*new Date();a=s.createElement(o), m=s.getElementsByTagName(o)[0];a.async=1;a.src=g;m.parentNode.insertBefore(a,m) })(window,document,'script','//www.google-analytics.com/analytics.js','ga'); ga('create', 'UA-46896377-2', 'auto'); ga('send', 'pageview');

Endorsements by third parties and purpose statements

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Bam Construct [64]	Letter [40]	601/11 8/7 [3 601/11 9/9 [4 601/14 6/4 [6 601/15 3/4 [6 601/15 2/2 [4
Credativ [67]	Letter [29]	601/11 4/8 [6 601/11 5/X [6 601/11 0/0 [2 601/11 1/2 [3 601/12 4/8 [6 601/14 1/6 [6 601/15 6/5 [3
Cromwell College of IT and Management [70]	Letter [71]	601/15 6/5 [3
First Group [72]	Letter [73]	601/42 6/5 [5
Food Allergy Management Europe [74]	Letter [75]	601/11 2/4 [7 601/11 3/6 [7
Lichfield and Tamworth Chambers of Commerce [78]	Letter [79]	601/11 4/8 [6 601/11 5/X [6
London South Bank University (Faculty of engineering, Sci, and built environment)	Letter1 [81]	601/11

(function(i,s,o,g,r,a,m){i['GoogleAnalyticsObject']=r;i[r]=i[r]||function(){ (i[r].q=i[r].q||[]).push(arguments)},i[r].l=1*new Date();a=s.createElement(o), m=s.getElementsByTagName(o)[0];a.async=1;a.src=g;m.parentNode.insertBefore(a,m) })(window,document,'script','//www.google-analytics.com/analytics.js','ga'); ga('create', 'UA-46896377-2', 'auto'); ga('send', 'pageview');

Endorsements by third parties and purpose statements

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[80]	Letter2 [82] Letter3 [83] Letter4 [84]	8/7 [3 601/1 9/9 [4 601/1 6/4 [6 601/1 3/4 [6 601/1 2/2 [4
Mott MacDonald [85]	Letter [86]	601/1 8/7 [3 601/1 9/9 [4 601/1 6/4 [6 601/1 3/4 [6 601/1 2/2 [4
NAACE [87]	Letter 1 [88] Letter 2 [89] Letter 3 [90] Letter 4 [91]	501/0 1/0 [9 501/0 0/9 [9 501/0 7/6 [9 501/1 8/1 [9 500/8 0/5 [1 500/9 8/3 [9 600/6 8/X [5 500/8 3/8 [9 501/0 3/6 [9 501/0

(function(i,s,o,g,r,a,m){i['GoogleAnalyticsObject']=r;i[r]=i[r]||function(){ (i[r].q=i[r].q||[]).push(arguments)},i[r].l=1*new Date();a=s.createElement(o), m=s.getElementsByTagName(o)[0];a.async=1;a.src=g;m.parentNode.insertBefore(a,m) })(window,document,'script','//www.google-analytics.com/analytics.js','ga'); ga('create', 'UA-46896377-2', 'auto'); ga('send', 'pageview');

Endorsements by third parties and purpose statements

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		5/4 [9 601/11 0/0 [2 601/11 1/2 [3 601/12 4/8 [6 601/14 1/6 [6 601/13 6/5 [3
Nescot [100]	Letter [101]	603/16 4/X [102] 603/28 7/4 [103] 601/42 6/5 [104] 603/14 2/7 [105] 601/87 5/X [106]
Open Source Consortium [107]	Letter 1 [108] Letter 2 [109] Letter 3 [110] Letter 4 [111] Letter 5 [112]	601/11 4/8 [6 601/11 5/X [6 501/02 1/0 [9 501/02 0/9 [9 501/02 7/6 [9 501/14 8/1 [9 500/86 0/5 [1

(function(i,s,o,g,r,a,m){i['GoogleAnalyticsObject']=r;i[r]=i[r]||function(){ (i[r].q=i[r].q||[]).push(arguments)},i[r].l=1*new Date();a=s.createElement(o), m=s.getElementsByTagName(o)[0];a.async=1;a.src=g;m.parentNode.insertBefore(a,m) })(window,document,'script','//www.google-analytics.com/analytics.js','ga'); ga('create', 'UA-46896377-2', 'auto'); ga('send', 'pageview');

Endorsements by third parties and purpose statements

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		500/9 8/3 [9 600/6 8/X [5 500/8 3/8 [9 501/0 3/6 [9 501/0 5/4 [9 601/1 0/0 [2 601/1 1/2 [3 601/1 4/8 [6 601/1 1/6 [6 601/1 6/5 [3 601/3 1/8 [113]
Linux Professional Institute [114]	Letter [115]	601/4 6/5 [5
RHACC [116]	Letter [117]	603/1 4/X [102] 603/2 7/4 [103] 601/4 6/5 [104] 603/1 2/7 [105] 601/8 5/X [106]

(function(i,s,o,g,r,a,m){i['GoogleAnalyticsObject']=r;i[r]=i[r]||function(){ (i[r].q=i[r].q||[]).push(arguments)},i[r].l=1*new Date();a=s.createElement(o), m=s.getElementsByTagName(o)[0];a.async=1;a.src=g;m.parentNode.insertBefore(a,m) })(window,document,'script','//www.google-analytics.com/analytics.js','ga'); ga('create', 'UA-46896377-2', 'auto'); ga('send', 'pageview');

Endorsements by third parties and purpose statements

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Saffron Interactive [118]	Letter [119]	601/42 6/5 [5
Seddon Construction Ltd [120]	Letter [121]	601/11 8/7 [3 601/11 9/9 [4 601/14 6/4 [6 601/15 3/4 [6 601/15 2/2 [4
The Open University [122]	Letter [123]	601/87 5/X [106] 603/11 3/X [124]
Mirandanet Fellowship [125]	Letter [126]	601/11 4/8 [6 601/11 5/X [6 601/11 0/0 [2 601/11 1/2 [3 601/12 4/8 [6 601/14 1/6 [6 601/15 6/5 [3
The Modern Baccalaureate [127]	Letter [128]	601/11 4/8 [6 601/11 5/X [6
TopCon Positioning Europe [129]	Letter [130]	601/11 8/7 [3

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Endorsements by third parties and purpose statements

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		601/11 9/9 [4 601/14 6/4 [6 601/15 3/4 [6 601/15 2/2 [4
Royal Institute of Chartered Surveyors [131]	Letter 1 [132] Letter 2 [133]	601/11 8/7 [3 601/11 9/9 [4 601/14 6/4 [6 601/15 3/4 [6 601/15 2/2 [4
UK Fast [134]	Letter 1 [135]	603/12 4/X [102] 601/42 6/5 [104] 601/87 5/X [106]
University of Northumbria [136]	Letter [137]1 Letter 2 [138] Letter 3 [139]	601/11 8/7 [3 601/11 9/9 [4 601/14 6/4 [6 601/15 3/4 [6 601/15 2/2 [4
University of Westminster (ABE) [140]	Letter [141] 1	601/11 8/7 [3

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	Letter 2 [142] Letter 3 [143]	601/1 9/9 [4 601/1 6/4 [6 601/1 3/4 [6 601/1 2/2 [4

Purpose Statements for qualifications

Purpose of TLM Level 3 qualifications

TLM Level 3 Award in Designing, Engineering and Constructing a Sustainable Built Environment QAN 601/1496/4 [65] Handbook [144]

Who is this qualification for?

The purpose of this qualification is to recognise learning at Level 3 that is relevant to the design, engineering and construction of buildings with a specific emphasis on environmental sustainability. It is suitable for anyone that is interested in working in the construction industry but especially those that want to get a taste of work in professions such as architecture, surveying, civil engineering and facilities management. Even for those not going into employment in the construction industry, the qualification will provide an insight into how their environment is constructed and the decisions that need to be taken to get a building project under way. You will need to be competent in mathematics and English at least at GCSE grade C level and in ICT user skills at Level 2 to be able to access this course. Although not essential, having the Designing, Engineering and Constructing a Sustainable Built Environment (QCF) Level 2 qualification will be a distinct advantage.

What does this qualification cover?

The focus of this award is in defining a sustainable construction project. There is one 12 credit unit of 60 Guided Learning Hours.

Defining a Sustainable Construction Project

At the end of this unit learners will be able to

- research and convey the project remit.
- set standards for sustainability in a construction project.
- define site information required at pre-design phase.

The qualification is assessed on its coursework through a portfolio of evidence derived from day to day work as far as possible in authentic practical contexts.

What could this qualification lead to?

This qualification could ultimately lead to employment in the construction industry in one of a range of professional positions such as architect, surveyor, civil engineer, facilities manager. It provides an insight for citizens so that they are better placed to participate in the democratic process when issues around planning arise in their locality. It will support a general improvement in education through applied practise in English, mathematics and ICT. It could provide a stepping stone to an

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apprenticeship in the construction industry.

This qualification has been developed indirect collaboration with industry professionals to meet current and up to date industry demands. It provides a link between the Level 2 Certificate and the Level 3 Certificates and Diplomas to make a smoother progression allowing greater flexibility in matching assessment to needs. It is designed so that high attainers that can achieve A and A* grades early are not left marking time in KS4. Nearly 25% of learners achieve the highest level 2 grades available by the age of 16 and probably half of these could achieve these grades before the end of KS4. Employers recognise that the highest attaining 5-10% of the cohort are ready to tackle Level 3 work by the end of Year 10 especially if motivated by real and practical contexts. This qualification reduces the probability of underachievement in the highest attaining children in the cohort. It can act as a means of gaining recognition at a basic level 3 competence on the way to the larger certificate and diploma and therefore enhance motivation. For this reason the qualification is ungraded. For students that take other Level 3 subjects it can act as a practical means of broadening context (eg in mathematics, physics, engineering and digital technologies) with close links to applied learning in employer led scenarios. This qualification is 100% coursework and is not intended to provide performance points. It is designed to support learner interest and progression, particularly for high attainers and provides credit towards the coursework elements of the Level 3 certificate and diploma outlined below.

Who Supports this qualification?

Employer involvement

It is essential to involve employers in the construction industry in the coursework assessment and suitable contacts can be provided where needed. (Handbook page 5 para. 1.5) Suitable involvement includes employers making judgements against a minimum of three of the assessment criteria and agreeing these judgements with the assessor.

Candidates should highlight the BIM Protocol, BIM Employer’s Information Requirements (EIR) and PAS1192:2 specification. Information regarding this can be found via the Government BIM TaskGroup website (Handbook page 57 criterion 1.3)

Industry letters of support are provided in these links:

Bam Construction [145] Letter [40]

Mott MacDonald [85] Letter [146]

Royal Institute Of Chartered Surveyors [131] Letter [147]

Seddon Construction [148] Letter [149]

Topcon Positioning [150] Letter [151]

University letters

London South Bank University [152] Letter_1 [83] Letter 2 [84]

Northumbria University [153] Letter 1 [138] Letter 2 [139]

University of Westminster [154] Letter 1 [142] Letter 2 [143]

University of Newcastle [155] Letter 1 [156]

Will the qualification lead to further learning?

This Award specifically leads to further study to achieve the certificate and/or diploma with the same title. It can also provide evidence of a practical extension to the breadth of study to support

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traditional academic A levels and routes to higher education. It might also provide a basis for choosing to do an apprenticeship in a construction industry context.

TLM Level 3 Certificate in Designing, Engineering and Constructing a Sustainable Built Environment 601/1563/4 [66] Handbook [144]

Who is this qualification for?

The purpose of this qualification is to recognise learning at Level 3 that is relevant to the design, engineering and construction of buildings with a specific emphasis on environmental sustainability. It is suitable for anyone that is interested in working in the construction industry but especially those that want to get a taste of work in professions such as architecture, surveying, civil engineering and facilities management. Even for those not going into employment in the construction industry, the qualification will provide an insight into how their environment is constructed and the decisions that need to be taken to get a building project under way. You will need to be competent in mathematics and English at least at GCSE grade C level and in ICT user skills at Level 2 to be able to access this course. Although not essential, having the Designing, Engineering and Constructing a Sustainable Built Environment Level 2 qualification will be a distinct advantage, as wil having achieved the award at Level 3.

What does this qualification cover?

The focus of this award is in defining a sustainable construction project. There is one 12 credit unit of 60 Guided Learning Hours.

Defining a Sustainable Construction Project

At the end of this unit learners will be able to

- research and convey the project remit.
- set standards for sustainability in a construction project.
- define site information required at pre-design phase.

Support Design, Structural and Services aspects of a Sustainable Construction Project. [157]

At the end of this unit learners will be able to

- use building information modelling techniques to develop the design.
- use building information modelling techniques to develop structural elements of a building project.
- use building information modelling techniques to develop building services elements of a building project.

Developing a Sustainable Construction Project [157]

At the end of this unit learners will be able to

- prepare a design brief and take steps to appoint an effective design team.
- use building information modelling techniques for concept design.
- prepare information and resources needed to support a planning application.

The qualification is assessed on its coursework through a portfolio of evidence derived from day to day work as far as possible in authentic practical contexts. There is a grading exam externally set and externally marked.

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What could this qualification lead to?

This qualification could ultimately lead to employment in the construction industry in one of a range of professional positions such as architect, surveyor, civil engineer, facilities manager. It provides an insight for citizens so that they are better placed to participate in the democratic process when issues around planning arise in their locality. It will support a general improvement in education through applied practise in English, mathematics and ICT. It could provide a stepping stone to an apprenticeship in the construction industry.

This qualification has been developed indirect collaboration with industry professionals to meet current and up to date industry demands. It provides a link between the Level 2 Certificate, Level 3 Award and Level 3 Diploma to make a smoother progression allowing greater flexibility in matching assessment to needs. This qualification is complementary to other Level 3 subjects broadening the level 3 curriculum eg for those studying mathematics, physics, engineering and digital technologies, with close links to applied learning in employer led scenarios. This qualification is a combination of coursework and a grading exam. It is designed to support learner interest and progression, particularly for potential construction industry professionals and is a subset of the Diploma with the same title and can act as a stepping stone to it.

Who Supports this qualification?

Employer involvement

It is essential to involve employers in the construction industry in the coursework assessment and suitable contacts can be provided where needed. (Handbook page 5 para. 1.5) Suitable involvement includes employers making judgements against a minimum of three of the assessment criteria and agreeing these judgements with the assessor.

Candidates should highlight the BIM Protocol, BIM Employer’s Information Requirements (EIR) and PAS1192:2 specification. Information regarding this can be found via the Government BIM TaskGroup website (Handbook page 57 criterion 1.3)

Industry letters of support are provided in these links:

Bam Construction [145] Letter [40]

Mott MacDonald [85] Letter [146]

Royal Institute Of Chartered Surveyors [131] Letter [147]

Seddon Construction [148] Letter [149]

Topcon Positioning [150] Letter [151]

University letters

London South Bank University [152] Letter 1 [83] Letter 2 [84]

Northumbria University [153] Letter 1 [138] Letter 2 [139]

University of Westminster [154] Letter 1 [142] Letter 2 [143]

Newcastle University Letter 1 [156]

Will the qualification lead to further learning?

This Certificate specifically leads to further study to achieve the Diploma with the same title. It can also provide evidence of a practical extension to the breadth of study to support traditional academic A levels and routes to higher education. It might also provide a basis for choosing to do an

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apprenticeship in a construction industry context.

TLM Level 3 Diploma in Designing, Engineering and Constructing a Sustainable Built Environment 601/1562/2 [44] Handbook [144]

Who is this qualification for?

The purpose of this qualification is to recognise learning at Level 3 that is relevant to the design, engineering and construction of buildings with a specific emphasis on environmental sustainability. It is suitable for anyone that is interested in working in the construction industry but especially those that want to get a taste of work in professions such as architecture, surveying, civil engineering and facilities management. Even for those not going into employment in the construction industry, the qualification will provide an insight into how their environment is constructed and the decisions that need to be taken to get a building project under way. You will need to be competent in mathematics and English at least at GCSE grade C level and in ICT user skills at Level 2 to be able to access this course. Although not essential, having the Designing, Engineering and Constructing a Sustainable Built Environment Level 2 qualification will be a distinct advantage, as will having achieved the award or certificate at Level 3.

What does this qualification cover?

The focus of this award is in defining a sustainable construction project. There is one 12 credit unit of 60 Guided Learning Hours.

Defining a Sustainable Construction Project

At the end of this unit learners will be able to

- research and convey the project remit.
- set standards for sustainability in a construction project.
- define site information required at pre-design phase.

 Support Design, Structural and Services aspects of a Sustainable Construction Project. [157]

At the end of this unit learners will be able to

- use building information modelling techniques to develop the design.
- use building information modelling techniques to develop structural elements of a building project.
- use building information modelling techniques to develop building services elements of a building project.

Developing a Sustainable Construction Project [157]

At the end of this unit learners will be able to

- prepare a design brief and take steps to appoint an effective design team.
- use building information modelling techniques for concept design.
- prepare information and resources needed to support a planning application.

Lifecycle and Financial Planning for a Sustainable Construction Project [158]

- use building information modelling techniques to support the operational management of a building.

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- understand cost analysis and financial control.
- produce a budget for a complex building project.

Evaluating and Documenting a Sustainable Construction Project [158]

- make objective comparisons between construction methods.
- communicate outcomes from professional perspectives.
- make a presentation of a summary report to a critical audience.

The qualification is assessed on its coursework through a portfolio of evidence derived from day to day work as far as possible in authentic practical contexts. There is a grading exam externally set and externally marked.

What could this qualification lead to?

This qualification could ultimately lead to employment in the construction industry in one of a range of professional positions such as architect, surveyor, civil engineer, facilities manager. It provides an insight for citizens so that they are better placed to participate in the democratic process when issues around planning arise in their locality. It will support a general improvement in education through applied practise in English, mathematics and ICT. It could provide a stepping stone to an apprenticeship in the construction industry.

This qualification has been developed in direct collaboration with industry professionals to meet current and up to date industry demands. It provides a link from the Level 2 Certificate with options for milestones using the Level 3 Award and Certificate of the same name. This qualification is complementary to other Level 3 subjects broadening the level 3 curriculum eg for those studying mathematics, physics, engineering and digital technologies, with close links to applied learning in employer led scenarios. This qualification is a combination of coursework and a grading exam. It is designed to support learner interest and progression, particularly for potential construction industry professionals. It can lead to under graduate courses at university related to the construction industry.

Who Supports this qualification?

Employer involvement

It is essential to involve employers in the construction industry in the coursework assessment and suitable contacts can be provided where needed. (Handbook page 5 para. 1.5) Suitable involvement includes employers making judgements against a minimum of three of the assessment criteria and agreeing these judgements with the assessor.

Candidates should highlight the BIM Protocol, BIM Employer's Information Requirements (EIR) and PAS1192:2 specification. Information regarding this can be found via the Government BIM TaskGroup website (Handbook page 57 criterion 1.3)

Industry letters of support are provided in these links:

Bam Construction [145] Letter [40]

Mott MacDonald [85] Letter [146]

Royal Institute Of Chartered Surveyors [131] Letter [147]

Seddon Construction [148] Letter [149]

Topcon Positioning [150] Letter [151]

University letters

London South Bank University [152] Letter 1 [83] Letter 2 [84]

Northumbria University [153] Letter 1 [138] Letter 2 [139]

University of Westminster [154] Letter 1 [142] Letter 2 [143]

University of Newcastle [155] Letter 1 [156]

Will the qualification lead to further learning?

This Diploma specifically leads to university under graduate courses related to the construction industry including architecture, surveying, civil engineering and facilities management. It can also provide evidence of a practical extension to the breadth of study to support traditional academic A levels and routes to higher education. It might also provide a basis for choosing to do an apprenticeship in a construction industry context.

The Learning Machine Ltd (TLM)

TLM Level 3 Diploma in Open Systems Computing Handbook [159] QAN 601/1376/ [33]5

Endorsements: Open Source Consortium [109] Trade Association, NAACE [88], credativ [29]

Who is this qualification for?

This is a technical level vocational qualification of 360 guided learning hours. It is designed for students that want to work as developers in the software industry or occupations where high levels of digital literacy are an advantage. A typically related standard occupation code is 2136 Developer IT/computing. The content of the qualification is contextualised in global open source software development communities including their expanding contribution to the employment market. While not mandatory, GCSE or equivalent qualifications in a computing related subject will be an advantage and candidates should have achieved at least grade Cs in mathematics and English at GCSE.

What does this qualification cover?

The qualification units are indicative of the content.

Unit 1: Computational Thinking 10 credits (75 GLH)
Unit 2: Principles of software engineering 10 credits (75 GLH)
Unit 3: Delivering a software project 10 credits (60 GLH)
Unit 4: Open Systems and Community Development 10 credits (75 GLH)
Unit 5: Computer Systems Management 10 credits (75 GLH)

Employer involvement

Ideally the candidate should gain some significant work experience through a placement in a company where they can make a meaningful programming contribution that can contribute to Unit 2 or Unit 3. If this is not possible, employer involvement can be associated with specific assessment criteria, for example in Unit 3

1.3 present the proposal to critical experts.
1.4 make modifications as a result of feedback.
2.5 test code regularly involving third parties.
3.1 provide regular updates on progress to a mentor.
3.5 make a final presentation to a critical audience.

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There are also opportunities for candidates to earn money from open source code contributions eg for those 18 or over Google Summer of Code Stipends. This could be the extension of a project after the qualification has been completed forming part of an apprenticeship. This is in keeping with the Richard Review recommendation 6. The Government should encourage diversity and innovation in delivering apprenticeships. There will be many paths and approaches that an apprentice can take to reach ‘the standard’ and we should strip out any unnecessary prescription and regulation of the process for getting there. (Recommendation 6 of the Richard Review).

WHAT COULD THIS QUALIFICATION LEAD TO?

This qualification could lead to direct employment in any company that needs to develop and maintain its own digital applications. For example a small business that wants control over its own web site or that wants to reduce its costs by taking advantage of the masses of free software legally available fro the internet. This is a low level software engineering position that could then lead to more complex work and a more senior position with added experience and further learning.

Will the qualification lead to further learning?

There is a wide range of further learning and development opportunities that can be accessed from this qualification. It would provide a sound background for any degree level study in a subject with a significant digital technologies component. Examples would include, Computer Science, IT, and Digital Media. Candidates need to be aware that in this industry there are new complex tools being made available all the time and they will not survive in employment if they don't adopt a life-long learning approach that includes taking responsibility for their own updating. Joining Open Source Communities is a good way of supplementing any formal courses in further or higher education.

Award, Certificate and Diploma

There is an Award, Certificate and Diploma associated with the content of this qualification. The Award and Certificate are subsets of the Diploma and provide means of gaining credit towards the Diploma along the way or to recognise a lower amount of learning eg if the candidate struggles to complete the Diploma in the time available. It means they will not leave with nothing. Only the Diploma is listed as eligible for performance measures at the time of writing. The Diploma provides a course of study the size of an A level and as such is intended to provide a similar level of preparation to a full A level but with an emphasis on practical competence in the software development sector that could be sufficient to enable a start in employment. All students requiring a full A level sized course should take the Diploma. The Award and certificate might provide useful technical skills to support other subjects such as mathematics, physics or engineering.

Demand for skills

There is clear demand for skills in the open source job market.

- 93% of respondent employers plan to hire at least one Linux professional within the next six months.
- 90% of employers say it's difficult to find professionals with Linux skills.
- The average increase in pay for staffers with Linux experience from January 2012 to January 2013 was a healthy 9%.

Source (DICE)

You can track open source jobs in London here [160].

The qualification provides a practical technical dimension that prepares students for computer programming and and related digital competencies that form a suitable background for further on the job learning or further study in computer science in higher education.It equips the student with transferable knowledge in the domain of digital technologies, underpinning a specific emphasis on practical programming skills and open source software community development. As a result, it is a

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suitable basis for providing a route directly into employment in the global software development industry or for further practical or academic study. Given the increasing importance of digital technologies in supporting everything from academic research to industrial manufacture, the qualification is a powerful ally to other vocational and academic disciplines. When combined with Level 3 mathematics, further mathematics and physical science courses the qualification forms a strong practical basis for entry into technical occupations as well as university computer science courses. The emphasis on open systems supports government policies for achieving best value and understanding issues related to intellectual property and lock-in to particular suppliers

Purpose of Tech Awards

TLM Level 2 Certificate in Open Systems IT Management Qualification Number:601/4276/5 [56] Specification and details: Handbook [161]

Who is this qualification for?

This is a substantial Level 2 Vocational Qualification of 150 guided learning hours. It is designed for students that want to work as systems or network managers in organisations deploying Posix based infrastructure. This includes Linux, and BSD derivatives such as Mac OS. A typically related standard occupation code is 3131 administrator, computer. The content of the qualification is specifically related to the tasks required to administer computer systems running open source network operating software. While not mandatory, a Level 1 or equivalent qualification in computing, computer science or IT will be an advantage and candidates should have achieved or be realistically in the process of achieving at least grade Cs in mathematics and English at GCSE or equivalent functional skills.

What does this qualification cover?

The qualification covers

The qualification units are indicative of the content.

- Understanding global software communities and their products (40 GLH)
- Using an operating system efficiently (40 GLH)
- Managing Computer Hardware, Data and Networks (40 GLH)
- Carry out an IT Systems Management Project (30 GLH)

Employer involvement

Centres must provide each candidate with a minimum of 1 day working alongside a professional systems or network manager. This professional must assess the candidates competence against at least 3 of the criteria and agree them with the assessor. This is a mandatory requirement before the candidate is eligible to take the grading exam. Details are provided in Section 6 of the handbook.

The centre must provide evidence that there is employer involvement that meets the DfE requirements and this should be checked with the account manager at TLM before proceeding.

Letters of support:

Trade Organisations

Open Source Consortium [112].

Linux Professional Institute [162].

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Employers

National Association of Advisers in Computer Education. [90]

First Group [73].

WHAT COULD THIS QUALIFICATION LEAD TO?

This qualification could lead to direct employment in any company that needs IT infrastructural support for computers and/or networks running open source operating software. For example a small business that runs Linux servers, firewalls or desktop computers. Since most of the principles are common to all operating systems, the transition from open source to proprietary systems could be made on the job with a small allowance of time and familiarising with a different environment. It is likely that a Level 2 candidate would be inducted into a junior position which would be supported with further experience before taking full responsibility for an entire installation. There are Level 3 Tech levels planned as a progression route from this certificate referened to the Linux Professional Institute's LPIC 1 and LPIC 2 certificates.

Will the qualification lead to further learning?

There is a wide range of further learning and development opportunities that can be accessed from this qualification. It would provide a sound background for level 3 study in a subject with a significant digital technologies component. Examples include, Computer Science, IT, Digital Media and the more specific Linux Professional certificates such as Red Hat Systems Engineer and LPIC 1 and 2 certificates of the Linux Professional Institute. Candidates need to be aware that in this industry there are new complex tools being made available all the time and they will not survive in employment if they don't adopt a life-long learning approach that includes taking responsibility for their own updating. Joining Open Source Communities is a good way of supplementing any formal courses in further or higher education. Increasing the breadth of their experience through courses leading to qualifications in computing, computer science or IT related activities will help them become more employable in a wider range of occupations and will provide a broader base for managing large and complex installations.

Demand for skills

There is clear demand for skills in the open source job market.

- 93% of respondent employers plan to hire at least one Linux professional within the next six months.
- 90% of employers say it's difficult to find professionals with Linux skills.
- The average increase in pay for staffers with Linux experience from January 2012 to January 2013 was a healthy 9%.

Source (DICE)

You can track open source jobs in London here [160].

This qualification provides a practical technical dimension that prepares students for systems management. It equips the student with transferable knowledge in the domain of digital technologies, underpinning a specific emphasis on practical network management skills and underpinning the Linux Professional Institute examination "Linux Essentials" As a result, it is a suitable basis for providing a route directly into employment or for further practical or academic study in the wider field of digital technologies. The emphasis on open systems supports government policies for achieving best value and understanding issues related to intellectual property and lock-in to particular suppliers.

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Purpose Level 2 Qualifications

TLM Level 2 Certificate in Designing, Engineering and Constructing a Sustainable Built Environment QAN 60111999 [41]

OVERVIEW

Who is this qualification for?

The purpose of the qualification is to teach about some of the up to date issues related to the built environment and provide an interesting context for strengthening numeracy, literacy, IT skills understanding and knowledge as well as applying scientific methods to real problems in civil engineering and building design. It looks at specific issues related to buildings so that the learner will better appreciate the human environment including the impact of people on their natural surroundings.

Who might be interested in taking this course?

Anyone that likes working with real and technical contexts as opposed to mainly academic study. Anyone interested in a future career in the building industry in any discipline. Anyone that is interested in how buildings are designed, planned and constructed taking account of their environmental impact.

What will the student study as part of this qualification?

There are 4 compulsory units making up the qualification

- Defining a Sustainable Construction Project
- Developing a Sustainable Construction Project
- Delivering a Sustainable Construction Project
- Evaluating a Sustainable Building Project

The details of the assessment criteria can be read from the qualifications specification [163].

What knowledge and skills will the student develop as part of this qualification and how might these be of use and value in further studies?

The knowledge and understanding component covers a wide range of issues related to construction. As a specific example in unit 3, guidance in the specification states "Candidates will create their own fully annotated drawing sheet complete with floor plans, elevations and sections at a useful scale." This illustrates practical and technical skills with many opportunities for developing literacy and numeracy using scientific methods include quantitative measures and control of variables. The knowledge specific to the locality will enable more informed participation in the community as well as better insight in other related academic subjects. The practical and technical skills include the use of industry standard software in realising building design, costing quantities and building efficiency. There will be opportunities to design and make prototypes and models in two and three dimensions eg using addative manufacture (3D printing) and similar techniques.

Which subjects will complement this course?

This qualification can be complementary to any other academic or technical subject. Meaningful links can be made with all Ebacc subjects. For example a good support for Modern Languages would be a project to work collaboratively on a building design project with a group in a different country using the internet and translation services such as Google translate. Links to geography and history can be made through historic buildings and the building locations. There are links to generic IT skills in specialist software, media and internet technologies.

This course provides a progression route to the level 3 qualification with the same title but it also

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provides a general education background that would be suitable support for the great majority of level 3 qualifications whether A levels, Applied general or Tech level.

TLM Level 2 Certificate in Open Systems Computing QAN 60111112 [30]

OVERVIEW

Who is this qualification for?

The purpose of the qualification is to teach about some of the up to date issues related to open systems computing including a balance across computer programming, ICT applications, associated hardware and networks. Whereas GCSE Computer science is focused on computational thinking and an academic approach to computing, this qualification provides a more practical and engineering based approach to implementing technologies and digital systems for practical purposes. The Open Systems dimension is to try to achieve cost reductions by enabling the avoidance of lock-in to particular suppliers through the adoption of internationally agreed open standards and showing how to get all the technical tools and resources that the learner will ever need freely and legally from the Internet. There is a community dimension through the open source ethos embedded in the specification. There are many opportunities to provide an interesting context for strengthening numeracy, literacy, generic IT skills understanding and knowledge as well as applying scientific methods to real problems in engineering and software design. It looks at specific issues related to copyright and licensing so that the learner will better appreciate the importance of understanding intellectual property in a world increasingly dominated by digital information.

Who might be interested in taking this course?

Anyone that likes working with real and technical contexts as opposed to mainly academic study. Anyone interested in a future career in digital industries but is undecided about where to specialise. Anyone that is interested in how software is developed in global communities. Anyone who wants to gain the knowledge to reduce their dependency on proprietary technologies to help themselves, their family and future employers save money. Ideally you should have completed the Level 1 qualification by the same name before starting this course but that is not mandatory. If starting with this course you should consider yourself a reasonable prospect for grades C and higher in mathematics and English GCSEs.

What will the student study as part of this qualification?

There are 3 compulsory units making up the qualification

Unit 1 - Computer Science - 5 credits - 40 GLH
Unit 2 - Using digital applications to support projects - 5 credits - 40 GLH
Unit 3 - Computer hardware systems and networks - 5 Credits - 40 GLH

The details of the assessment criteria can be read from the qualifications specification [164].

What knowledge and skills will the student develop as part of this qualification and how might these be of use and value in further studies?

Students will learn how to modify open source code to produce new and useful applications. Originate and test their code, find and use useful free resources from the internet including software and digital content. Use technology to support collaborative projects eg providing their coursework to teachers. Make objective comparisons between digital resources. Work safely within an overall acceptable use policy and respect other people. Find patterns in digital data and information. Compare models, transfer their growing competence in digital technologies to other subjects, communicate data and information in a form fit for purpose and audience. Use remix legally to add value to existing resources, solve problems systematically and rationally. Self and peer assess to gauge the effectiveness of their own learning and familiarise them with the power of the peer review process. Think creatively, logically and critically in digital contexts, evaluate their

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own and others' work and roles in teams and in computing projects. Apply language and mathematics in real and relevant digital contexts. Adopt enterprising approaches to new situations arising from their work with digital technologies.

Which subjects will complement this course?
This qualification can be complementary to any other academic or technical subject. Meaningful links can be made with all Ebacc subjects. For example a good support for Modern Languages would be a project to work collaboratively on a software project with a group in a different country using the internet and translation services such as Google translate. Links to history could be made through links to the origins of computing. This is a practical and technical qualifications that will provide skills and knowledge that can support further learning in any subject whether academic or vocational.

This course provides a progression route to the level 3 Tech Level Diploma qualification with the same title but it also provides a general education background that would be suitable support for the great majority of level 3 qualifications.

TLM Level 2 Certificate for IT User Skills in Open Systems and Enterprise QAN 6006688X [5]

OVERVIEW

Who is this qualification for?

The purpose of the qualification is to build on Level 1 IT user skills in the efficient use of technology to improve their productivity and work in other subject areas. There is an emphasis on open systems as required in the UK government Cabinet Office Policy of 2012 mandating the use of open standards in all government business. The Open Systems dimension under-pins the achievement of cost reductions by enabling the avoidance of lock-in to particular suppliers through the adoption of internationally agreed open standards. Learners will move nearer to a position where they can get all the technical tools and resources that they will ever need freely and legally from the Internet. This contributes directly to social inclusion and equality of access to the tools needed to support further learning. There are many opportunities to provide learning contexts that strengthen numeracy, and literacy, as well as supporting other subjects across the curriculum.

Who might be interested in taking this course?

Anyone that wants to learn how to use digital technology tools efficiently to support their work, whether it is at school, at home or at work. This qualification will provide a basis for any other higher level qualification in the digital technology domain and is especially designed to underpin transition to higher level digital technology based qualifications at level 3 both in the user and practioner sectors. Anyone that is interested in improving their productivity in other subject learning or at work will benefit. Anyone wanting to gain the knowledge to reduce their dependency on proprietary technologies to help themselves, their family and future employers save money associated with licensing software will be progressing further in that direction with this qualification.

What will the student study as part of this qualification?

There are two compulsory units, Improving Productivity using IT and IT Security for Users. These provide a synoptic basis of 5 credits for the coursework associated with the qualification. The candidate can then choose from a wide range of units [165] to provide a further 12 credits. Further details of the assessment specification can be read from the qualifications specification [166] and you can ring to talk it over with us at any time. The student will learn a core of essential underpinning knowledge that is tested in the grading exam worth 70% of the marks. They will learn skills in a set of applications targeted on specific interests through their coursework.

What knowledge and skills will the student develop as part of this qualification and how might these be of use and value in further studies?

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Students will learn how to use common IT tools efficiently, safely and effectively. They will demonstrate competence in real practical tasks involving the use of text, graphics and numbers with an emphasis on generic principles that can transfer between contexts. Increasingly higher level study depends on digital skills whether it is to publish work, search for information or re-use other people's work. There is no other subject that would not benefit from the learning that this qualification provides and the generic knowledge and understanding needed for it is essential for further study in any digital technologies subject. The qualification is based on the national occupational standards and as such provides skills and knowledge that are essential in the workplace.

Which subjects will complement this course?
This qualification is complementary to any other academic or technical subject because it is fundamentally about essential digital literacy and IT User skills. Any other subject can provide a context for their development. Meaningful links can be made with all Ebacc subjects. For example a publishing project could result in a book with its own ISBN published for free using the Lulu.com service.That could be using English as a complement to this course. A video editing project [167]might include elements of geography allied to global politics. Maths and art might be combined by graphics transforms in a vector drawing program.

While this qualification provides a progression route to the level 3 IT user and practitioner qualifications, it also provides a general education background that would be suitable support for the great majority of higher level qualifications and occupations.

TLM Level 2 Certificate for IT User Skills in Open Systems and Enterprise (ITQ) QAN 50080738 [97]

INDUSTRY LETTER OF ENDORSEMENT [168]: EVIDENCE OF END-USER DEMAND. [169]

Purpose statement

Who will benefit from this qualification?

The Level 2 Certificate in Open Systems and Enterprise is aimed **primarily at adults** wanting to improve their skills and knowledge in the use of computers. Its purpose is to enable them to become employable in occupations that require IT User competence and to enable them to operate independently and effectively in life, learning and work where digital literacy and IT skills are needed. The flexibility in a coursework approach to re-engage people that have had bad experiences of formal learning in the past provides a stepping stone for these people into employment. At level 2 the candidates are likely to have some significant background experience in using computers or they will be people who are particularly quick learners who can adapt rapidly to new situations and readily take responsibility for their own work.

What knowledge and skills will the student develop as part of this qualification and how might these be of use and value in further studies?

This qualification will help support you in becoming independent when using the generic and transferable computer user skills needed to perform with confidence in the workplace. Students will learn how to use common IT tools efficiently, safely and effectively with options available in all areas of IT user skills. They will demonstrate competence in real practical tasks involving, for example, the use of text, graphics and numbers with an emphasis on generic principles that can transfer between contexts. Increasingly, higher level study depends on digital skills whether it is to publish work, search for information or re-use other people's work. There is no other subject or occupation that would not benefit from the learning that this qualification provides. The generic knowledge and understanding needed for it is essential for further study in any digital technologies subject. The qualification is based on the National Occupational Standards for IT Users [170] and as such provides skills and knowledge that are essential in the workplace and is 100% related to the IT User vocational occupational area. It is referenced to Level 2 in the European Qualifications Framework.

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[171]

The full details of the assessment criteria can be read from the qualifications specification [172] which can be downloaded as a pdf file.

How will knowledge and skills be learnt?

The wide range of units cover all possible interests in IT applications both in the work place and in day to day living. There are units in desktop technologies such as word processors and spreadsheets, using the internet and using media applications such as audio and video. Currently 26 units are listed.

Level 2 Unit 1 - Improving Productivity Using IT (4 credits)
Level 2 Unit 2 - Web site Software (4 credits)
Level 2 Unit 3 - Using Collaborative Technologies (4 credits)
Level 2 Unit 4 - IT Security for Users (2 credit)
Level 2 Unit 5 - Spreadsheet Software (4 credits)
Level 2 Unit 6 - Specialist Software (4 credits)
Level 2 Unit 7 - Word Processing (4 credits)
Level 2 Unit 8 - Using the Internet (4 credits)
Level 2 Unit 9 - Drawing and planning (3 credits)
Level 2 Unit 10 - Presentation Software (4 credits)
Level 2 Unit 11 - Database Software (4 credits)
Level 2 Unit 12 - Desktop Publishing Software (4 credits)
Level 2 Unit 13 - Using Email (3 credits)
Level 2 Unit 14 - Audio Software (3 credits)
Level 2 Unit 15 - Imaging Software (4 credits)
Level 2 Unit 16 - IT Communication Fundamentals (2 credits)
Level 2 Unit 17 - Video Software (3 credits)
Level 2 Unit 18 - IT Software Fundamentals (3 credits)
Level 2 Unit 19 - IT User Fundamentals (3 credits)
Level 2 Unit 20 - Using Mobile IT Devices (2 credits)
Level 2 Unit 21 - Data Management Software (3 credits)
Level 2 Unit 22 - Understanding the social and environmental impact of architecture and construction (3 credits)
Level 2 Unit 23 - Multimedia Software (4 credits)
Level 2 Unit 24 - Additive Manufacture (3 credits)
Level 2 Unit 25 - Developing computer games and puzzles (4 credits)
Level 2 Unit 26 - Computer games development (4 credits)

In the column headed Gold, here [165] there are links to each unit's details and the guidance [173] linked to the criteria gives more idea about what will be learnt and the evidence required from coursework. There are more units available listed in the structure on the register of qualifications [97] but we only list those on this site that are currently requested by training providers. If there is demand we will add others.

The mandatory unit "Improving Productivity using IT" [174] is about planning work, carrying it out and saying how well the software applications supported it. It provides 4 credits. The qualification requires 16 credits in total with 12 from the optional units and the details of how these credits can be made up can be found on the register of qualifications. [97] You will need to check with the training centre which options they support to ensure they are in line with your particular needs and interests.

Outcomes

The outcome of taking this qualification will be to increase the learner's knowledge and skills in IT with an emphasis on the importance of open systems. They will use specific IT tools to tackle practical tasks with the details determined by the specific units taken. This will equip the learner

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for **operating independently and effectively in life, learning and work specifically in the effective use of digital applications**. The details of how these outcomes are supported are given below and in the handbook [172]. Subordinate outcomes include overcoming barriers to enter work through improvements in the IT skills used in most contemporary employment and progression to level 3 courses in digital fields such as TLM Diploma in Open Systems Computing, Level 3 ITQ qualifications or Intermediate or Advanced Apprenticeships that require Functional Skills in IT. 100% of the qualification is relevant to the use of digital technologies in the workplace or in an apprenticeship including options for specific contexts of work. Typical job roles supported by this qualification would be support for information management in an office environment, contributing to equipment procurement in a small business, and IT skills support in specific contexts dependent on the units chosen.

Differences between this qualification and others that we provide.

This qualification is different from the qualification 6006688X [5] with the same title because it is all assessed on coursework whereas 6006688X [5] is designed for use in schools and has a grading exam based on generic technical knowledge. The qualification TLM Level 2 Certificate in Open Systems Computing is different because it is focused more on computer science, programming and networks. In comparison to the Award [175] with the same title, this qualifications provides a greater range of applications experience and will take longer to complete. Improving productivity using IT [176] is mandatory whereas in the Award it is not. The qualification's demands are greater than for the Level 1 qualification with the same title in keeping with the general level descriptions in the for Level 1 and Level 2 qualifications. At Level 2 you will be expected to work with less guidance, with greater precision and take more responsibility for your own work. Click the links for the descriptions of the general demands for Level 1 [177] and Level 2 [178] qualifications so that you can see the difference.

Which subjects will complement this course and where will the qualification lead?

This qualification can be complementary to any other academic or technical subject. It will reinforce Functional Skills in IT [179] but provides much wider scope to include more up to date use of technologies in a wider range of contexts. For example a publishing project could result in a book with its own ISBN published for free using the Lulu.com service. Free on-line book publishing can support any other course in any other subject. A modelling project might look at a simulation for throwing dice in mathematics using a spreadsheet and random number generator to improve understanding of statistics and how they are used and misused in the the media. Learning to draw diagrams on computers is universally useful for DIY projects through to designing web sites.
An example of student coursework [167] produced for this qualification from this qualification has had over 15,000 plays on You Tube. So if you have been put off by dry theoretical courses in the past, there is scope to gain skills leading to more engaging and interesting activities.

While this qualification provides a progression route specifically designed to lead to the level 3 qualification with the same title, it also provides a general education background that would be suitable support for the great majority of level 2 and 3 qualifications, intermediate and advanced apprenticeships. Birmingham Adult Education Services, Staffordshire and Coventry adult education services will accept this qualification as evidence of readiness to start a Level 2 IT User course.

Rationale for qualification being available outside of an apprenticeship

This qualification would be suitable for inclusion in an apprenticeship but also provides a progression route into higher level apprenticeships and skills and knowledge that are important to a wide range of cross-sector employment as well as skills needed in everyday living.

TLM Level 2 Certificate In Smart Product Design and Manufacture QAN 60145584 [51]

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OVERVIEW

Who is this qualification for?

The purpose of the qualification is to provide opportunities to learn about designing products that have an element of "computer based intelligence" in them using tools that are also computer controlled. There is an emphasis on whole product or systems design and the processes and tools necessary for manufacturing products. This contributes directly to wider issues such as safety and environmental sustainability. There are many opportunities to reinforce learning in other parts of the curriculum by using contexts from those areas that are of particular interest to the learner. Strengthening numeracy, and literacy are particularly supported.

Who might be interested in taking this course?

Anyone that wants to learn how to design and manufacture products in a contemporary technology setting. This qualification will provide a basis for higher level qualifications in engineering and manufacture and is especially designed to include practical skills appropriate for hobbies and enjoyment as well as understanding design and manufacture as a basis for higher level study. For future engineers this qualification combines well with physics, computing, art and mathematics in providing the basis for progression to professional level study. For others it provides an insight into how contemporary designs and products come to market.

What will the student study as part of this qualification?

There are 3 compulsory units making up the qualification

1 : Smart Product Design and visualisation 5 Credits (40 GLH)
2 : Smart Manufacture 5 Credits (40 GLH)
3 : Smart Electronics 5 Credits (40 GLH)

The details of the assessment criteria can be read from the qualifications specification [180].

What knowledge and skills will the student develop as part of this qualification and how might these be of use and value in further studies?

Students will learn how to design products using a range of traditional and contemporary tools including two and three dimensional software, pliers, screw drivers, soldering irons. They will demonstrate competence in real practical tasks designing and making products that have elements of digital control, sensing and feedback in them. They will learn to communicate their ideas and evaluate their products against rational criteria. The knowledge, understanding and skills developed will be useful in any future career in manufacturing or engineering and will provide a basis for more general DIY competence in day to day living.

Which subjects will complement this course?
The subjects most complementary to this course are mathematics, English, physics, Art and computing. Courses leading to this qualification will draw on and support all aspects of STEM learning but also aesthetics and therefore art and ICT. Meaningful links can be made with all Ebacc subjects. For example a design project might model an historical building or geographical location and joint work to collaborate with partners in a different country could involve MFL.

While this qualification provides a progression route to Level 3 qualifications in manufacture, it also provides a general education background that would be suitable complement to the great majority of qualifications, in particular bringing a practical dimension to purely academic study.

Purpose for Level 1 Qualifications

TLM Level 1 Certificate in Designing, Engineering and Constructing a

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Sustainable Built Environment QAN 60111987 [37]

OVERVIEW

Who is this qualification for?

The purpose of the qualification is to teach about some of the up to date issues related to the built environment and provide an interesting context for strengthening numeracy, literacy, IT skills understanding and knowledge as well as applying scientific methods to real problems in civil engineering and building design. It looks at specific issues related to buildings so that the learner will better appreciate the human environment including the impact of people on their natural surroundings.

Who might be interested in taking this course?

Anyone that likes working with real and technical contexts as opposed to mainly academic study. Anyone interested in a future career in the building industry in any discipline. Anyone that is interested in how buildings are designed, planned and constructed taking account of their environmental impact.

What will the student study as part of this qualification?

There are 4 compulsory units making up the qualification

- Defining a Sustainable Construction Project
- Roles in Construction Teams
- Producing a Technical Design for a Construction Project and Sharing Information
- Planning, Costing and Presenting a Sustainable Building Project

The details of the assessment criteria can be read from the qualifications specification [163].

What knowledge and skills will the student develop as part of this qualification and how might these be of use and value in further studies?

The knowledge and understanding component covers a wide range of issues related to construction. As a specific example in unit 1, guidance in the specification states "they can investigate the ways electricity, water, sewage treatment, refuse collection and other council services are provided, and how sustainable these services are. They can analyse human behaviour in their school and community with
regard to recycling, litter, wellbeing, tolerance, inclusion and social cohesion." This provides many opportunities for developing literacy and numeracy using scientific method to include quantitative measures and control of variables. The knowledge specific to the locality will enable more informed participation in the community as well as better insight in other related academic subjects. The practical and technical skills include the use of industry standard software in realising building design, costing quantities and building efficiency. There will be opportunities to design and make prototypes and models in two and three dimensions eg using addative manufacture (3D printing) and similar techniques.

Which subjects will complement this course?

This qualification can be complementary to any other academic or technical subject. Meaningful links can be made with all Ebacc subjects. For example a good support for Modern Languages would be a project to work collaboratively on a building design project with a group in a different country using the internet and translation services such as Google translate. Links to geography and history can be made through historic buildings and the building locations. There are links to generic IT skills in specialist software, media and internet technologies.

This course provides a progression route to the level 2 qualification with the same title but it also provides a general education background that would be suitable support for the great majority of

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level 2 qualifications.

TLM Level 1 Certificate in Open Systems Computing QAN 60111100 [26]

OVERVIEW

Who is this qualification for?

The purpose of the qualification is to teach about some of the up to date issues related to open systems computing including a balance across computer programming, ICT applications, associated hardware and networks. Whereas GCSE Computer science is focused on computational thinking and an academic approach to computing, this qualification provides a more practical and engineering based approach to implementing technologies and digital systems for practical purposes. The Open Systems dimension is to try to achieve cost reductions by enabling the avoidance of lock-in to particular suppliers through the adoption of internationally agreed open standards and showing how to get all the technical tools and resources that the learner will ever need freely and legally from the Internet. There is a community dimension through the open source ethos embedded in the specification. There are many opportunities to provide an interesting context for strengthening numeracy, literacy, generic IT skills understanding and knowledge as well as applying scientific methods to real problems in engineering and software design. It looks at specific issues related to copyright and licensing so that the learner will better appreciate the importance of understanding intellectual property in a world increasingly dominated by digital information.

Who might be interested in taking this course?

Anyone that likes working with real and technical contexts as opposed to mainly academic study. Anyone interested in a future career in digital industries but is undecided about where to specialise. Anyone that is interested in how software is developed in global communities. Anyone who wants to gain the knowledge to reduce their dependency on proprietary technologies to help themselves, their family and future employers save money.

What will the student study as part of this qualification?

There are 3 compulsory units making up the qualification

Unit 1 - Computer Science - 5 credits - 40GLH
Unit 2 - Using digital applications to support projects - 5 credits - 40GLH
Unit 3 - Computer hardware systems and networks - 5 Credits - 40 GLH

The details of the assessment criteria can be read from the qualifications specification [180].

What knowledge and skills will the student develop as part of this qualification and how might these be of use and value in further studies?

Students will learn how to modify open source code to produce new and useful applications. Originate and test their code, find and use useful free resources from the internet including software and digital content. Use technology to support collaborative projects eg providing their coursework to teachers. Make objective comparisons between digital resources. Work safely within an overall acceptable use policy and respect other people. Find patterns in digital data and information. Compare models, transfer their growing competence in digital technologies to other subjects, communicate data and information in a form fit for purpose and audience. Use remix legally to add value to existing resources, solve problems systematically and rationally. Self and peer assess to gauge the effectiveness of their own learning and familiarise them with the power of the peer review process. Think creatively, logically and critically in digital contexts, evaluate their own and others' work and roles in teams and in computing projects. Apply language and mathematics in real and relevant digital contexts. Adopt enterprising approaches to new situations arising from their work with digital technologies.

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Which subjects will complement this course?
This qualification can be complementary to any other academic or technical subject. Meaningful links can be made with all Ebacc subjects. For example a good support for Modern Languages would be a project to work collaboratively on a software project with a group in a different country using the internet and translation services such as Google translate. Links to history could be made through links to the origins of computing. This is a practical and technical qualifications that will provide skills and knowledge that can support further learning in any subject whether academic or vocational.

This course provides a progression route to the level 2 qualification with the same title but it also provides a general education background that would be suitable support for the great majority of level 2 qualifications.

TLM Level 1 Certificate in Open Systems and Enterprise QAN 60145596 [181]

Purpose Statement

Who is this qualification for?

The purpose of the qualification is to teach relative novices in IT user skills how to use technology efficiently to improve their productivity and work in other subject areas. There is an emphasis on open systems as required in the UK government Cabinet Office Policy of 2012 mandating the use of open standards in all government business. The Open Systems dimension under-pins the achievement of cost reductions by enabling the avoidance of lock-in to particular suppliers through the adoption of internationally agreed open standards, showing how to get all the technical tools and resources that the learner will ever need freely and legally from the Internet. This contributes directly to social inclusion and equality of access to the tools needed to support further learning. There are many opportunities to provide learning contexts that strengthen numeracy, and literacy, as well as supporting other subjects across the curriculum.

Who might be interested in taking this course?

Anyone that wants to learn how to use digital technology tools efficiently to support their work, whether it is at school, at home or at work. This qualification will provide a basis for any other higher level qualification in the digital technology domain and is especially designed to underpin the Level 2 qualification of the same title described above. Anyone that is interested in improving their productivity in other subject learning or at work will benefit. Anyone wanting to gain the knowledge to reduce their dependency on proprietary technologies to help themselves, their family and future employers save money will be taking a first step in that direction with this qualification.

What will the student study as part of this qualification?

There are 5 compulsory units making up the qualification

1 : Improving Productivity Using IT	3 Credits
2 : Digital editing and publishing	4 Credits
3 : Digital design and graphics	4 Credits
4 : IT Security for Users	1 Credit
5 : Digital modelling	4 Credits

The details of the assessment criteria can be read from the qualifications specification [166].

What knowledge and skills will the student develop as part of this qualification and how might these be of use and value in further studies?

Students will learn how to use common IT tools efficiently, safely and effectively. They will demonstrate competence in real practical tasks involving the use of text, graphics and numbers with

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an emphasis on generic principles that can transfer between contexts. Increasingly higher level study depends on digital skills whether it is to publish work, search for information or re-use other people's work. There is no other subject that would not benefit from the learning that this qualification provides and the generic knowledge and understanding needed for it is essential for further study in any digital technologies subject.

Which subjects will complement this course?
This qualification can be complementary to any other academic or technical subject because it is essentially digital literacy and IT User skills and any other subject can provide a context for their development. Meaningful links can be made with all Ebacc subjects. For example a publishing project could result in a book with its own ISBN published for free using the Lulu.com service.That could be using English as a complement to this course. A modelling project might look at a simulation for throwing dice in mathematics using a spreadsheet and random number generator. Maths and art might be combined by graphics transforms in a vector drawing program.

While this qualification provides a progression route to the level 2 qualification with the same title, it also provides a general education background that would be suitable support for the great majority of level 2 qualifications.

TLM Level 1 Certificate in Open Systems and Enterprise (ITQ)
QAN 50080805 [1]

OVERVIEW

RECOGNITION: BIRMINGHAM ADULT EDUCATION [169]: EAST HULL CLC [182]: TDM [183]

Who is this qualification for?

The Level 1 Certificate in Open Systems and Enterprise is aimed primarily at adults with a little or superficial experience of computers that want to improve their skills and knowledge in IT. The qualification's purpose is to enable candidates to begin to overcome the barrier of IT competence to entering work and to enable them to operate more independently and effectively in life, learning and work where digital literacy and IT skills are needed. Flexibility in a coursework approach provides scope to re-engage people that have had bad experiences of formal learning in the past. Level 1 learners will be people that still need structured guidance although they will be able to follow instructions competently. Entry level is more geared to learners with very weak background not only in computers but in general education and Level 2 is more for those with some significant previous experience, confidence and success in prior learning particularly use of computers. Awards are smaller in size than certificates and so this qualification will cover more ground than the award with the same title and will take less time to complete.

What knowledge and skills will the student develop as part of this qualification and how might these be of use and value in further studies and employment?

This qualification will help support you in becoming more independent when using the generic and transferable computer user skills needed to perform with confidence in the workplace or to progress to Level 2 qualifications. You will be provided with structured support to enable you to learn how to use common IT tools efficiently, safely and effectively with options available in all areas of IT user skills. You will be helped to tackle practical tasks involving, for example, the use of text, graphics and numbers with an emphasis on progressing towards greater self-sufficiency that is required at higher level study. There is no other subject or occupation that would not benefit from the learning that this qualification provides and the generic knowledge and understanding needed for it is essential for further study in any digital technologies related subject. The qualification is based on the National Occupational Standards for IT Users [184] and as such provides skills and knowledge that are essential in the workplace and is 100% related to the IT User vocational occupational area. It

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is referenced to Level 2 in the European Qualifications Framework.

The full details of the assessment criteria can be read from the qualifications specification [185] which can be downloaded as a pdf file.

How will knowledge and skills be learnt?

The wide range of units cover all possible interests in IT applications both in the work place and in day to day living. There are units in desktop technologies such as word processors and spreadsheets, using the internet and using media applications such as audio and video. Currently 25 units are listed

Level 1 Unit 1 - Improving Productivity Using IT (3 credits)
Level 1 Unit 2 - Web site Software (3 credits)
Level 1 Unit 3 - Using Collaborative Technologies (3 credits)
Level 1 Unit 4 - IT Security for Users (1 credit)
Level 1 Unit 5 - Spreadsheet Software (3 credits)
Level 1 Unit 6 - Specialist Software (2 credits)
Level 1 Unit 7 - Word Processing (3 credits)
Level 1 Unit 8 - Using the Internet (3 credits)
Level 1 Unit 9 - Drawing and planning (2 credits)
Level 1 Unit 10 - Presentation Software (3 credits)
Level 1 Unit 11 - Database Software (3 credits)
Level 1 Unit 12 - Desktop Publishing Software (3 credits)
Level 1 Unit 13 - Using Email (2 credits)
Level 1 Unit 14 - Audio Software (2 credits)
Level 1 Unit 15 - Imaging Software (3 credits)
Level 1 Unit 16 - IT Communication Fundamentals (2 credits)
Level 1 Unit 17 - Video Software (2 credits)
Level 1 Unit 18 - IT Software Fundamentals (3 credits)
Level 1 Unit 19 - IT User Fundamentals (3 credits)
Level 1 Unit 20 - Using Mobile IT Devices (2 credits)
Level 1 Unit 21 - Data Management Software (2 credits)
Level 1 Unit 22 - Understanding the social and environmental impact of architecture and construction (3 credits)
Level 1 Unit 23 - Multimedia Software (3 credits)
Level 1 Unit 24 - Additive Manufacture (3 credits)
Level 1 Unit 25 - Developing Computer Games and Puzzles (4 credits)

In the column headed Silver, here [165] there are links to each unit's details and the guidance [186] linked to the criteria gives more idea about what will be learnt and the evidence required from coursework. There are more units available listed in the structure on the register of qualifications [1] but we only list those currently requested by training providers on this site. If there is demand we will add others.

The mandatory unit "Improving Productivity using IT" [187] is about planning work, carrying it out and saying how well the software applications supported it. It provides 3 credits. The qualification requires 13 credits in total with 10 from the optional units and the details of how these credits can be made up can be found on the register of qualifications [1]. You will need to check with the training centre which options they support to ensure they are in line with your particular needs and interests.

Differences between this qualification and others that we provide.

This qualification is different from the qualification 60145596 [181] with the same title because it is all assessed on coursework whereas 60145596 is designed for use in schools and has a grading exam. The qualification TLM Level 1 Certificate in Open Systems Computing (QCF) QAN 60111100 [26]is different because it is focused more on computer science, programming and networks.
In comparison to the Award with the same title, this qualifications provides a greater range of

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applications experience and will take longer to complete. The entry level qualifications and Level 2 qualifications are each of different difficulty and so the Level 1 qualification also provides a progression route from Entry level attainment through to Level 2. The descriptions of the levels are provided here [188]. You can use these to help you decide which level is the best starting point for you.

Which subjects will complement this course and where will the qualification lead?

This qualification can be complementary to any other academic or technical subject. It will reinforce Functional Skills in IT but provides much wider scope to include more up to date use of technologies in a wider range of contexts. For example a publishing project could result in a book with its own ISBN published for free using the Lulu.com service. Free on-line book publishing can support any other course in any other subject. A modelling project might look at a simulation for throwing dice in mathematics using a spreadsheet and random number generator to improve understanding of statistics and how they are used and misused in the the media. Learning to draw diagrams on computers is universally useful for DIY projects through to designing web sites. A student progressing from this qualification to Level 2 made a video for his coursework that has had over 15,000 plays on You Tube [167]. So if you have been put off by dry theoretical courses in the past, there is scope to gain skills leading to more engaging and interesting activities.

While this qualification provides a progression route specifically designed to lead to the level 2 qualification with the same title, it also provides a general education background that would be suitable support for the great majority of level 2 qualifications and intermediate apprenticeships. Birmingham Adult Education Services, Staffordshire and Coventry adult education services will accept this qualification as evidence of readiness to start a Level 2 IT User course. Birmingham Adult Education Services has expressed a specific need for this qualification as have East Hull CLC and TDM.

TLM Level 1 Award in Open Systems and Enterprise (ITQ) QAN 50114281 [95]

OVERVIEW

RECOGNITION: BIRMINGHAM ADULT EDUCATION **[169]:** EAST HULL CLC **[182]:** TDM **[183]**

Who is this qualification for?

The Level 1 Certificate in Open Systems and Enterprise is aimed primarily at adults with a little or superficial experience of computers that want to improve their skills and knowledge in IT. The qualification's purpose is to enable candidates to begin to gain the competence needed to enter work and to enable them to operate more independently and effectively in life, learning and work where digital literacy and IT skills are needed. Flexibility in a coursework approach provides scope to re-engage people that have had bad experiences of formal learning in the past. Level 1 learners will be people that still need structured guidance although they will be able to follow instructions competently. Entry level is more geared to learners with very weak background not only in computers but in general education and Level 2 is more for those with some significant previous experience, confidence and success in prior learning particularly use of computers. Awards are smaller in size than certificates and so this qualification will cover less ground than the certificate with the same title and will take less time to complete.

What knowledge and skills will the student develop as part of this qualification and how might these be of use and value in further studies and employment?

This qualification will help support you in becoming more independent when using the generic and

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transferable computer user skills needed to perform with confidence in the workplace or to progress to Level 2 qualifications. You will be provided with structured support to enable you to learn how to use common IT tools efficiently, safely and effectively with options available in all areas of IT user skills. You will be helped to tackle practical tasks involving, for example, the use of text, graphics and numbers with an emphasis on progressing towards greater self-sufficiency that is required at higher level study. There is no other subject or occupation that would not benefit from the learning that this qualification provides and the generic knowledge and understanding needed for it is essential for further study in any digital technologies related subject. The qualification is based on the National Occupational Standards for IT Users [184] and as such provides skills and knowledge that are essential in the workplace and is 100% related to the IT User vocational occupational area. It is referenced to Level 2 in the European Qualifications Framework.

The full details of the assessment criteria can be read from the qualifications specification [185] which can be downloaded as a pdf file.

How will knowledge and skills be learnt?

The wide range of units cover all possible interests in IT applications both in the work place and in day to day living. There are units in desktop technologies such as word processors and spreadsheets, using the internet and using media applications such as audio and video. Currently 25 units are listed

Level 1 Unit 1 - Improving Productivity Using IT (3 credits)
Level 1 Unit 2 - Web site Software (3 credits)
Level 1 Unit 3 - Using Collaborative Technologies (3 credits)
Level 1 Unit 4 - IT Security for Users (1 credit)
Level 1 Unit 5 - Spreadsheet Software (3 credits)
Level 1 Unit 6 - Specialist Software (2 credits)
Level 1 Unit 7 - Word Processing (3 credits)
Level 1 Unit 8 - Using the Internet (3 credits)
Level 1 Unit 9 - Drawing and planning (2 credits)
Level 1 Unit 10 - Presentation Software (3 credits)
Level 1 Unit 11 - Database Software (3 credits)
Level 1 Unit 12 - Desktop Publishing Software (3 credits)
Level 1 Unit 13 - Using Email (2 credits)
Level 1 Unit 14 - Audio Software (2 credits)
Level 1 Unit 15 - Imaging Software (3 credits)
Level 1 Unit 16 - IT Communication Fundamentals (2 credits)
Level 1 Unit 17 - Video Software (2 credits)
Level 1 Unit 18 - IT Software Fundamentals (3 credits)
Level 1 Unit 19 - IT User Fundamentals (3 credits)
Level 1 Unit 20 - Using Mobile IT Devices (2 credits)
Level 1 Unit 21 - Data Management Software (2 credits)
Level 1 Unit 22 - Understanding the social and environmental impact of architecture and construction (3 credits)
Level 1 Unit 23 - Multimedia Software (3 credits)
Level 1 Unit 24 - Additive Manufacture (3 credits)
Level 1 Unit 25 - Developing Computer Games and Puzzles (4 credits)

In the column headed Silver, here [165] there are links to each unit's details and the guidance [186] linked to the criteria gives more idea about what will be learnt and the evidence required from coursework. There are more units available listed in the structure on the register of qualifications [95] but we only list those currently requested by training providers on this site. If there is demand we will add others.

There are no mandatory units in this Award, the requirement is to achieve 9 or more credits from the optional unit pool. You will need to check with the training centre which options they support to ensure they are in line with your particular needs and interests.

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Differences between this qualification and others that we provide.

This qualification is different from the certificate with the same title in that it requires less credit and there is no mandatory unit. This Award can be converted to the Certificate by adding more credit including the mandatory unit "Improving Productivity using IT" [187]. Other qualifications are in more specialist fields in digital technologies. Entry Level qualifications are easier and there is more support in terms of sturctured guidance whereas Level 2 qualifications require greater self-suficiency and autonomy. Descriptions of the levels are avialable here. [188] Normally your training provider will be able to advise you on the best starting point for you in your circumstances.

The full details of the assessment criteria can be read from the qualifications specification [185] which can be downloaded as a pdf file.

Which subjects will complement this course and where will the qualification lead?

This qualification can be complementary to any other academic or technical subject. It will reinforce Functional Skills in IT but provides much wider scope to include more up to date use of technologies in a wider range of contexts. For example a publishing project could result in a book with its own ISBN published for free using the Lulu.com service. Free on-line book publishing can support any other course in any other subject. A modelling project might look at a simulation for throwing dice in mathematics using a spreadsheet and random number generator to improve understanding of statistics and how they are used and misused in the the media. Learning to draw diagrams on computers is universally useful for DIY projects through to designing web sites. A student progressing from units on which this qualification is based to Level 2 made a video for his coursework that has had over 15,000 plays on You Tube [167]. So if you have been put off by dry theoretical courses in the past, there is scope to gain skills leading to more engaging and interesting activities.

While this qualification provides a progression route specifically designed to lead to broader study at level one and to the level 2 qualification with the same title, it also provides a general education background that would be suitable support for the great majority of level 2 qualifications and intermediate apprenticeships. Birmingham Adult Education Services, Staffordshire and Coventry adult education services will accept this qualification as evidence of readiness to start a Level 2 IT User course. Birmingham Adult Education Services has expressed a specific need for this qualification together with East Hull CLC and TDM.

TLM Level 1 Certificate In Smart Product Design and Manufacture QAN 60145572 [48]

OVERVIEW

Who is this qualification for?

The purpose of the qualification is to provide an introduction to designing products that have an element of "computer based intelligence" in them using tools that are also computer controlled. There is an emphasis on whole product or systems design and the processes and tools necessary for manufacturing products. This contributes directly to wider issues such as safety and environmental sustainability. There are many opportunities to reinforce learning in other parts of the curriculum by using contexts from those areas that are of particular interest to the learner. Strengthening numeracy, and literacy are particularly supported.

Who might be interested in taking this course?

Anyone that wants to learn how to design and manufacture products in a contemporary technology setting. This qualification will provide a basis for higher level qualifications in engineering and

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manufacture and is especially designed to underpin the Level 2 qualification of the same title described above. For future engineers this qualification combines well with physics, computing and mathematics in providing the basis for progression to professional level study. For others it provides an insight into how contemporary designs and products come to market.

What will the student study as part of this qualification?

There are 3 compulsory units making up the qualification

1 : Smart Product Design and visualisation 5 Credits (40 GLH)
2 : Smart Manufacture 5 Credits (40 GLH)
3 : Smart Electronics 5 Credits (40 GLH)

The details of the assessment criteria can be read from the qualifications specification [180].

What knowledge and skills will the student develop as part of this qualification and how might these be of use and value in further studies?

Students will learn how to design products using a range of traditional and contemporary tools including two and three dimensional software, pliers, screw drivers, soldering irons. They will demonstrate competence in real practical tasks designing and making products that have elements of digital control, sensing and feedback in them. They will learn to communicate their ideas and evaluate their products against rational criteria. The knowledge, understanding and skills developed will be useful in any future career in manufacturing or engineering and will provide a basis for more general DIY competence in day to day living.

Which subjects will complement this course?
The subjects most complementary to this course are mathematics, English, physics, Art and computing. Courses leading to this qualification will draw on and support all aspects of STEM learning but also aesthetics and therefore art and ICT. Meaningful links can be made with all Ebacc subjects. For example a design project might model an historical building or geographical location and joint work to collaborate with partners in a different country could involve MFL.

While this qualification provides a progression route to the level 2 qualification with the same title, it also provides a general education background that would be suitable complement to the great majority of level 2 qualifications, in particular bringing a practical dimension to purely academic study.

Purpose for Entry Level qualifications - The Learning Machine Ltd - TLM

TLM Entry Level Award in IT User Skills (Entry 3) (QCF) 60109889 [189]

OVERVIEW

RECOGNITION: BIRMINGHAM ADULT EDUCATION [169]: EAST HULL CLC [182]: TDM [183]

Who is this qualification for?

The Entry Level 3 Award in Open Systems and Enterprise is aimed primarily at learners that want to improve their skills and knowledge in the use of computers but are coming from a background that would make direct access to the Level 1 qualification difficult. Its purpose is to enable them to gain the confidence needed to progress to higher level work and to operate work environments where there is close suprevision. This qualification will help you to a position where you can begin to operate independently and effectively in life, learning and work where digital literacy and IT skills

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are needed. It is particularly suited to those that lack confidence in using computers and related technologies, perhaps because they have had bad experiences of formal learning in the past.

What knowledge and skills will the student develop as part of this qualification and how might these be of use and value in further studies?

This qualification will help support you in moving towards greater independence as your confidence grows. The generic and transferable computer user skills needed to perform with confidence in the workplace are supported and students will learn how to use common IT tools efficiently, safely and effectively with options available in most areas of IT user skills subject to close support and supervision. Increasingly higher level study depends on digital skills whether it is to publish work, search for information or re-use other people's work. There is no other subject or occupation that would not benefit from the learning that this qualification provides and the generic knowledge and understanding needed for it is essential for further study in any digital technologies subject. The qualification is based on the National Occupational Standards for IT Users [170]and as such provides skills and knowledge that are essential in the workplace and is 100% related to the IT User vocational occupational area. It is referenced to Level 1 in the European Qualifications Framework [171].

The full details of the assessment criteria can be read from the qualifications specification [185] which can be downloaded as a pdf file.

How will knowledge and skills be learnt?

The range of units cover most of the possible interests in IT applications both in the work place and in day to day living. There are units in desktop technologies such as word processors and spreadsheets, using the internet and using media applications such as audio and video. Currently 8 units are listed

Entry 3 Unit 1 - Improving Productivity Using IT (3 credits)
Entry 3 Unit 2 - On-line basics (1 credits)
Entry 3 Unit 3 - Desktop Publishing (2 credits)
Entry 3 Unit 4 - Displaying information using IT (3 credits)
Entry 3 Unit 5 - Using IT to find information (3 credits)
Entry 3 Unit 6 - Communicating information using IT (3 credits)
Entry 3 Unit 7 - Producing charts using IT (3 credits)
Entry 3 Unit 8 - IT Security for Users (1 credit)

In the column headed Bronze, here [165] there are links to each unit's details and the guidance [186] linked to the criteria gives more idea about what will be learnt and the evidence required from coursework. There are more units available listed in the structure on the register of qualifications [189] but we only list those currently requested by training providers on this site. If there is demand we will add others.

There are no mandatory units in this Award, the requirement is to achieve 13 or more credits from the optional unit pool. The unit "Improving Productivity using IT" [190] is mandatory. You will need to check with the training centre which options they support to ensure they are in line with your particular needs and interests.

Differences between this qualification and others that we provide.

This qualification is different from the qualifications at Entry level 1 and Entry Level 2 because it is aimed at mainstream adults whereas the Entry 1 and Entry 2 certificates are aimed at learners with special needs. The Entry Level 3 Certificate is bigger than the Entry 3 Award and requires the Improving Productivity using IT unit whereas the Award does not. You can extend the credit from the Award to gain the Certificate so the Award can help you reach an early milestone on the way to the certificate and some learners find this encouraging. Learners starting out on the Entry 3 Certificate

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will find the work less demanding than those starting out on the Level 1 award or certificate with the same title. This then provides a gentler introduction for those that lack confidence. Other TLM qualifications are in more specialist fields in digital technologies

Which subjects will complement this course and where will the qualification lead?

This qualification can be complementary to any other academic or technical subject. It will reinforce Functional Skills in IT but provides much wider scope to include more up to date use of technologies in a wider range of contexts. For example, a publishing project could result in a book with its own ISBN published for free using the Lulu.com service (At Entry Level 3 considerable support can be provided for these more complex activities). Free on-line book publishing can support any other course in any other subject. Learning to draw diagrams on computers is universally useful for DIY projects through to designing web sites. A student progressing from units on which this qualification is based to Level 2 made a video for his coursework that has had over 15,000 plays on You Tube [167]. So if you have been put off by dry theoretical courses in the past, there is scope to gain skills leading to more engaging and interesting activities.

While this qualification provides a progression route specifically designed to lead to broader study at Level 1 or in some cases Level 2 qualification with the same title, it also provides a general education background that would be suitable support for progress into the great majority of level 2 qualifications and intermediate apprenticeships. Birmingham Adult Education Services, Staffordshire and Coventry adult education services will accept this qualification as evidence of readiness to start a Level 2 IT User course. Birmingham Adult Education Services has expressed a specific need for this qualification as have East Hull CLC and TDM.

TLM Entry Level Award in IT User Skills (ITQ) (Entry 2) 60133818 [113]

Letters of support: Open Source Consortium [111]: Birmingham City Council [191]: Hull City Learning Centre [192]: The Development Manager [193]

OVERVIEW

Who is this qualification for?

This qualification has a primary purpose of supporting individuals to operate independently and effectively in life, learning and work. This is an entry level qualification providing a first step into IT User qualifications for those that have little experience of IT and need confidence in the generic skills needed in order to work efficiently in a range of occupations. The demand for the qualification is from learners who need initial support in developing independence in IT user skills necessary in a wide range of specific employment sectors as well as in general living. It provides a progression route to Level 1 and Level 2 qualifications based on the same assessment model and supported by the same innovative open source technologies. The assessment model and supporting technologies have been developed through three Transfer of Innovation projects co-funded by the European Commission providing a unique approach that can lower costs and enable improved teaching strategies for the target group not available in similar qualifications. Learners taking this qualification will improve their employability skills as published by the CBI and be better able to participate in lifelong learning activities that are dependent on digital technologies.

What does this qualification cover?

The qualification covers

The qualification units in theis QCF qualification are indicative of the content.

- Improving productivity using IT is mandatory it is about the generic transferrable skills

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needed in IT activities.
- Using ICT: Safe Working Practices is a mandatory unit to ensure basic safety and security is understood.
- There is a choice of units covering many of the most commonly skills needed in a range of occupational settings. This enables the work of each learner to be contextualised in the occupational sector in which they have an interest directly relating the IT skills to those spefic needs.
- Optional units cover Audio and Video Software, Using ICT to Select and Exchange Information, Online Basics, Desktop Publishing Software, Using ICT in the Workplace, Imaging software, Using ICT Equipment in a Work Place, Using Word Processing Software, ICT for Employment. This enables the learner to choose the optional area that most closely supports the work they are likely to undertake in an existing or future employment area.

What could this qualification lead to?

This qualification will enable the candidate to gain the confidence to become a more independent learner, taking part in higher level study for IT users and to use their IT skills in an increasingly broad and complex range of occupations. The qualification is complementary to the employability skills published by the CBI. The emphasis on open systems and transferable generic skills is to enable change of occupational context as this is increasingly likely in the way the world is changing. Far too many large organisations are locked into dated proprietary work flows making it difficult for them to switch to more efficient and lower cost work flows, especially those enabled by web based open systems such as HTML 5. This qualification provides an entry to a set of qualifications specifically planned to provide progression not only for personal independence but to contribute to organisational independence that will make businesses in England more efficient and more competitive as recognised in the cabinet office document open-standards-principles. [194]There are options to progress to Entry 3 for those that need more breadth and a shorter step up or they can go straight to level 1 in either IT User skills or computing with further progression to level 2 and level 3. There is a Substantial Vocational Qualification at Level 2 designed as a first step in to professional systems management with routes into professional qualifications in the high demand area of Linux and open systems.

Why are these qualifications different?

TLM qualifications in digital technologies are planned as a coherent suite with a common pedagogical model for assessment and a common set of supporting tools based on the internet and open source technologies. The development has won co-funding support from the European Commission for three multilateral Transfer of Innovation Projects resulting in lower delivery costs and better targeting of assessment in terms of risk and purpose. The strategy is to lower barriers to entry (including coasts) and support increasing self-sufficiency both in personal terms and in the potential to contribute to organisational independence.

Employer involvement

Ideally the candidate should develop their IT skills in the context of the general working context. (Open Source Consortium)

Employer involvement was extensive in the development of the national occupational standards that form the basis for assessment of the qualification's units. The qualification also contributes to the CBI employment criteria. It is supported by the Open Source Consortium of companies (Letter of support) [111], a trade association for businesses focused in the rapidly growing open source and open systems employment sector. The demand for skills [195] in this area is clear in the public as well as private sector as evidenced by the recent Cabinet Office policy on open systems [194] which requires all government departments to adopt open systems when most are heavily committed to proprietary systems. Technical skills in information and digital literacy have become as important as literacy and numeracy in most jobs and with rapid change, unlike literacy and numeracy which stay more or less constant, technology skills need constant up dating. This qualification is generically developed so that it can respond to change in a wide range of contexts and it is supported by assessment methods and technologies that have been specifically developed for the purpose in

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collaboration with employers in both the public and private sectors.

Source URL: https://theingots.org/community/endorse

Links
[1] http://register.ofqual.gov.uk/Qualification/Details/500_8080_5
[2] https://theingots.org/community/endorse#PL1ITU
[3] https://theingots.org/community/endorse#PL1ITUs
[4] https://theingots.org/community/endorse#PL1ITUe
[5] http://register.ofqual.gov.uk/Qualification/Details/600_6688_X
[6] https://theingots.org/community/endorse#PL2ITU
[7] https://theingots.org/community/endorse#PL2ITUs
[8] https://theingots.org/community/endorse#PL2ITQ
[9] https://register.ofqual.gov.uk/Detail/Index/39472?category=qualifications&query=TLM%20Level%202%20Certificate%20in%20Open%20Platforms%20and%20Digital%20Skills
[10] https://thelearningmachine.co.uk/certificate-open-platforms-digital-skills/
[11] https://theingots.org/community/opds
[12] https://register.ofqual.gov.uk/Detail/Index/41079?category=qualifications&query=TLM%20Level%202%20Certificate%20in%20User%20Skills%20and%20Digital%20Technologies
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[14] https://register.ofqual.gov.uk/Detail/Index/39715?category=qualifications&query=TLM%20Level%202%20Certificate%20in%20Cyber%20Security%20and%20Digital%20Forensics
[15] https://thelearningmachine.co.uk/certificate-cyber-security-digital-forensics/
[16] https://theingots.org/community/csdf
[17] https://register.ofqual.gov.uk/Detail/Index/37768?category=qualifications&query=TLM%20Level%203%20Certificate%20in%20User%20Skills%20in%20Cloud%20Systems%20and%20Services%20(ITQ)
[18] https://thelearningmachine.co.uk/it-user-skills-level-3/
[19] https://theingots.org/community/cloud
[20] https://register.ofqual.gov.uk/Detail/Index/41233?category=qualifications&query=TLM%20L2%20Certificate%20in%20Open%20Systems%20and%20Advanced%20Manufacturing%20Technologies
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[22] https://theingots.org/community/rocketry1
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[137] https://theingots.org/community/sites/default/files/uploads/user4/Support/Nothumbria.pdf
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(function(i,s,o,g,r,a,m){i['GoogleAnalyticsObject']=r;i[r]=i[r]||function(){ (i[r].q=i[r].q||[]).push(arguments)},i[r].l=1*new Date();a=s.createElement(o), m=s.getElementsByTagName(o)[0];a.async=1;a.src=g;m.parentNode.insertBefore(a,m) })(window,document,'script','//www.google-analytics.com/analytics.js','ga'); ga('create', 'UA-46896377-2', 'auto'); ga('send', 'pageview');

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