



## 1. Acronyms and abbreviations

<b>AELP</b>	Association of Employment and Learning Providers	<a href="https://www.aelp.org.uk/">https://www.aelp.org.uk/</a>
<b>A level</b>	General Certificate of Education Advanced level	
<b>AoC</b>	Association of Colleges	<a href="http://www.aoc.co.uk">www.aoc.co.uk</a>
<b>APS</b>	Annual Population Survey	
<b>ASHE</b>	Annual Survey of Hours and Earning	<a href="http://www.ons.gov.uk/ons/rel/ashe/annual-survey-of-hours-and-earnings/index.html">www.ons.gov.uk/ons/rel/ashe/annual-survey-of-hours-and-earnings/index.html</a>
<b>AS level</b>	Advanced Subsidiary level	
<b>AI</b>	Artificial Intelligence	
<b>AQA</b>	Assessment and Qualifications Alliance	<a href="http://www.aqa.org.uk/">www.aqa.org.uk/</a>
<b>BCS70</b>	British Cohort Study	<a href="http://www.cls.ioe.ac.uk/page.aspx?&amp;sitesectionid=795&amp;site-sectiontitle=Welcome+to+the+1970+British+Cohort+Study">www.cls.ioe.ac.uk/page.aspx?&amp;sitesectionid=795&amp;site-sectiontitle=Welcome+to+the+1970+British+Cohort+Study</a>
<b>BEIS</b>	Department for Business, Energy and Industrial Strategy	<a href="http://www.gov.uk/government/organisations/department-for-business-energy-and-industrial-strategy">www.gov.uk/government/organisations/department-for-business-energy-and-industrial-strategy</a>
<b>BIS</b>	Department for Business, Innovation and Skills	
<b>BME</b>	Black and Minority Ethnic	
<b>BRES</b>	Business Register and Employment Survey	<a href="http://www.ons.gov.uk/surveys/informationforbusinesses/businesssurveys/businessregisterandemploymentsurvey">www.ons.gov.uk/surveys/informationforbusinesses/businesssurveys/businessregisterandemploymentsurvey</a>
<b>BTEC</b>	Business and Technology Education Council	<a href="http://qualifications.pearson.com/en/about-us/qualification-brands/btec.html">qualifications.pearson.com/en/about-us/qualification-brands/btec.html</a>
<b>CBI</b>	Confederation of British Industry	<a href="http://www.cbi.org.uk">www.cbi.org.uk</a>
<b>CCDG</b>	Careers Choices Dewis Gyrfa	<a href="http://www.careerswales.com">www.careerswales.com</a>
<b>Cebr</b>	Centre for Economic and Business Research	<a href="http://www.cebr.com">www.cebr.com</a>
<b>CEng</b>	Chartered Engineer	
<b>CRAC</b>	Careers Research & Advisory Centre	<a href="http://www.crac.org.uk/">www.crac.org.uk/</a>
<b>DCLG</b>	Department for Communities and Local Government	<a href="http://www.gov.uk/government/organisations/department-for-communities-and-local-government">www.gov.uk/government/organisations/department-for-communities-and-local-government</a>
<b>DELNI</b>	Department for Employment and Learning Northern Ireland	<a href="http://www.delni.gov.uk">www.delni.gov.uk</a>
<b>DENI</b>	Department of Education Northern Ireland	<a href="http://www.deni.gov.uk">www.deni.gov.uk</a>

<b>DfE</b>	Department for Education	<a href="http://www.education.gov.uk">www.education.gov.uk</a>
<b>DLHE</b>	Destination of Leavers from Higher Education	<a href="http://hesa.ac.uk/pubs/dlhe">hesa.ac.uk/pubs/dlhe</a>
<b>DUP</b>	Democratic Unionist Party	<a href="http://www.mydup.com/">http://www.mydup.com/</a>
<b>EBacc</b>	English Baccalaureate	
<b>EBM</b>	Engineering Brand Monitor	<a href="http://www.engineeringuk.com/research">www.engineeringuk.com/research</a>
<b>EEA</b>	European Economic Area	
<b>EEF</b>	Engineering Employers Federation	<a href="http://www.eef.org.uk/">www.eef.org.uk/</a>
<b>EMT</b>	Engineering and Manufacturing Technologies	
<b>EngTech</b>	Engineering Technician	
<b>EPSRC</b>	Engineering and Physical Sciences Research Council	<a href="http://www.epsrc.ac.uk/">www.epsrc.ac.uk/</a>
<b>ESFA</b>	Education & Skills Funding Agency	<a href="https://www.gov.uk/government/organisations/education-and-skills-funding-agency">https://www.gov.uk/government/organisations/education-and-skills-funding-agency</a>
<b>EU</b>	European Union	<a href="http://europa.eu/index_en.htm">europa.eu/index_en.htm</a>
<b>EY</b>	Ernst & Young	<a href="http://www.ey.com/uk/en/home">www.ey.com/uk/en/home</a>
<b>FE</b>	Further Education	
<b>FSM</b>	Free School Meals	
<b>GCSE</b>	General Certificate of Secondary Education	
<b>GDP</b>	Gross Domestic Product	
<b>GVA</b>	Gross Value Added	
<b>HE</b>	Higher Education	
<b>HEFCE</b>	Higher Education Funding Council for England	<a href="http://www.hefce.ac.uk">www.hefce.ac.uk</a>
<b>HESA</b>	Higher Education Statistics Agency	<a href="http://www.hesa.ac.uk">www.hesa.ac.uk</a>
<b>HMRC</b>	Her Majesty's Revenue & Customs	<a href="http://www.gov.uk/government/organisations/hm-revenue-customs">www.gov.uk/government/organisations/hm-revenue-customs</a>
<b>HNC</b>	Higher National Certificate	

<b>HND</b>	Higher National Diploma	
<b>IAC</b>	Industry Apprenticeship Council	<a href="http://semta.org.uk/iac">semta.org.uk/iac</a>
<b>IB</b>	International Baccalaureate	<a href="http://www.ibo.org/">www.ibo.org/</a>
<b>ICE</b>	Institution of Civil Engineers	<a href="https://www.ice.org.uk/">https://www.ice.org.uk/</a>
<b>ICT</b>	Information and Communications Technology	
<b>ICTTech</b>	Information and Communications Technology Technician	
<b>IEng</b>	Incorporated Engineer	
<b>IET</b>	The Institution of Engineering and Technology	<a href="http://www.theiet.org/">http://www.theiet.org/</a>
<b>IFS</b>	Institute of Fiscal Studies	<a href="http://www.ifs.org.uk">www.ifs.org.uk</a>
<b>IGCSE</b>	International General Certificate of Secondary Education	
<b>IMechE</b>	Institution of Mechanical Engineers	<a href="http://www.imeche.org/">www.imeche.org/</a>
<b>IPPR</b>	Institute for Public Policy Research	<a href="http://www.ippr.org/">www.ippr.org/</a>
<b>IoP</b>	Institute of Physics	<a href="http://www.iop.org">www.iop.org</a>
<b>ISE</b>	Institute of Student Employers	<a href="http://ise.org.uk/">http://ise.org.uk/</a>
<b>JCQ</b>	Joint Council for Qualifications	<a href="http://www.jcq.org.uk">www.jcq.org.uk</a>
<b>LANTRA</b>	Skills body for land-based and environmental sector	<a href="http://www.lantra.co.uk/">http://www.lantra.co.uk/</a>
<b>L-DHLE</b>	Longitudinal Destination of Leavers from Higher Education	<a href="http://www.hesa.ac.uk/pubs/dlhe">www.hesa.ac.uk/pubs/dlhe</a>
<b>LEP</b>	Local Enterprise Partnership	
<b>LFS</b>	Labour Force Survey	
<b>LGA</b>	Local Government Association	<a href="https://www.local.gov.uk/">https://www.local.gov.uk/</a>
<b>MA</b>	Modern Apprenticeship	
<b>NAO</b>	National Audit Office	<a href="http://www.nao.org.uk/">www.nao.org.uk/</a>
<b>NAS</b>	National Apprenticeship Service	<a href="http://www.apprenticeships.gov.uk">www.apprenticeships.gov.uk</a>

<b>NCUB</b>	National Centre for Universities & Business	<a href="http://www.ncub.co.uk/">www.ncub.co.uk/</a>
<b>NEC</b>	Not elsewhere classified	
<b>NEET</b>	Not in employment education or training	
<b>NQF</b>	National Qualifications Framework	
<b>NVQ</b>	National Vocational Qualification	
<b>OCR</b>	Oxford, Cambridge and RSA Examinations	<a href="http://www.ocr.org.uk">www.ocr.org.uk</a>
<b>OECD</b>	Organisation for Economic Co-operation and Development	<a href="http://www.oecd.org">www.oecd.org</a>
<b>Ofcom</b>	Office of Communications	<a href="https://www.ofcom.org.uk/">https://www.ofcom.org.uk/</a>
<b>Ofgem</b>	Office of Gas and Electricity Markets	<a href="https://www.ofgem.gov.uk/">https://www.ofgem.gov.uk/</a>
<b>Ofqual</b>	The Office of Qualifications and Examinations Regulation	<a href="http://www.ofqual.gov.uk">www.ofqual.gov.uk</a>
<b>Ofsted</b>	Office for Standards in Education, Children's Services and Skills	<a href="http://www.gov.uk/government/organisations/ofsted">www.gov.uk/government/organisations/ofsted</a>
<b>ONS</b>	Office for National Statistics	<a href="http://www.ons.gov.uk">www.ons.gov.uk</a>
<b>PAYE</b>	Pay as you earn	
<b>PEI</b>	Professional Engineering Institution	
<b>POLAR3</b>	Participation of Local Areas (third iteration)	<a href="http://www.hefce.ac.uk/analysis/yp/POLAR/">www.hefce.ac.uk/analysis/yp/POLAR/</a>
<b>PwC</b>	Pricewaterhouse Coopers	<a href="http://www.pwc.com/gx/en.html">www.pwc.com/gx/en.html</a>
<b>QCF</b>	Qualification and Credit Framework	
<b>QTS</b>	Qualified Teacher Status	
<b>RAF</b>	Royal Air Force	<a href="https://www.raf.mod.uk/">https://www.raf.mod.uk/</a>
<b>R&amp;D</b>	Research and Development	
<b>RAEng</b>	Royal Academy of Engineering	<a href="http://www.raeng.org.uk">www.raeng.org.uk</a>
<b>REF</b>	Research Excellence Framework	<a href="http://www.ref.ac.uk">www.ref.ac.uk</a>
<b>RN</b>	Royal Navy	<a href="https://www.royalnavy.mod.uk/">https://www.royalnavy.mod.uk/</a>

<b>RQF</b>	Regulated Qualifications Framework	<a href="http://ofqual.blog.gov.uk/2015/10/01/explaining-the-rqf/">ofqual.blog.gov.uk/2015/10/01/explaining-the-rqf/</a>
<b>SFA</b>	Skills Funding Agency	<a href="http://www.gov.uk/government/organisations/skills-funding-agency">www.gov.uk/government/organisations/skills-funding-agency</a>
<b>SIC</b>	Standard Industrial Classification	
<b>SME</b>	Small and medium-sized enterprise	
<b>SMMT</b>	Society of Motor Manufacturers & Traders	<a href="http://www.smmmt.co.uk/">www.smmmt.co.uk/</a>
<b>SOC</b>	Standard Occupational Classification	
<b>SQA</b>	Scottish Qualifications Authority	<a href="http://www.sqa.org.uk">www.sqa.org.uk</a>
<b>STEM</b>	Science, Technology, Engineering and Mathematics	
<b>SVQ</b>	Scottish Vocational Qualification	
<b>TRaM</b>	Technician Registration and Membership	
<b>THE</b>	Times Higher Education	<a href="http://www.timeshighereducation.com/">www.timeshighereducation.com/</a>
<b>UCAS</b>	Universities and Colleges Admissions Service	<a href="http://www.ucas.com">www.ucas.com</a>
<b>UKCES</b>	United Kingdom Commission for Employment and Skills	<a href="http://www.ukces.org.uk">www.ukces.org.uk</a>
<b>UKRI</b>	UK Research and Innovation	
<b>UK-SPEC</b>	UK Standards for Professional Engineering Competence	<a href="http://www.engc.org.uk/ukspec.aspx">www.engc.org.uk/ukspec.aspx</a>
<b>UoA</b>	Unit of Assessment	
<b>UPMAP</b>	Understanding participation rates in post-16 mathematics and physics	<a href="http://www.ioe.ac.uk/UPMAP">www.ioe.ac.uk/UPMAP</a>
<b>UTC</b>	University Technical College	
<b>VRQ</b>	Vocationally Related qualification	
<b>Warwick IER</b>	University of Warwick Institute of Employment Research	<a href="https://www.aelp.org.uk/">https://www.aelp.org.uk/</a>
<b>WISE</b>	Women in Science, Technology and Engineering	<a href="http://www.wisecampaign.org.uk">www.wisecampaign.org.uk</a>

## 2. Main data sources

Chapter	Name		Data on	Available
2	Inter-Departmental Business Register	IDBR	Enterprise numbers, enterprise size, turnover	Data request to ONS
3	Engineering Brand Monitor	EBM	Perceptions on STEM careers and pathways	From EngineeringUK
3	ONS population data	ONS	Data on current population structure and population projections	<a href="https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration">https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration</a>
4	Joint Council for Qualifications	JCQ	GCSE and Alevel results	<a href="https://www.jcq.org.uk/">https://www.jcq.org.uk/</a>
4	Scottish Qualifications Authority statistics	SQA	National 5 and Higher results	<a href="https://www.sqa.org.uk/sqa/63001.8312.html">https://www.sqa.org.uk/sqa/63001.8312.html</a>
4	DfE England schools data	DfE	Schools data England teacher workforce	<a href="https://www.gov.uk/government/collections/statistics-school-workforce">https://www.gov.uk/government/collections/statistics-school-workforce</a>
4	Wales Education Workforce Council	EWC	Education workforce statistics	<a href="https://www.ewc.wales/site/index.php/en/research-statistics/education-workforce-statistics">https://www.ewc.wales/site/index.php/en/research-statistics/education-workforce-statistics</a>
4	Scottish Government school education statistics		Scotland teacher workforce data	<a href="http://www.gov.scot/Topics/Statistics/Browse/School-Education">http://www.gov.scot/Topics/Statistics/Browse/School-Education</a>
5	Skills Funding Agency FE data library	DfE	Apprenticeship statistics	<a href="https://www.gov.uk/government/collections/fe-data-library">https://www.gov.uk/government/collections/fe-data-library</a>
5	Skills Development Scotland		Apprenticeship statistics	<a href="http://www.skillsdevelopmentscotland.co.uk/publications-statistics/publications/?page=1&amp;order=date-desc">http://www.skillsdevelopmentscotland.co.uk/publications-statistics/publications/?page=1&amp;order=date-desc</a>
5	Stats Wales		Further education, work-based learning and community learning statistics	<a href="http://gov.wales/statistics-and-research/further-education-work-based-learning-community-learning-statistics/?lang=en">http://gov.wales/statistics-and-research/further-education-work-based-learning-community-learning-statistics/?lang=en</a>
5	Northern Ireland Department for the Economy		Apprenticeship statistics	<a href="https://www.economy-ni.gov.uk/search/type/publication/topic/1647?query=apprenticeships&amp;edit-submit-button=Go">https://www.economy-ni.gov.uk/search/type/publication/topic/1647?query=apprenticeships&amp;edit-submit-button=Go</a>
5	Ofqual	Ofqual	Vocational qualifications dataset	<a href="https://www.gov.uk/government/statistical-data-sets/vocational-qualifications-dataset">https://www.gov.uk/government/statistical-data-sets/vocational-qualifications-dataset</a>
5	Association of Colleges	AoC	Research and statistics	<a href="https://www.aoc.co.uk/about-colleges/research-and-stats">https://www.aoc.co.uk/about-colleges/research-and-stats</a>
6	Higher Education Statistics Agency	HESA	HE student statistics	Data request to HESA
7	ONS population data	ONS	Data on current population structure, distribution and population projections	<a href="https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration">https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration</a>
7	ONS Labour Force Survey	LFS	Labour force data on employment	<a href="https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes">https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes</a>
7	Inter-Departmental Business Register	IDBR	Enterprise numbers, enterprise size, turnover	Data request to ONS
8	HESA Destinations of Leavers Survey	DLHE	Graduate destinations, including employment	Data request to HESA
9	ONS Annual Survey of Hours and Earnings	ASHE	Salary statistics	<a href="https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours">https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours</a>

### 3. The EngineeringUK engineering footprint

Below is the list of Standard Occupational Classification (SOC) 2010 codes used to define core engineering jobs and related engineering jobs.

A detailed explanation of the approach to defining the engineering footprint is in Chapter 2 of the report.

#### Core engineering occupations

Code	Standard Occupation
1121	Production managers and directors in manufacturing
1122	Production managers and directors in construction
1123	Production managers and directors in mining and energy
2121	Civil engineers
2122	Mechanical engineers
2123	Electrical engineers
2124	Electronics engineers
2126	Design and development engineers
2127	Production and process engineers
2129	Engineering professionals n.e.c.
2135	IT business analysts, architects and systems designers
2136	Programmers and software development professionals
2139	Information technology and telecommunications professionals n.e.c.
2142	Environment professionals
2150	Research and development managers
2461	Quality control and planning engineers
2462	Quality assurance and regulatory professionals
3112	Electrical and electronics technicians
3113	Engineering technicians
3114	Building and civil engineering technicians
3115	Quality assurance technicians
3116	Planning, process and production technicians
3119	Science, engineering and production technicians n.e.c.
3122	Draughtspersons
3565	Inspectors of standards and regulations
5211	Smiths and forge workers
5212	Moulders, core makers and die casters
5213	Sheet metal workers
5214	Metal plate workers, and riveters
5215	Welding trades
5216	Pipe fitters
5221	Metal machining setters and setter-operators
5222	Tool makers, tool fitters and markers-out
5223	Metal working production and maintenance fitters
5224	Precision instrument makers and repairers
5225	Air-conditioning and refrigeration engineers
5231	Vehicle technicians, mechanics and electricians
5232	Vehicle body builders and repairers
5235	Aircraft maintenance and related trades
5236	Boat and ship builders and repairers
5237	Rail and rolling stock builders and repairers
5241	Electricians and electrical fitters
5242	Telecommunications engineers
5244	TV, video and audio engineers
5245	IT engineers
5249	Electrical and electronic trades n.e.c.
5250	Skilled metal, electrical and electronic trades supervisors
5314	Plumbers and heating and ventilating engineers
5330	Construction and building trades supervisors
8115	Rubber process operatives
8116	Plastics process operatives
8117	Metal making and treating process operatives
8121	Paper and wood machine operatives
8122	Coal mine operatives
8123	Quarry workers and related operatives
8125	Metal working machine operatives
8126	Water and sewerage plant operatives
8129	Plant and machine operatives n.e.c.
8133	Routine inspectors and testers
8143	Rail construction and maintenance operatives



## Related engineering occupations

## Code Standard Occupation

1136	Information technology and telecommunications directors
1255	Waste disposal and environmental services managers
2133	IT specialist managers
2134	IT project and programme managers
2137	Web design and development professionals
2431	Architects
2433	Quantity surveyors
2434	Chartered surveyors
2435	Chartered architectural technologists
2436	Construction project managers and related professionals
3121	Architectural and town planning technicians
3131	IT operations technicians
3132	IT user support technicians
3422	Product, clothing and related designers
3512	Aircraft pilots and flight engineers
5234	Vehicle paint technicians
5311	Steel erectors
5312	Bricklayers and masons
5313	Roofers, roof tilers and slaters
5315	Carpenters and joiners
5316	Glaziers, window fabricators and fitters

5319 Construction and building trades n.e.c.

8111 Food, drink and tobacco process operatives

8112 Glass and ceramics process operatives

8114 Chemical and related process operatives

8118 Electroplaters

8119 Process operatives n.e.c.

8124 Energy plant operatives

8131 Assemblers (electrical and electronic products)

8132 Assemblers (vehicles and metal goods)

8135 Tyre, exhaust and windscreen fitters

8139 Assemblers and routine operatives n.e.c.

8141 Scaffolders, staggers and riggers

8142 Road construction operatives

8149 Construction operatives n.e.c.

8221 Crane drivers

8232 Marine and waterways transport operatives

### Standard Industrial Classification (SIC) codes in the Engineering footprint

Below is the list of Standard Industrial Classification (SIC) 2007 codes used to define industries in the engineering footprint.

#### Code Description

05101 Deep coal mines

05102 Open cast coal working

05200 Mining of lignite

06100 Extraction of crude petroleum

06200 Extraction of natural gas

07100 Mining of iron ores

07210 Mining of uranium and thorium ores

07290 Mining of other non-ferrous metal ores

08110 Quarrying of ornamental and building stone, limestone, gypsum, chalk and slate

08120 Operation of gravel and sand pits; mining of clays and kaolin

08910 Mining of chemical and fertilizer minerals

08930 Extraction of salt

08990 Other mining and quarrying n.e.c.

09100 Support activities for petroleum and natural gas mining

09900 Support activities for other mining and quarrying

10130 Production of meat and poultry meat products

10200 Processing and preserving of fish, crustaceans and molluscs

10310 Processing and preserving of potatoes

10320 Manufacture of fruit and vegetable juice

10390 Other processing and preserving of fruit and vegetables

10410 Manufacture of oils and fats

10420 Manufacture of margarine and similar edible fats

10511 Liquid milk and cream production

10512 Butter and cheese production

10519 Manufacture of other milk products

10520	Manufacture of ice cream	11050	Manufacture of beer	14142	Manufacture of women's underwear
10611	Grain milling	11060	Manufacture of malt	14190	Manufacture of other wearing apparel and accessories n.e.c.
10612	Manufacture of breakfast cereals and cereals-based food	11070	Manufacture of soft drinks; production of mineral waters and other bottled waters	14200	Manufacture of articles of fur
10620	Manufacture of starches and starch products	12000	Manufacture of tobacco products	14310	Manufacture of knitted and crocheted hosiery
10710	Manufacture of bread; manufacture of fresh pastry goods and cakes	13100	Preparation and spinning of textile fibres	14390	Manufacture of other knitted and crocheted apparel
10720	Manufacture of rusks and biscuits; manufacture of preserved pastry goods and cakes	13200	Weaving of textiles	15110	Tanning and dressing of leather; dressing and dyeing of fur
10730	Manufacture of macaroni, noodles, couscous and similar farinaceous products	13300	Finishing of textiles	15120	Manufacture of luggage, handbags and the like, saddlery and harness
10810	Manufacture of sugar	13910	Manufacture of knitted and crocheted fabrics	15200	Manufacture of footwear
10821	Manufacture of cocoa and chocolate confectionery	13921	Manufacture of soft furnishings	16100	Sawmilling and planing of wood
10822	Manufacture of sugar confectionery	13922	Manufacture of canvas goods, sacks, etc.	16210	Manufacture of veneer sheets and wood-based panels
10831	Tea processing	13923	Manufacture of household textiles	16220	Manufacture of assembled parquet floors
10832	Production of coffee and coffee substitutes	13931	Manufacture of woven or tufted carpets and rugs	16230	Manufacture of other builders' carpentry and joinery
10840	Manufacture of condiments and seasonings	13939	Manufacture of other carpets and rugs	16240	Manufacture of wooden containers
10850	Manufacture of prepared meals and dishes	13940	Manufacture of cordage, rope, twine and netting	16290	Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting materials
10860	Manufacture of homogenized food preparations and dietetic food	13950	Manufacture of non-wovens and articles made from non-wovens, except apparel	17110	Manufacture of pulp
10890	Manufacture of other food products n.e.c.	13960	Manufacture of other technical and industrial textiles	17120	Manufacture of paper and paperboard
10910	Manufacture of prepared feeds for farm animals	13990	Manufacture of other textiles n.e.c.	17211	Manufacture of corrugated paper and paperboard, sacks and bags
10920	Manufacture of prepared pet foods	14110	Manufacture of leather clothes	17219	Manufacture of other paper and paperboard containers
11010	Distilling, rectifying and blending of spirits	14120	Manufacture of workwear	17220	Manufacture of household and sanitary goods and of toilet requisites
11020	Manufacture of wine from grape	14131	Manufacture of other men's outerwear	17230	Manufacture of paper stationery
11030	Manufacture of cider and other fruit wines	14132	Manufacture of other women's outerwear	17240	Manufacture of wallpaper
11040	Manufacture of other non-distilled fermented beverages	14141	Manufacture of men's underwear	17290	Manufacture of other articles of paper and paperboard n.e.c.

18110	Printing of newspapers	20412	Manufacture of cleaning and polishing preparations	23410	Manufacture of ceramic household and ornamental articles
18121	Manufacture of printed labels	20420	Manufacture of perfumes and toilet preparations	23420	Manufacture of ceramic sanitary fixtures
18129	Printing n.e.c.	20510	Manufacture of explosives	23430	Manufacture of ceramic insulators and insulating fittings
18130	Pre-press and pre-media services	20520	Manufacture of glues	23440	Manufacture of other technical ceramic products
18140	Binding and related services	20530	Manufacture of essential oils	23490	Manufacture of other ceramic products n.e.c.
18201	Reproduction of sound recording	20590	Manufacture of other chemical products n.e.c.	23510	Manufacture of cement
18202	Reproduction of video recording	20600	Manufacture of man-made fibres	23520	Manufacture of lime and plaster
18203	Reproduction of computer media	21100	Manufacture of basic pharmaceutical products	23610	Manufacture of concrete products for construction purposes
19100	Manufacture of coke oven products	21200	Manufacture of pharmaceutical preparations	23620	Manufacture of plaster products for construction purposes
19201	Mineral oil refining	22110	Manufacture of rubber tyres and tubes; retreading and rebuilding of rubber tyres	23630	Manufacture of ready-mixed concrete
19209	Other treatment of petroleum products (excluding petrochemicals manufacture)	22190	Manufacture of other rubber products	23640	Manufacture of mortars
20110	Manufacture of industrial gases	22210	Manufacture of plastic plates, sheets, tubes and profiles	23650	Manufacture of fibre cement
20120	Manufacture of dyes and pigments	22220	Manufacture of plastic packing goods	23690	Manufacture of other articles of concrete, plaster and cement
20130	Manufacture of other inorganic basic chemicals	22230	Manufacture of builders' ware of plastic	23700	Cutting, shaping and finishing of stone
20140	Manufacture of other organic basic chemicals	22290	Manufacture of other plastic products	23910	Production of abrasive products
20150	Manufacture of fertilizers and nitrogen compounds	23110	Manufacture of flat glass	23990	Manufacture of other non-metallic mineral products n.e.c.
20160	Manufacture of plastics in primary forms	23120	Shaping and processing of flat glass	24100	Manufacture of basic iron and steel and of ferro-alloys
20170	Manufacture of synthetic rubber in primary forms	23130	Manufacture of hollow glass	24200	Manufacture of tubes, pipes, hollow profiles and related fittings, of steel
20200	Manufacture of pesticides and other agrochemical products	23140	Manufacture of glass fibres	24310	Cold drawing of bars
20301	Manufacture of paints, varnishes and similar coatings, mastics and sealants	23190	Manufacture and processing of other glass, including technical glassware	24320	Cold rolling of narrow strip
20302	Manufacture of printing ink	23200	Manufacture of refractory products	24330	Cold forming or folding
20411	Manufacture of soap and detergents	23310	Manufacture of ceramic tiles and flags	24340	Cold drawing of wire
		23320	Manufacture of bricks, tiles and construction products, in baked clay	24410	Precious metals production

24420	Aluminium production	25930	Manufacture of wire products, chain and springs	27200	Manufacture of batteries and accumulators
24430	Lead, zinc and tin production	25940	Manufacture of fasteners and screw machine products	27310	Manufacture of fibre optic cables
24440	Copper production	25990	Manufacture of other fabricated metal products n.e.c.	27320	Manufacture of other electronic and electric wires and cables
24450	Other non-ferrous metal production	26110	Manufacture of electronic components	27330	Manufacture of wiring devices
24460	Processing of nuclear fuel	26120	Manufacture of loaded electronic boards	27400	Manufacture of electric lighting equipment
24510	Casting of iron	26200	Manufacture of computers and peripheral equipment	27510	Manufacture of electric domestic appliances
24520	Casting of steel	26301	Manufacture of telegraph and telephone apparatus and equipment	27520	Manufacture of non-electric domestic appliances
24530	Casting of light metals	26309	Manufacture of communication equipment other than telegraph, and telephone apparatus and equipment	27900	Manufacture of other electrical equipment
24540	Casting of other non-ferrous metals	26400	Manufacture of consumer electronics	28110	Manufacture of engines and turbines, except aircraft, vehicle and cycle engines
25110	Manufacture of metal structures and parts of structures	26511	Manufacture of electronic instruments and appliances for measuring, checking, testing, navigation and other purposes, except industrial process control equipment	28120	Manufacture of fluid power equipment
25120	Manufacture of doors and windows of metal	26512	Manufacture of electronic industrial process control equipment	28131	Manufacture of pumps
25210	Manufacture of central heating radiators and boilers	26513	Manufacture of non-electronic instruments and appliances for measuring, checking, testing, navigation and other purposes, except process control equipment	28132	Manufacture of compressors
25290	Manufacture of other tanks, reservoirs and containers of metal	26514	Manufacture of non-electronic industrial process control equipment	28140	Manufacture of taps and valves
25300	Manufacture of steam generators, except central heating hot water boilers	26520	Manufacture of watches and clocks	28150	Manufacture of bearings, gears, gearing and driving elements
25400	Manufacture of weapons and ammunition	26600	Manufacture of irradiation, electromedical and electrotherapeutic equipment	28210	Manufacture of ovens, furnaces and furnace burners
25500	Forging, pressing, stamping and roll-forming of metal; powder metallurgy	26701	Manufacture of optical precision instruments	28220	Manufacture of lifting and handling equipment
25610	Treatment and coating of metals	26702	Manufacture of photographic and cinematographic equipment	28230	Manufacture of office machinery and equipment (except computers and peripheral equipment)
25620	Machining	26800	Manufacture of magnetic and optical media	28240	Manufacture of power-driven hand tools
25710	Manufacture of cutlery	27110	Manufacture of electric motors, generators and transformers	28250	Manufacture of non-domestic cooling and ventilation equipment
25720	Manufacture of locks and hinges	27120	Manufacture of electricity distribution and control apparatus	28290	Manufacture of other general-purpose machinery n.e.c.
25730	Manufacture of tools			28301	Manufacture of agricultural tractors
25910	Manufacture of steel drums and similar containers			28302	Manufacture of agricultural and forestry machinery other than tractors
25920	Manufacture of light metal packaging				

<b>28410</b>	Manufacture of metal forming machinery	<b>30910</b>	Manufacture of motorcycles	<b>33190</b>	Repair of other equipment
<b>28490</b>	Manufacture of other machine tools n.e.c.	<b>30920</b>	Manufacture of bicycles and invalid carriages	<b>33200</b>	Installation of industrial machinery and equipment
<b>28910</b>	Manufacture of machinery for metallurgy	<b>30990</b>	Manufacture of other transport equipment n.e.c.	<b>35110</b>	Production of electricity
<b>28921</b>	Manufacture of machinery for mining	<b>31010</b>	Manufacture of office and shop furniture	<b>35120</b>	Transmission of electricity
<b>28922</b>	Manufacture of earthmoving equipment	<b>31020</b>	Manufacture of kitchen furniture	<b>35130</b>	Distribution of electricity
<b>28923</b>	Manufacture of equipment for concrete crushing and screening and roadworks	<b>31030</b>	Manufacture of mattresses	<b>35210</b>	Manufacture of gas
<b>28930</b>	Manufacture of machinery for food, beverage and tobacco processing	<b>31090</b>	Manufacture of other furniture	<b>35220</b>	Distribution of gaseous fuels through mains
<b>28940</b>	Manufacture of machinery for textile, apparel and leather production	<b>32110</b>	Striking of coins	<b>35300</b>	Steam and air conditioning supply
<b>28950</b>	Manufacture of machinery for paper and paperboard production	<b>32130</b>	Manufacture of imitation jewellery and related articles	<b>36000</b>	Water collection, treatment and supply
<b>28960</b>	Manufacture of plastics and rubber machinery	<b>32200</b>	Manufacture of musical instruments	<b>37000</b>	Sewerage
<b>28990</b>	Manufacture of other special-purpose machinery n.e.c.	<b>32300</b>	Manufacture of sports goods	<b>38210</b>	Treatment and disposal of non-hazardous waste
<b>29100</b>	Manufacture of motor vehicles	<b>32401</b>	Manufacture of professional and arcade games and toys	<b>38220</b>	Treatment and disposal of hazardous waste
<b>29201</b>	Manufacture of bodies (coachwork) for motor vehicles (except caravans)	<b>32409</b>	Manufacture of other games and toys, n.e.c.	<b>38310</b>	Dismantling of wrecks
<b>29202</b>	Manufacture of trailers and semi-trailers	<b>32500</b>	Manufacture of medical and dental instruments and supplies	<b>38320</b>	Recovery of sorted materials
<b>29203</b>	Manufacture of caravans	<b>32910</b>	Manufacture of brooms and brushes	<b>39000</b>	Remediation activities and other waste management services
<b>29310</b>	Manufacture of electrical and electronic equipment for motor vehicles	<b>32990</b>	Other manufacturing n.e.c.	<b>41201</b>	Construction of commercial buildings
<b>29320</b>	Manufacture of other parts and accessories for motor vehicles and their engines	<b>33110</b>	Repair of fabricated metal products	<b>41202</b>	Construction of domestic buildings
<b>30110</b>	Building of ships and floating structures	<b>33120</b>	Repair of machinery	<b>42110</b>	Construction of roads and motorways
<b>30120</b>	Building of pleasure and sporting boats	<b>33130</b>	Repair of electronic and optical equipment	<b>42120</b>	Construction of railways and underground railways
<b>30200</b>	Manufacture of railway locomotives and rolling stock	<b>33140</b>	Repair of electrical equipment	<b>42130</b>	Construction of bridges and tunnels
<b>30300</b>	Manufacture of air and spacecraft and related machinery	<b>33150</b>	Repair and maintenance of ships and boats	<b>42210</b>	Construction of utility projects for fluids
<b>30400</b>	Manufacture of military fighting vehicles	<b>33160</b>	Repair and maintenance of aircraft and spacecraft	<b>42220</b>	Construction of utility projects for electricity and telecommunications
		<b>33170</b>	Repair and maintenance of other transport equipment n.e.c.	<b>42910</b>	Construction of water projects

<b>42990</b>	Construction of other civil engineering projects n.e.c.	<b>61200</b>	Wireless telecommunications activities	<b>71122</b>	Engineering related scientific and technical consulting activities
<b>43110</b>	Demolition	<b>61300</b>	Satellite telecommunications activities	<b>71129</b>	Other engineering activities
<b>43120</b>	Site preparation	<b>61900</b>	Other telecommunications activities	<b>71200</b>	Technical testing and analysis
<b>43130</b>	Test drilling and boring	<b>62011</b>	Ready-made interactive leisure and entertainment software development	<b>72110</b>	Research and experimental development on biotechnology
<b>43210</b>	Electrical installation	<b>62012</b>	Business and domestic software development	<b>72190</b>	Other research and experimental development on natural sciences and engineering
<b>43220</b>	Plumbing, heat and air-conditioning installation	<b>62020</b>	Computer consultancy activities	<b>74901</b>	Environmental consulting activities
<b>43290</b>	Other construction installation	<b>62030</b>	Computer facilities management activities	<b>74902</b>	Quantity surveying activities
<b>43999</b>	Other specialised construction activities n.e.c.	<b>62090</b>	Other information technology and computer service activities	<b>80200</b>	Security systems service activities
<b>45200</b>	Maintenance and repair of motor vehicles	<b>63110</b>	Data processing, hosting and related activities	<b>84220</b>	Defence activities
<b>49500</b>	Transport via pipeline	<b>63120</b>	Web portals	<b>95110</b>	Repair of computers and peripheral equipment
<b>51220</b>	Space transport	<b>71111</b>	Architectural activities	<b>95120</b>	Repair of communication equipment
<b>59200</b>	Sound recording and music publishing activities	<b>71112</b>	Urban planning and landscape architectural activities	<b>95210</b>	Repair of consumer electronics
<b>61100</b>	Wired telecommunications activities	<b>71121</b>	Engineering design activities for industrial process and production	<b>95220</b>	Repair of household appliances and home and garden equipment

4. Qualifications frameworks

Main stages of education/employment	Framework for higher education qualifications in England, Wales and Northern Ireland www.qaa.ac.uk	Regulated Qualifications Framework for England and Northern Ireland www.ofqual.gov.uk www.ccea.org.uk	Credit and Qualifications Framework for Wales www.cqfw.net	National Framework of Qualifications for Ireland www.qqi.ie	Scottish Credit and Qualifications Framework www.scfq.org.uk
	LEVEL	LEVEL	LEVEL	LEVEL	LEVEL
Professional or postgraduate education, research or employment	8 Doctoral Degrees	8 Technical/Vocational Qualifications Level 8	8 Doctoral Degrees, Industry Qualifications, for example, Chartered Accountant	10 Doctoral Degrees, Higher Doctorates	12 Doctoral Degrees, Professional Apprenticeships, Professional Development Awards (PDA), Award
Higher education	7 Master's Degrees, Integrated Master's Degrees, Postgraduate Diplomas, Postgraduate Certificate in Education (PGCE), Postgraduate Certificates	7 Technical/Vocational Qualifications Level 7	7 Master's Degrees, Vocational Qualifications, Postgraduate Certificate in Education (PGCE), Apprenticeships	9 Master's Degrees, Postgraduate Diplomas	11 Master's Degrees, Integrated Master's Degrees, Professional Apprenticeships, SVQ, PDA, Postgraduate Diplomas, Postgraduate Certificates, Award
Advanced Skills Training	6 Bachelor's Degrees with Honours, Bachelor's Degrees, Professional Graduate Certificate in Education (PGCE), Graduate Diplomas, Graduate Certificates	6 Technical/Vocational Qualifications Level 6	6 Honours Degrees, Vocational Qualifications, Professional Certificates in Education, Apprenticeships	8 Honours Bachelor Degrees, Higher Diplomas	10 Bachelor's Degrees with Honours, Professional Apprenticeships, SVQ, PDA, Graduate Diplomas, Graduate Certificates, Award
Entry to professional graduate employment	5 Foundation Degrees, Diplomas of Higher Education (DipHE), Higher National Diplomas (HND)	5 Technical/Vocational Qualifications Level 5, Higher National Diplomas (HND)	5 Foundation Degrees, Vocational Qualifications, Higher National Diplomas (HND), Apprenticeships	7 Ordinary Bachelor Degrees	9 Bachelor's/Ordinary Degrees, Technical Apprenticeships, PDA, SVQ, Graduate Diploma, Graduate Certificates, Award
Specialised education and training	4 Higher National Certificates (HNC), Certificates of Higher Education (CertHE)	4 Technical/Vocational Qualifications Level 4, Higher National Certificates (HNC)	4 Higher National Certificates (HNC), Certificates of Higher Education (CertHE), Vocational Qualifications, Apprenticeships	6 Advanced Certificate, Higher Certificate	8 Higher National Diplomas (HND), Diplomas of Higher Education (DipHE), Technical Apprenticeship, PDA, SVQ, Award
Qualified/Skilled worker	3 Access to HE Diploma*	3 Technical/Vocational Qualifications Level 3, GCE AS and A Levels	3 Welsh Baccalaureate Advanced, Vocational Qualifications, AS and A Level, Access to HE, Apprenticeships	5 Level 5 Certificate, Leaving Certificate	7 Higher National Certificates (HNC), Modern Apprenticeships, PDA, SVQ, Certificates of Higher Education (CertHE), Scottish Baccalaureate, Advanced Higher, Award
Entry to higher education	*The Access to HE Diploma is regulated by QAA but is not part of the FHEQ				
Completion of secondary education	The table gives an indication of how you can compare qualifications across national boundaries. Examples of major qualifications at each level are provided. For more detail of the qualifications that are current at the time of publication in each country, you will need to consult the website given at the head of each column.				
Progression to skilled employment	This leaflet is designed to give some information to help you begin this process, for example, by telling you what your qualification, or qualifications you are interested in studying, are broadly comparable to in other countries.				
Continuation of secondary education	2	2 Technical/Vocational Qualifications Level 2. GCSEs at grade A* - C and from 2017 grade 4-9 (England). Functional Skills Level 2 (England) Essential Skills Qualifications (NI)	2 Welsh Baccalaureate National, Vocational Qualifications, Essential Skills, GCSEs grades A*-C, Apprenticeships	4 Level 4 Certificate, Leaving Certificate	5 National 5, Modern Apprenticeships, SVQ, NPA, National Certificate, Award
Secondary education Initial entry into employment or further education	1	1 Technical/Vocational Qualifications Level 1. GCSEs at grade D-G and from 2017 grade 3-1 (England). Functional Skills Level 1 (England). Essential Skills Qualifications (NI)	1 Welsh Baccalaureate Foundation, Vocational Qualifications, Essential Skills, GCSEs at grade D-G	3 Level 3 Certificate, Junior Certificates	4 National 4, SVQ, NPA, National Certificate, Award
<b>Qualifications can cross boundaries</b> - a guide to comparing qualifications in the UK and Ireland, March 2017					
	Entry Level	Entry Level Certificates (sub levels 1-3), functional skills Entry Level (England) (English, Mathematics & ICT), Essential Skills Qualifications (NI)	Entry Level Entry Level Qualifications	2 Level 2 Certificate	3 National 3, NPA, National Certificate, Award
				1 Level 1 Certificate	2 National 2, NPA, National Certificate, Award
					1 National 1, Award