

## 25. UK: United Kingdom

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### 25.1. General information



This description commences with a summary of the conventional Higher Education system in the UK. This is then followed by an overview of some of the variations on the theme that can occur. The general view of the UK higher education (HE) system is described in figure 25.1 although this is a simplified version of the real picture of access to higher education. A fuller description is given in section 25.X. The UK has been using a National Qualifications Framework (NQF)<sup>1</sup> for a number of years now and this is described after figure 25.1 together with a comparison of the UK NQF with the European Qualifications Framework (EQF)<sup>2</sup> and the Dublin Descriptors<sup>3</sup>. Also referenced are the UK's specific output standards for Engineering<sup>4</sup>. Following this general national context information, specific and detailed information is presented about the undergraduate and postgraduate (masters and doctoral) levels of education and of programmes generally available in the three HE levels.

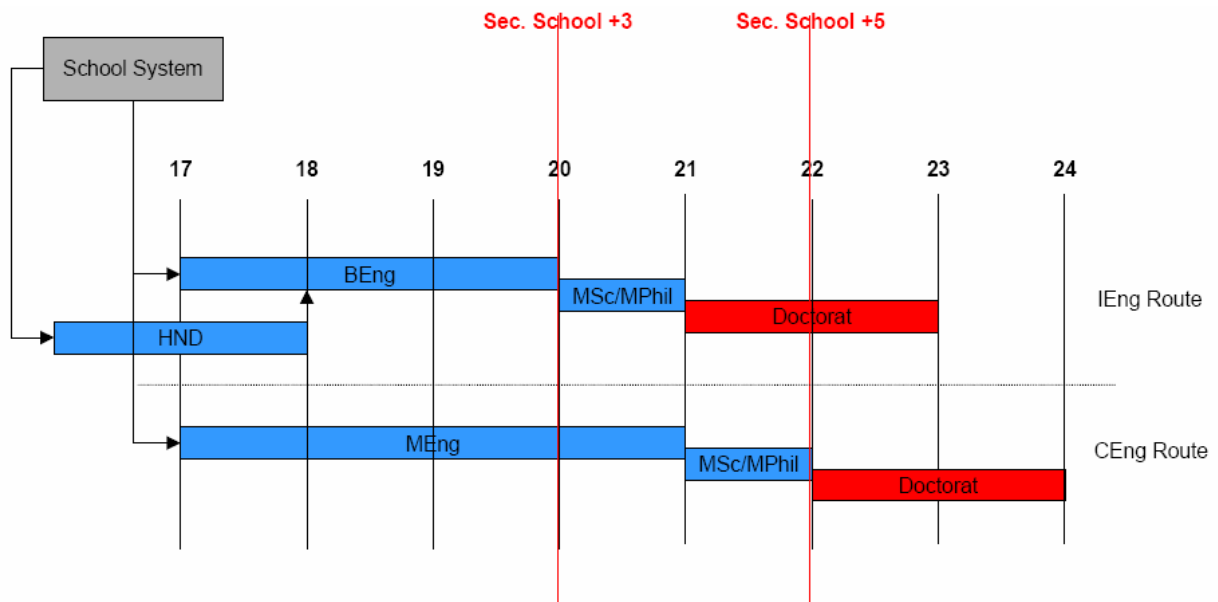


Figure 25.1: UK Higher Education System in EIE disciplines (General picture).

Firstly to clarify terminology, in the UK the whole degree is usually referred to as a programme of study rather than a course although in the UCAS<sup>5</sup> (Universities and Colleges Admission System) guide below the term course is used. Programmes comprise a number of modules. In this section the terms programme and module will be used in favour of courses.

### **Frameworks for higher education qualifications in the UK.**

Responsibility for the development and maintenance of the overall education system in the UK rests with the Government through the Quality Assurance Agency<sup>6</sup> (QAA). The QAA has produced two qualifications frameworks that describe the achievement represented by higher education qualifications, they are:

- The framework for HE qualifications in England, Wales and Northern Ireland<sup>7</sup>
- The framework for HE qualifications in Scotland<sup>8</sup>

It is important to understand the place of these frameworks with respect to the European Qualifications Framework (EQF) and the Dublin Descriptors and the compatibility of the NQF with the Bologna Process. The following is a precise of the frameworks and the UK's stance on the issue of compatibility.

A revised version of the framework for higher education qualifications (FHEQ) in England, Wales and Northern Ireland was published for consultation in April 2008<sup>9</sup>. Point 3 of this document states: *"The fundamental premise of the FHEQ is that qualifications should be awarded on the basis of achievement of outcomes and attainment rather than years of study. Qualification descriptors are key to this. Qualification descriptors set out the generic outcomes and attributes expected for the award of qualifications. The qualification descriptors contained in the FHEQ exemplify the outcomes and attributes expected of learning resulting in the award of higher education qualifications; as distinct from higher level skills awards."*

This point clearly states the outputs orientation of the UK's Government, higher education institutions and overall approach to programme accreditation and sets the scene for the positioning of the UK NQF against the Bologna Process and the EQF. In the UK higher education sector position paper<sup>10</sup> the UK welcomes the broad objectives and purpose behind the EQF. In the detailed response it states: *"If the EQF is to be successful, it is essential that it complements existing arrangements within the Bologna Process to create the European Higher Education Area (EHEA). ... The reference levels and descriptors in the EQF are **generic** descriptors which encompass the spectrum of lifelong learning and are neither suitable nor intended to replace the Dublin Descriptors within the Framework for Qualifications of the EHEA. The Dublin Descriptors were developed specifically for HE and are of use for the majority of HE qualifications."*

To understand the UK HE provision, it is useful to compare the level descriptors appropriate at the HE levels between the UK NQF, the EQF and the Dublin Descriptors. Boxes 25.1, provides, by way of example, a comparison of these descriptors at the Bachelor level, reference can be made to the qualifications for the other levels.

**Box 25.1 Bachelor Degree / First Cycle Degree**

**EQF:**

**Knowledge:** Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles.

**Skills:** Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study.

**Competence:** Manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts. Take responsibility for managing professional development of individuals and groups.

**UK NQF**

An Honours graduate will have developed an understanding of a complex body of knowledge, some of it at the current boundaries of an academic discipline. Through this, the graduate will have developed analytical techniques and problem-solving skills that can be applied in many types of employment. The graduate will be able to evaluate evidence, arguments and assumptions, to reach sound judgements, and to communicate effectively.

An Honours graduate should have the qualities needed for employment in situations requiring the exercise of personal responsibility, and decision-making in complex and unpredictable circumstances.

**Dublin Descriptor**

Have demonstrated knowledge and understanding in a field of study that builds upon and supersedes their general secondary education, and is typically at a level that, whilst supported by advanced textbooks, includes some aspects that will be informed by knowledge of the forefront of their field of study.

Can apply their knowledge and understanding in a manner that indicates a professional approach to their work or vocation, and have competences typically demonstrated through devising and sustaining arguments and solving problems within their field of study.

Have the ability to gather and interpret relevant data (usually within their field of study) to inform judgements that include reflection on relevant social, scientific or ethical issues.

Can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.

Have developed those learning skills that are necessary for them to continue to undertake further study with a high degree of autonomy.

The final level of detail worth reference to is the subject benchmark statements for Engineering<sup>4</sup>. These benchmark statements clearly articulate what is expected of the outcome of an engineering degree programme in the UK and form the basis for the design and quality assurance of engineering degrees.

Higher Education usually commences with students aged 17 or 18 immediately after A-level education within a school or sixth form college, during which students will usually study 3 or more subjects. There are, in addition to the A level entry route, alternative routes into UK HE including Foundation years, Foundation Degrees, Access programmes and, as a result of the most recent change to the pre-University education system, the School's Diploma. These entry routes offer access to the full breadth and depth of potential candidates and embrace the academic and vocational HE routes. The overall picture of access is complex but has been summarized in pictorial form in the 'progression map' (Figure 25.2) produced by Higher York's working group in Electrical and Electronic Engineering<sup>11</sup>.

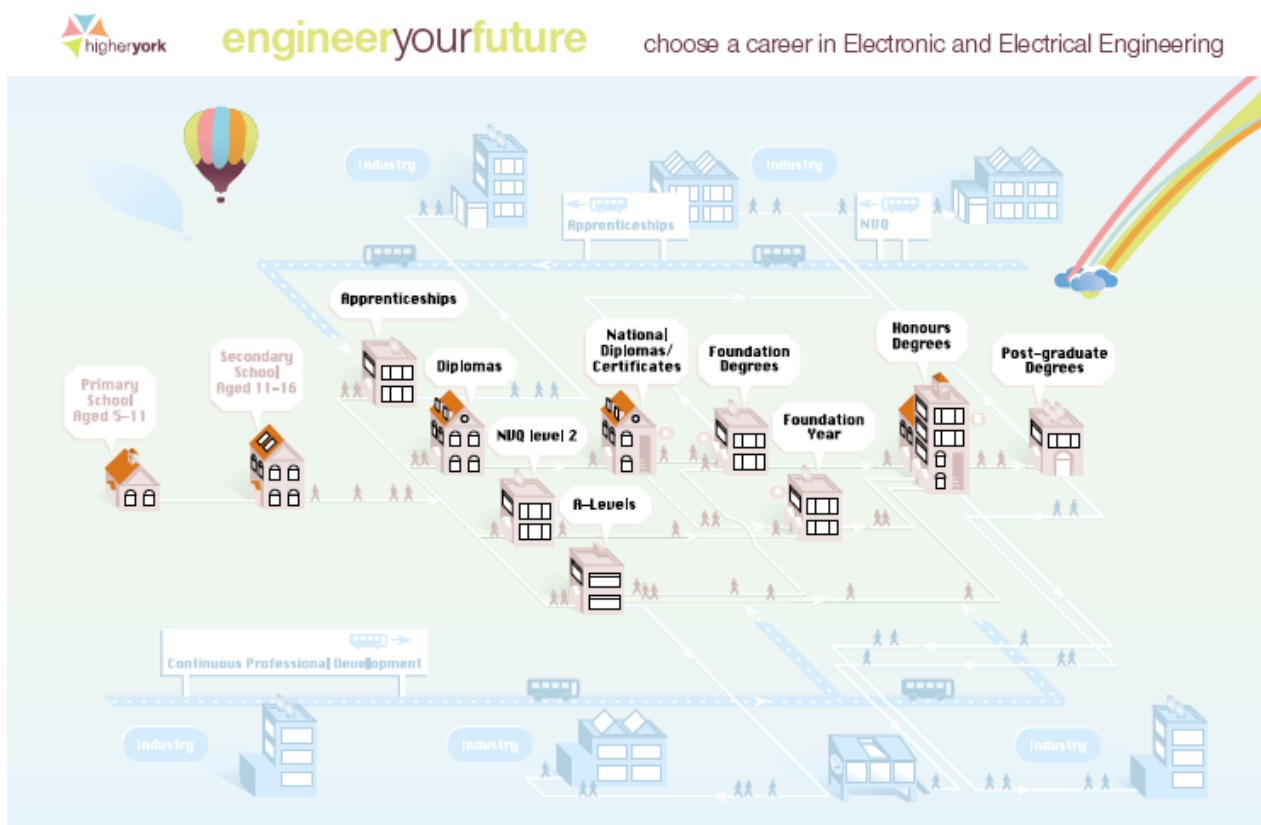


Figure 25.2 'Progression map' for Electrical and Electronic Engineering<sup>11</sup>

In the application for places in the HE system, students can choose from a range of durations of degree programmes, from the minimum of three years to a current maximum of five years (assuming no agreed period of absence). The three-year variant of the programme will be either a Bachelor of Science (BSc) or Bachelor of Engineering (BEng). Both these programmes can, when agreed by the academic institution, be increased to four years by adding a year in industry to form a 'sandwich' degree.

The four-year variant of the undergraduate programme will typically be a Master of Engineering (MEng). This programme can also be increased to five years by adding a year in industry to form a 'sandwich' degree. The Bachelor of Science, Bachelor of Engineering and Master of Engineering are all undergraduate or First Cycle programmes (FCD).

FCDs are typically graded using pass, ordinary, third class, lower second class, upper second class and first class classifications, although not all academic institutions use all of them. Some institutions use a Pass/Fail classification for MEng programmes.

Upon completion of an undergraduate programme any student can, subject to meeting certain conditions, undertake a postgraduate Masters programme, the duration of which is usually one-year full time. The conditions of progression relate to the relevance of the first cycle degree to the subject of the second cycle degree and to the level of academic achievement of the student in the first cycle degree, entry conditions are all set by the HE institution offering the higher degree. Masters degrees in the United Kingdom can be either taught or by research. Also, upon completion of an undergraduate programme and subject to the student achieving upper second or first class honours, a student can undertake a three-year Doctoral programme. Both the Master and Doctorate programmes are Second Cycle Degrees (SCD).

A wide range of variations is possible. Students can defer entry to higher education after school/college in favour of employment, returning to the academic system at any stage. In a similar way, a break can be taken between the FCD and the SCD. Both the FCD and SCD can be taken part time, although part time FCDs are less common. The Open University also offers the facility to undertake modules of study and build up a FCD over a larger number of years.

### 25.1.1 *Electrical and Information Engineering in United Kingdom, boundaries of the field of study*

One of the definitions possible for EIE lies in the way in which a student would select a course within an academic institution. The source for this information is the Universities & Colleges Admission System (UCAS)<sup>5</sup>. UCAS organises the first cycle degrees offered by UK institutions using a hierarchy within discipline areas. A search of related key words to EIE reveals the following hierarchy and hence list of courses that lie within the EIE general area. In the following list the numbers in brackets refer to the number of courses under that name that are offered within the UK.

Electronic/Electrical (866 courses)

- Aeronautical electronics (7 courses)
- Applied electronic (5 courses)
- Automotive electronic (4 courses)
- Automotive electronic engineering (4 courses)
- Communications Electronic Graphics (1 course)

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- Computer Electronics (16 courses)
- Consumer Electronics (2 courses)
- Digital electronics (32 courses)
- Electronic / electrical engineering (787 courses)
- Electronic Art (4 courses)
- Electronic business (2 courses)
- Electronic communications (22 courses)
- Electronic communications engineering (16 courses)
- Electronic communications systems (12 courses)
- Electronic computer aided design (8 courses)
- Electronic computer systems (12 courses)
- Electronic control (36 courses)
- Electronic design (45 courses)
- Electronic engineering management (25 courses)
- Electronic engineering systems (42 courses)
- Electronic graphics (13 courses)
- Electronic imaging (9 courses)
- Electronic manufacturing (12 courses)
- Electronic media (10 courses)
- Electronic media design (2 courses)
- Electronic music (33 courses)
- Electronic power engineering (19 courses)
- Electronic power systems (11 courses)
- Electronic product design (7 courses)
- Electronic product engineering (9 courses)
- Electronic publishing (5 courses)
- Electronic systems (71 courses)
- Electronic systems design (19 courses)
- Electronic systems engineering (29 courses)
- Electronic visual communications (1 course)
- Embedded electronic systems engineering (12 courses)
- Environmental electronics (1 course)
- Industrial electronics (5 courses)
- Instrumentation electronics (1 course)
- Integrated electronic systems engineering (3 courses)
- Marine electronics (1 course)
- Mechanical electronic systems engineering (14 courses)
- Medical electronics (14 courses)
- Multimedia electronics (2 courses)
- Power electronic (5 courses)
- Power electronic systems (12 courses)
- Transport electronic engineering (6 courses)

Computer Science (326 courses)

- Business systems engineering (4 courses)
- Computing (3321 courses)
- Information (1070 courses)
- Information systems (561 courses)
- Information technology (58 courses)
- Information engineering (694 courses)

Computer Systems Engineering (177 courses)

Telecommunications (82 courses)

Information Communications Technology (ICT) (162 courses)

As can be seen from the list there is a great variety in the general naming of courses/programmes. A detailed look at the particular courses within each subheading reveals an even greater range of programme titles with programmes including combinations with other subjects. The naming of degree programmes is controlled by the academic institution only. Dual titles for some programmes occur, usually for marketing purposes.

A directory of Postgraduate level programmes is available on the Prospects website<sup>12</sup>. A search of Electrical/Electronic Engineering reveals 453 programmes offered within the United Kingdom, 365 in England, 56 in Scotland, 27 in Wales and 5 in Northern Ireland. Some of the 453 programmes are available in a number of optional levels. In total there are 302 at Master of Science level, 116 at Postgraduate Diploma, 113 at PhD, 97 at MPhil and 51 at Postgraduate Certificate level. The programmes offered are a mix of taught programmes and qualifications achieved by research.

### 25.1.2 Content, degrees and accreditation

The UK higher education system consists of two main cycles, undergraduate and graduate (or postgraduate), these correspond to the European First Cycle Degree (FCD) and Second Cycle Degree (SCD). FCDs are typically of 3-year or 4-year duration and classified as Bachelor of Science or Bachelor of Engineering usually, but not always, indicative of a scientific or engineering basis. SCDs are typically of 1-year or 3-year duration classified as Master of Science (MSc) or Master of Philosophy (MPhil) for the 1-year duration degrees and Doctor of Philosophy (PhD) for the 3-year degrees.

The 'value' of the FCDs is defined by the Quality Assurance Agency (QAA) in terms of credits. A FCD consists of 3 or 4 years of studies where each year must comprise 120 credits. A 3-year BSc or MEng therefore comprises 360 credits. This compares directly with the 180 ECTS for the same programme. The conversion is therefore 1 ECTS is equivalent to 2 UK credits. Masters level degrees are slightly different because the QAA defines that a Masters year should comprise **140 credits** (70 ECTS) to

reflect the increased period of time spent studying for the qualification. One UK credit is approximately equivalent to an expected student workload of 10 hours, so one ECTS is equivalent to 20 student hours. This time comprises lectures, laboratories, assessments, lecture preparation, assessment preparation, assignments, etc.

Within the general quality and accreditation frameworks, each University has full autonomy to decide on the contents of each degree. Comparison between institutions and, to some extent courses within each Institution, cannot therefore be generalised too far. General comparability between the level of achievement between institutions is helped through the use of external examiners. The external examiner system was introduced into the UK during the 19<sup>th</sup> century. The general purpose of the external examiner is to ensure that standards of assessment and outcomes are kept in balance and to ensure that the examination practices in all institutions are fair to the students.

Basic studies in engineering include mathematics, basic sciences and computer technology. After two years the studies become more subject-related. Students can choose specific study options within the degree programme. A Master's thesis is usually written during the final year of the studies.

Responsibility for the assurance of quality within higher education rests with the Quality Assurance Agency (QAA). In the UK quality assurance is very closely aligned with the applicable qualification framework. Point 4 of the revised framework for higher education qualifications (FHEQ) in England, Wales and Northern Ireland (published for consultation in April 2008)<sup>9</sup> states: *"The FHEQ is also used as a reference point in institutional audit and other forms of external review. Audit and review teams will examine the means which higher education providers employ for ensuring that their awards and qualifications are of an academic standard at least consistent with those referred to in the FHEQ, and that higher education providers are, where relevant, exercising their powers as degree awarding bodies in a proper manner. In particular, audit and review teams will wish to look at how higher education providers check the alignment between the academic standards of their awards and the levels referred to in the FHEQ. In this regard it should be regarded as a framework, not as a straightjacket."*

Assurance of quality was introduced into higher education in the UK in 1993 through the Higher Education Funding Council. Assessment of quality was judged on a three grade system, 'excellent', 'satisfactory' or 'unacceptable'. In 1995 a more indepth subject review process was introduced that graded 6 aspects of provision, each on a 1 to 4 scale. The resulting 'profile' was a single number from 1 to 24 with 24 representing excellence. The assessment was carried out by a panel of experts none of whom were from the institution being audited. Since this initial assessment, a more 'light touch' assessment system has been adopted in which the Institution is audited, as a whole, by an audit team and the Institution itself is responsible for establishing quality assurance procedures that it uses to assure the quality in each academic discipline.

An outcome of the QAA subject reviews was a move towards the establishment of assessment frameworks within HE institutions in the UK. These frameworks establish the principles and practices associated with assessment to help to ensure the fair and equitable treatment of all students.

### 25.1.3 Implementation of the Bologna-BMD system in the United Kingdom



The current structure of higher education in the UK in which the first cycle degree is either 3 years (BSc, BEng) or 4 years (MEng) followed by a one year Master and a three-year Postgraduate PhD second cycle degree has a limited fit to the Bologna-BMD model.

## 25.2. Degrees in EIE in United Kingdom

The general requirement for entry to a first cycle degree in a higher education institution is the acquisition of the required UCAS Tariff points at a secondary school or college. The value of this tariff will depend on the programme and the University or College selected. There are no general rules that would be useful and the reader is recommended to refer to the UCAS web site and from there the specific academic institution for details of entry requirements. The number of students entering an electrical/electronic engineering first cycle degree in the UK has fallen over the past years. Figure 25.3 shows the decline since 2002.

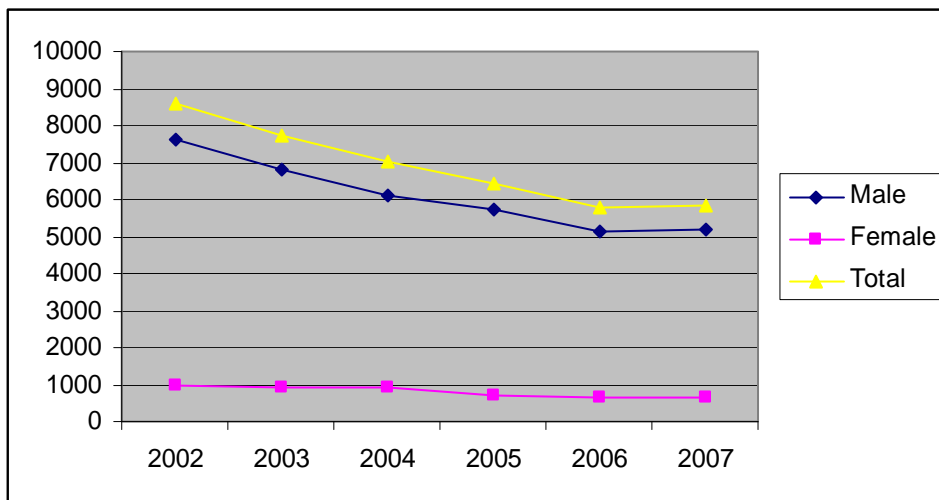


Figure 25.3 Number of students entering first cycle engineering degrees

Figure 24.4 shows the trend in the total number of students accepting a first cycle degree in the UK over the same time period. From these two figures the overall trend in applications for engineering is clear.

## EIE-Surveyor

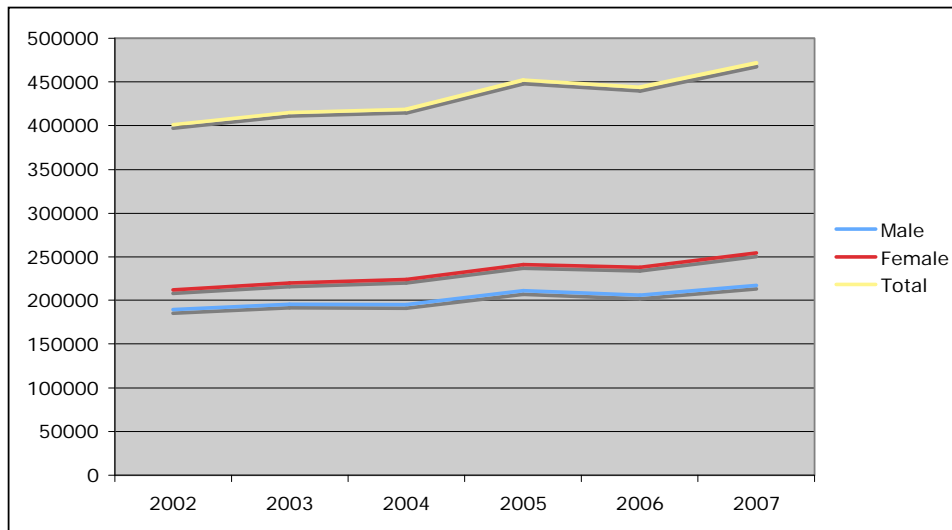


Figure 25.4 Total number of first cycle degree students (all subjects)

### 25.3. References

1. UK National Qualifications Framework, [http://www.qca.org.uk/qca\\_5967.aspx](http://www.qca.org.uk/qca_5967.aspx)
2. European Qualifications Framework, [http://ec.europa.eu/education/policies/educ/eqf/index\\_en.html](http://ec.europa.eu/education/policies/educ/eqf/index_en.html)
3. Dublin descriptors, [www.upc.edu/eees/contingut/arxiu/Descriptors\\_dublin%255B1%255D\\_2004.pdf](http://www.upc.edu/eees/contingut/arxiu/Descriptors_dublin%255B1%255D_2004.pdf)
4. Subject benchmark statements for Engineering, <http://www.qaa.ac.uk/academicinfrastructure/benchmark/honours/engineering.asp>
5. Universities and Colleges Admission System (UCAS), <http://www.ucas.ac.uk>
6. UK government Quality Assurance Agency: <http://www.qaa.ac.uk>.
7. The framework for HE qualifications in England, Wales and Northern Ireland, <http://www.qaa.ac.uk/academicinfrastructure/FHEQ/EWNI/default.asp>
8. The framework for HE qualifications in Scotland, <http://www.qaa.ac.uk/academicinfrastructure/FHEQ/SCQF/default.asp>
10. Draft revised version of the framework for HE qualifications in England, Wales and Northern Ireland, April 2008. [www.qaa.ac.uk/academicinfrastructure/FHEQ/EWNI08/FHEQ.pdf](http://www.qaa.ac.uk/academicinfrastructure/FHEQ/EWNI08/FHEQ.pdf)
11. Higher York 'Progression Map' for Electrical and Electronic Engineering, available from Higher York, <http://www.higheryork.org/>
12. Prospects, <http://www.prospects.ac.uk>



## **25.4. Doctoral Studies in the United Kingdom**

### **25.4.1. Supervision**

#### ***Scientific Board or Supervisor***

Supervisor - same personal supervisor for the student's thesis work on an active/new research area of the department.

Thesis Advisory Panel – Typically each MPhil and PhD student will have a Thesis Advisory Panel (TAP) consisting of their Supervisor and another member of academic staff. The purpose of this panel is to advise, guide and supervise the student throughout his/her period of research study until completion and submission of the thesis. In some circumstances additional persons may join the TAP, for example where the subject matter relates to other Departments.

#### ***Subject Assignment***

Subject assigned at the beginning of the doctoral studies, by agreement between student and supervisor.

#### ***Who can be a Supervisor***

Any professor/lecturer in the department approved to supervise at this level by the Institution.

#### ***Tasks of Scientific Board/Supervisor***

- |    |                                    |     |
|----|------------------------------------|-----|
| 1. | General management                 | YES |
| 2. | Deciding/advising layout of course | YES |
| 3. | Assigning a thesis subject         | YES |

#### ***Duration***

Three years (typically).

## **25.4.2. Development**

### ***Courseware?***

No.

### ***Course Work***

1. The students don't have to take course work during their doctoral degree preparation.
2. Extension: not relevant.
3. Credit system: not relevant.
4. Monitoring: not relevant.

### ***Contribution to Teaching***

1. Supervision of undergraduate laboratory work (typ. 4/6 hours per week).
2. Tutoring of undergraduate groups.

### ***Presentation of Work***

1. In the department.
2. At national conferences.
3. At international conferences.

### 25.4.3. Thesis Work

#### Submission of Doctoral Written Thesis

1. Language normally used: English. No alternative languages.
2. No credits allocated to the doctoral thesis.
3. The doctoral thesis is a previously unpublished substantial written report.

#### Oral Presentation of Thesis Work

1. Language normally used: English. No alternative languages.
2. Oral presentation to interested staff and/or a closed audience.
3. Oral examination with only student and examiners present.
4. Duration: typical duration of 3 hours with no upper time limit.

### 25.4.4. Examination

#### Thesis Examination Board

1. Composition: one internal examiner, one external examiner (2 members).
2. Selection by the supervisor but approved by the Scientific Committee.

#### Evaluation

1. Result based on the reading of the thesis and the oral examination of the candidate, with no grading system for the doctoral degree.
2. If the student fails, he/she may resubmit a revised thesis within a time limit of usually one year. He/she may also do further work as specified by the examination board or may be awarded a lower level qualification.

## 25. 5. Questionnaires

### *United Kingdom*

#### 3 – ACTIVITIES DURING DOCTORAL STUDIES

##### 3.1- SUPERVISION OF DOCTORAL STUDIES

<b>3.1.1</b>	Are the doctoral studies supervised by a Scientific Board/supervisor? If no, please proceed to 3.1.5.	NO
<b>3.1.2</b>	<b>How many members are in the Scientific Board?</b>	
<b>3.1.3</b>	How are the members of the Scientific Board chosen?	
<b>3.1.3.1</b>	Elected by the Faculty, Department?	YES/NO
<b>3.1.3.2</b>	Chosen by the student?	YES/NO
<b>3.1.3.3</b>	Chosen in another way? Please specify:	YES/NO
<b>3.1.4</b>	Which are the main tasks of the Scientific Board/ Supervisor?	
<b>3.1.4.1</b>	General management of the doctoral studies.	YES
<b>3.1.4.2</b>	Deciding the layout of the course, advising the students on their coursework.	YES
<b>3.1.4.4</b>	Assigning the thesis subject.	YES
<b>3.1.4.5</b>	Other. Please specify:  Advising the students on their coursework.	YES
<b>3.1.5</b>	Does the student need a personal supervisor during her/his studies?	YES
<b>3.1.5.1</b>	Does the same person supervise her/his thesis work?	YES
<b>3.1.6</b>	Must the subject of the doctoral thesis be an active research area in the department?	YES

3.1- SUPERVISION OF DOCTORAL STUDIES

3.1.7 The doctoral thesis subject is normally assigned:

3.1.7.1 At the beginning of the doctoral studies? YES

3.1.7.2 After a specified period of coursework? NO

3.1.7.3 Other. Please specify:

3.1.8 The thesis supervisor of a doctoral student can be:

3.1.8.1 Any professor or lecturer in the department? YES

3.1.8.2 Any researcher in the department? NO

3.1.8.2.1 In this case, is there a need for a second supervisor who is a professor or lecturer in the department? YES/NO

3.1.8.3 Any researcher in another institution? NO

3.1.8.3.1 In the latter case, is there a need for an internal supervisor? YES/NO

3.1.8.4 Other methods. Please specify:

3.1.9 The thesis subject is assigned by:

3.1.9.1 Agreement between the student and the proposed supervisor? YES

3.1.9.2 Other methods. Please specify: NO

3.2- COURSE WORK

3.2.1 Do the students have to take coursework during their doctoral degree preparation? If no, please proceed to 3.3. NO

3.2.2 **Extension and assessment.**

3.2.2.1 What is the number of contact hours spent in coursework in each year?

	Year 1	Year 2	Year 3	Year 4
	hrs	hrs	hrs	hrs

## 3.2- COURSE WORK

**3.2.2.2 In which form is this coursework offered?**

- As specialist graduate course units.
- As course units taken from the undergraduate programme.
- Other. Please specify.

**3.2.2.3** Is the coursework assessed by examinations?  
If not, please give details: YES/NO

**3.2.3 Credit system**

**3.2.3.1** Is the coursework in your institution described by a credit system? YES/NO

**3.2.3.2** Is it the ECTS system? YES/NO

If not, what is the relationship with ECTS?

**3.2.3.3** How many credits are allocated to coursework? **credits**

**3.2.4 Monitoring**

**3.2.4.1** Do you monitor the performance of the doctoral student taking coursework? YES/NO

**3.2.4.2 What regulations apply in case of failure in one or more course units?**

- Retake the exam.
- Take a different course unit.

## 3.3- PRESENTATION OF WORK RESULTS:

**3.3.1** In the department. YES

**3.3.2** At national conferences. YES

**3.3.3** At international conferences. YES

## 3.4- CONTRIBUTION TO TEACHING:

**3.4.1** Supervision of undergraduate laboratory. YES

**3.4.2** Teaching undergraduate courses. In some cases



**4 - AWARDING OF DOCTORAL DEGREE**

4.1- SUBMISSION OF DOCTORAL THESIS

- |                |   |         |
|----------------|---|---------|
| <b>4.1.1</b>   | Which language is normally used for the thesis?   | English |
| <b>4.1.2</b>   | Are alternative languages used for the thesis?<br>Please Specify:                                   | NO      |
| <b>4.1.3</b>   | Which language is normally used for the oral presentation and/or examination?                       | English |
| <b>4.1.4</b>   | Are alternative languages used in the oral presentation and examination?<br>Please Specify:         | NO      |
| <b>4.1.5</b>   | Are credits allocated to the doctoral thesis?   | NO      |
| <b>4.1.6</b>   | <b>The doctoral thesis is:</b>  |         |
| <b>4.1.6.1</b> | A previously unpublished substantial written report.  | YES     |
| <b>4.1.6.2</b> | A collection of individual or co-authored scientific papers with an introduction and/or commentary. |         |
| <b>4.1.6.3</b> | Other. Please specify:  |         |

4.2- THESIS EXAMINATION AND DEGREE AWARDING

- |                |  |     |
|----------------|--|-----|
| <b>4.2.1</b>   | Is there an oral presentation of the thesis work for an open audience as part of the evaluation procedure? | NO  |
| <b>4.2.2</b>   | Composition of the thesis examination board. Please, give the typical number of:                           |     |
| <b>4.2.2.1</b> | Internal examiners.  | ONE |
| <b>4.2.2.2</b> | External examiners.  | ONE |
| <b>4.2.2.3</b> | TOTAL.   | TWO |

## 4.2- THESIS EXAMINATION AND DEGREE AWARDING

<b>4.2.3</b>	How is the examination board chosen?	
<b>4.2.3.1</b>	By the supervisor.	YES <sup>1</sup>
<b>4.2.3.2</b>	By the scientific committee of the institution.	NO
<b>4.2.3.3</b>	By the rector or equivalent.	NO
<b>4.2.3.4</b>	By the national ministry.	NO
<b>4.2.3.5</b>	Other. Please specify:	
	<sup>1</sup> (4.2.3.1) YES, but approved by the Scientific Committee.	
<b>4.2.4</b>	Do the examiners base their evaluation mark on:	
<b>4.2.4.1</b>	Reading the thesis.	
<b>4.2.4.2</b>	The oral presentation of the thesis work.	
<b>4.2.4.3</b>	Both.	YES
<b>4.2.4.4</b>	What is the typical duration of the oral part of the thesis examination, if applicable?	3 hours
<b>4.2.4.5</b>	Is there an upper limit to the duration of the thesis examination?	NO
<b>4.2.5</b>	Is the oral part of the examination taken behind closed doors?	
<b>4.2.6</b>	What happens if the student fails?	
<b>4.2.6.1</b>	May not resubmit for doctorate.	YES
<b>4.2.6.2</b>	May resubmit revised thesis.	YES
<b>4.2.6.3</b>	May do further work as specified by examination board.	YES
<b>4.2.6.4</b>	If the thesis is to be re-submitted is there a time limit for this to occur? Please specify: Usually one year.	YES
<b>4.2.7</b>	Is there a grading system for the doctoral degree based on the quality of the work?	NO

## UK: United Kingdom

The following tables show a list of institutions offering EIE courses together with the courses they offer divided up as shown in the above hierarchical structure. The information in the following tables has been taken from the UCAS database and while every effort has been taken to be accurate apologies are offered for any accidental errors that have been introduced.

Reference should be made to the UCAS website or the website of the institution for further details of actual courses offered.

The web address for each institution can also be found on the UCAS web site.

<b>City</b>	<b>Institution name</b>	<b>http address</b>
Aberdeen	University of Aberdeen	<a href="http://www.abdn.ac.uk/">http://www.abdn.ac.uk/</a>
Aberdeen	Robert Gordon University	<a href="http://www.rgu.ac.uk/">http://www.rgu.ac.uk/</a>
Aberystwyth	University of Wales, Aberystwyth	<a href="http://www.aber.ac.uk/">http://www.aber.ac.uk/</a>
Aston	University of Aston	<a href="http://www.aston.ac.uk/">http://www.aston.ac.uk/</a>
Barnsley	Barnsley College	<a href="http://www.barnsley.ac.uk/">http://www.barnsley.ac.uk/</a>
Basingstoke	College of Technology	<a href="http://www.bcot.ac.uk/">http://www.bcot.ac.uk/</a>
Bangor	University of Wales, Bangor	<a href="http://www.bangor.ac.uk/">http://www.bangor.ac.uk/</a>
Bath	Bath Spa University College	<a href="http://www.bathspa.ac.uk/">http://www.bathspa.ac.uk</a>
Bath	University of Bath	<a href="http://www.bath.ac.uk/">http://www.bath.ac.uk/</a>
Bedford	Bedford College	<a href="http://www.bedford.ac.uk/">http://www.bedford.ac.uk/</a>
Belfast	Queen's University of Belfast	<a href="http://www.qub.ac.uk/">http://www.qub.ac.uk/</a>
	Bell College	<a href="http://www.bell.ac.uk/">http://www.bell.ac.uk/</a>
Birmingham	University of Central England	<a href="http://www.uce.ac.uk/">http://www.uce.ac.uk/</a>
Birmingham	University of Birmingham	<a href="http://www.bham.ac.uk/">http://www.bham.ac.uk/</a>
Birmingham	City University	
Blackburn	Blackburn College	<a href="http://www.blackburn.edu/">http://www.blackburn.edu/</a>
Bolton	Bolton Institute	<a href="http://www.bolton.ac.uk/">http://www.bolton.ac.uk/</a>
Bournemouth	Bournemouth University	<a href="http://www.bournemouth.ac.uk/">http://www.bournemouth.ac.uk/</a>
Bradford	University of Bradford	<a href="http://www.bradford.ac.uk/external/">http://www.bradford.ac.uk/external/</a>
Brighton	University of Brighton	<a href="http://www.brighton.ac.uk/">http://www.brighton.ac.uk/</a>
Bristol	University of West of England	<a href="http://www.uwe.ac.uk/">http://www.uwe.ac.uk/</a>
Bristol	University of Bristol	<a href="http://www.bris.ac.uk/">http://www.bris.ac.uk/</a>
Bristol	City of Bristol College	<a href="http://www.cityofbristol.ac.uk/">http://www.cityofbristol.ac.uk/</a>
Brunel	Brunel University	<a href="http://www.brunel.ac.uk/">http://www.brunel.ac.uk/</a>

<b>City</b>	<b>Institution name</b>	<b>http address</b>
Buckingham	University of Buckingham	<a href="http://www.buckingham.ac.uk/">http://www.buckingham.ac.uk/</a>
	Buckinghamshire Chilterns University College	<a href="http://www.bcuc.ac.uk/">http://www.bcuc.ac.uk/</a>
Cambridge	University of Cambridge	<a href="http://www.cam.ac.uk/">http://www.cam.ac.uk/</a>
Canterbury	University of Kent at Canterbury	<a href="http://www.kent.ac.uk/">http://www.kent.ac.uk/</a>
Canterbury	Christ Church University College	<a href="http://www.cant.ac.uk/">http://www.cant.ac.uk/</a>
Cardiff	Cardiff University	<a href="http://www.cf.ac.uk/">http://www.cf.ac.uk/</a>
Cardiff	University of Wales Institute	<a href="http://www.uwic.ac.uk/">http://www.uwic.ac.uk/</a>
Carmarthen	Carmarthenshire College	
Chesterfield	Chesterfield College	<a href="http://www.chesterfield.ac.uk/chesterfield-college/">http://www.chesterfield.ac.uk/chesterfield-college/</a>
Chichester	Chichester College	<a href="http://www.chichester.ac.uk/">http://www.chichester.ac.uk/</a>
Colchester	Colchester Institute	<a href="http://www.colch-inst.ac.uk/">http://www.colch-inst.ac.uk/</a>
Colchester , Essex	University of Essex	<a href="http://www.essex.ac.uk/">http://www.essex.ac.uk/</a>
Coventry	City College	<a href="http://www.tilehill.ac.uk/">http://www.tilehill.ac.uk/</a>
Coventry	Coventry University	<a href="http://www.coventry.ac.uk/">http://www.coventry.ac.uk/</a>
Cranfield	Cranfield University	<a href="http://www.cranfield.ac.uk/">http://www.cranfield.ac.uk/</a>
De Montfort	De Montfort University	<a href="http://www.dmu.ac.uk/">http://www.dmu.ac.uk/</a>
Derby	University of Derby	<a href="http://www.derby.ac.uk/">http://www.derby.ac.uk/</a>
Doncaster	Doncaster College	<a href="http://www.don.ac.uk/">http://www.don.ac.uk/</a>
Dudley	College of Technology	<a href="http://www.dudleycol.ac.uk/">http://www.dudleycol.ac.uk/</a>
Dundee	Dundee University	<a href="http://www.dundee.ac.uk/">http://www.dundee.ac.uk/</a>
Dundee	University of Abertay Dundee	<a href="http://www.abertay-undee.ac.uk/">http://www.abertay-undee.ac.uk/</a>
Durham	University of Durham	<a href="http://www.dur.ac.uk/">http://www.dur.ac.uk/</a>
Edinburgh	Heriot-Watt University	<a href="http://www.hw.ac.uk/">http://www.hw.ac.uk/</a>
Edinburgh	University of Edinburgh	<a href="http://www.ed.ac.uk/">http://www.ed.ac.uk/</a>
Exeter	University of Exeter	<a href="http://www.ex.ac.uk/">http://www.ex.ac.uk/</a>
Farnborough	Farnborough College of Technology	<a href="http://www.farn-ct.ac.uk/www/default.asp">http://www.farn-ct.ac.uk/www/default.asp</a>
Glamorgan	University of Glamorgan	<a href="http://www.glam.ac.uk/">http://www.glam.ac.uk/</a>
Glasgow	Caledonian University	<a href="http://www.gcal.ac.uk/">http://www.gcal.ac.uk/</a>
Glasgow	University of Glasgow	<a href="http://www.gla.ac.uk/">http://www.gla.ac.uk/</a>
Gloucester	Gloucestershire College of Arts & Technology	<a href="http://www.gloscat.ac.uk/">http://www.gloscat.ac.uk/</a>

<b>City</b>	<b>Institution name</b>	<b>http address</b>
Greenwich	University of Greenwich	<a href="http://www.gre.ac.uk/">http://www.gre.ac.uk/</a>
Hertfordshire	University of Hertfordshire	<a href="http://www.herts.ac.uk/">http://www.herts.ac.uk/</a>
	Hopwell Hall College	
Huddersfield	University of Huddersfield	<a href="http://www.hud.ac.uk/">http://www.hud.ac.uk/</a>
Hull	Hull College	<a href="http://www.hull-college.ac.uk">http://www.hull-college.ac.uk</a>
Hull	University of Hull	<a href="http://www.hull.ac.uk/">http://www.hull.ac.uk/</a>
Inverness	UHI Millenium Institute	<a href="http://www.uhi.ac.uk/">http://www.uhi.ac.uk/</a>
Keele	Keele University CWIS	<a href="http://www.keele.ac.uk/">http://www.keele.ac.uk/</a>
Lampeter	University of Wales, Lampeter	<a href="http://www.lamp.ac.uk/">http://www.lamp.ac.uk/</a>
Lancaster	Lancaster University	<a href="http://www.lancs.ac.uk/">http://www.lancs.ac.uk/</a>
Lancaster	University of Central Lancashire	<a href="http://www.uclan.ac.uk/">http://www.uclan.ac.uk/</a>
Leeds	Metropolitan University	<a href="http://www.mmu.ac.uk/">http://www.mmu.ac.uk/</a>
Leeds	University of Leeds	<a href="http://www.leeds.ac.uk/">http://www.leeds.ac.uk/</a>
Leicester	University of Leicester	<a href="http://www.le.ac.uk/">http://www.le.ac.uk/</a>
Lincoln	University of Lincoln	<a href="http://www.lincoln.ac.uk/">http://www.lincoln.ac.uk/</a>
Liverpool	John Moores	<a href="http://www.livjm.ac.uk/">http://www.livjm.ac.uk/</a>
Liverpool	University of Liverpool	<a href="http://www.liv.ac.uk/">http://www.liv.ac.uk/</a>
Liverpool	Liverpool Hope University College	<a href="http://www.hope.ac.uk/">http://www.hope.ac.uk/</a>
London	City University	<a href="http://www.city.ac.uk/">http://www.city.ac.uk/</a>
London	University of East London	<a href="http://www.uel.ac.uk/">http://www.uel.ac.uk/</a>
London	Goldsmiths College, University of London	<a href="http://www.gold.ac.uk/">http://www.gold.ac.uk/</a>
London	Guildhall University	<a href="http://www.lgu.ac.uk/">http://www.lgu.ac.uk/</a>
London	Imperial College, University of London	<a href="http://www.ic.ac.uk/">http://www.ic.ac.uk/</a>
London	Kings College, University of London	<a href="http://www.kcl.ac.uk/">http://www.kcl.ac.uk/</a>
London	Hammersmith & West London College	<a href="http://www.hwlc.ac.uk/">http://www.hwlc.ac.uk/</a>
London	Queen Mary and Westfield College, University of London	<a href="http://www.qmw.ac.uk/">http://www.qmw.ac.uk/</a>
London	Royal Holloway, University of London	<a href="http://www.rhbnc.ac.uk/">http://www.rhbnc.ac.uk/</a>
London	South Bank University	<a href="http://www.sbu.ac.uk/">http://www.sbu.ac.uk/</a>
London	University College, University of London	<a href="http://www.ucl.ac.uk/">http://www.ucl.ac.uk/</a>
London	University of North London	<a href="http://www.unl.ac.uk/">http://www.unl.ac.uk/</a>
London	University of Westminster	<a href="http://www.wmin.ac.uk/">http://www.wmin.ac.uk/</a>

<b>City</b>	<b>Institution name</b>	<b>http address</b>
London	Middlesex University	<a href="http://www.mdx.ac.uk/">http://www.mdx.ac.uk/</a>
London	Kingston University	<a href="http://www.kingston.ac.uk/">http://www.kingston.ac.uk/</a>
London	Thames Valley University	<a href="http://www.tvu.ac.uk/">http://www.tvu.ac.uk/</a>
Loughborough	Loughborough University of Technology	<a href="http://www.lboro.ac.uk/">http://www.lboro.ac.uk/</a>
Luton	University of Luton	<a href="http://www.luton.ac.uk/">http://www.luton.ac.uk/</a>
Manchester	Manchester Metropolitan University	<a href="http://www.mmu.ac.uk/">http://www.mmu.ac.uk/</a>
Manchester	University of Manchester	<a href="http://www.man.ac.uk">http://www.man.ac.uk</a>
Manchester	UMIST	<a href="http://www.umist.ac.uk">http://www.umist.ac.uk</a>
Napier	Napier University	<a href="http://www.napier.ac.uk/">http://www.napier.ac.uk/</a>
Newcastle Upon Tyne	Newcastle College	<a href="http://www.ncl-coll.ac.uk/">http://www.ncl-coll.ac.uk/</a>
Newcastle Upon Tyne	University of Newcastle upon Tyne	<a href="http://www.ncl.ac.uk/">http://www.ncl.ac.uk/</a>
Newcastle Upon Tyne	University of Northumbria	<a href="http://northumbria.ac.uk/">http://northumbria.ac.uk/</a>
Northampton	University College	<a href="http://www.northampton.ac.uk/">http://www.northampton.ac.uk/</a>
Norwich	Anglia Polytechnic University	<a href="http://www.anglia.ac.uk/">http://www.anglia.ac.uk/</a>
Norwich	University of East Anglia	<a href="http://www.uea.ac.uk/">http://www.uea.ac.uk/</a>
Nottingham	People's College Nottingham	<a href="http://www.peoples.ac.uk/">http://www.peoples.ac.uk/</a>
Nottingham	University of Nottingham	<a href="http://www.nottingham.ac.uk/">http://www.nottingham.ac.uk/</a>
Nottingham	Nottingham Trent University	<a href="http://www.ntu.ac.uk/">http://www.ntu.ac.uk/</a>
Oldbury	Sandwell College	<a href="http://www.sandwell.ac.uk/">http://www.sandwell.ac.uk/</a>
Oxford	Oxford Brookes University	<a href="http://www.brookes.ac.uk/">http://www.brookes.ac.uk/</a>
Oxford	Oxford University	<a href="http://www.ox.ac.uk/">http://www.ox.ac.uk/</a>
Paisley	University of Paisley	<a href="http://www.paisley.ac.uk/">http://www.paisley.ac.uk/</a>
Plymouth	College of Art & Design	<a href="http://www.pcad-web.org/">http://www.pcad-web.org/</a>
Plymouth	University of Plymouth	<a href="http://www.plym.ac.uk/">http://www.plym.ac.uk/</a>
Portsmouth	University of Portsmouth	<a href="http://www.port.ac.uk/">http://www.port.ac.uk/</a>
Reading	College & School of Art & Design	<a href="http://www.reading-college.ac.uk/">http://www.reading-college.ac.uk/</a>
Reading	University of Reading	<a href="http://www.rdg.ac.uk/">http://www.rdg.ac.uk/</a>
Ravensbourne	College of Design & Communication	<a href="http://www.rave.ac.uk/">http://www.rave.ac.uk/</a>
Roehampton	Roehampton University of Surrey	<a href="http://www.roehampton.ac.uk/">http://www.roehampton.ac.uk/</a>
Salford	University of Salford	<a href="http://www.salford.ac.uk/">http://www.salford.ac.uk/</a>

<b>City</b>	<b>Institution name</b>	<b>http address</b>
Sheffield	Sheffield Hallam University	<a href="http://www.shu.ac.uk/">http://www.shu.ac.uk/</a>
Sheffield	University of Sheffield	<a href="http://www.shef.ac.uk/">http://www.shef.ac.uk/</a>
Shrewsbury	Shrewsbury College of Arts and Technology	<a href="http://www.s-cat.ac.uk/Welcome.asp">http://www.s-cat.ac.uk/Welcome.asp</a>
Southampton	Southampton Institute	<a href="http://www.solent.ac.uk/">http://www.solent.ac.uk/</a>
Southampton	University of Southampton	<a href="http://www.soton.ac.uk/~indexes/">http://www.soton.ac.uk/~indexes/</a>
St. Andrews, Fife	University of St. Andrews	<a href="http://www.st-andrews.ac.uk/">http://www.st-andrews.ac.uk/</a>
St Austell, Cornwall	Cornwall College	<a href="http://www.cornwall.ac.uk/flashingintro.html">http://www.cornwall.ac.uk/flashingintro.html</a>
Stirling	University of Stirling	<a href="http://www.external.stir.ac.uk/">http://www.external.stir.ac.uk/</a>
Stoke on Trent	Staffordshire University	<a href="http://www.staffs.ac.uk/">http://www.staffs.ac.uk/</a>
Strathclyde	University of Strathclyde	<a href="http://www.strath.ac.uk/">http://www.strath.ac.uk/</a>
Sunderland	University of Sunderland	<a href="http://www.sunderland.ac.uk/">http://www.sunderland.ac.uk/</a>
Sunderland	City of Sunderland College	<a href="http://www.citysun.ac.uk">http://www.citysun.ac.uk</a>
Surrey	University of Surrey	<a href="http://www.surrey.ac.uk/">http://www.surrey.ac.uk/</a>
Sussex	University of Sussex	<a href="http://www.sussex.ac.uk/">http://www.sussex.ac.uk/</a>
Swansea	Institute of Higher Education	<a href="http://www.sihe.ac.uk/">http://www.sihe.ac.uk/</a>
Swansea	University of Wales, Swansea	<a href="http://www.swan.ac.uk/">http://www.swan.ac.uk/</a>
Teesside	University of Teesside	<a href="http://www.tees.ac.uk/">http://www.tees.ac.uk/</a>
Ulster	University of Ulster	<a href="http://www.ulst.ac.uk/">http://www.ulst.ac.uk/</a>
Uxbridge	Uxbridge College	<a href="http://www.uxbridge.ac.uk/">http://www.uxbridge.ac.uk/</a>
Walsall	College of Arts & Technology	<a href="http://www.walcat.ac.uk/">http://www.walcat.ac.uk/</a>
Warwick	Warwick University	<a href="http://www.warwick.ac.uk/">http://www.warwick.ac.uk/</a>
Westminster	University of Westminster	<a href="http://www.wmin.ac.uk/">http://www.wmin.ac.uk/</a>
Weymouth	Weymouth College	<a href="http://www.weymouth.ac.uk/">http://www.weymouth.ac.uk/</a>
Wigan	Wigan & Leigh College	<a href="http://www.wigan-leigh.ac.uk/">http://www.wigan-leigh.ac.uk/</a>
Wolverhampton	University of Wolverhampton	<a href="http://www.wlv.ac.uk/">http://www.wlv.ac.uk/</a>
Wrexham, Wales	North East Wales Institute of Higher Education	<a href="http://www.newi.ac.uk/">http://www.newi.ac.uk/</a>
York	University of York	<a href="http://www.york.ac.uk/">http://www.york.ac.uk/</a>