

Oil and Gas

UK Education & Training Capability

Withdrawn 20 May 2019

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An introduction to UKTI Education

The UK education system is among the best in the world, recognised internationally for its excellence in education and training.



Dominic Jermey
Chief Executive,
UK Trade & Investment



Martin Donnelly
Permanent Secretary,
Department for Business,
Innovation & Skills

With world-class organisations at the forefront of a wide range of education-related areas, the UK is also a global leader in helping other countries to develop excellence in their own education systems.

With this in mind, the Department for Business, Innovation & Skills and UK Trade & Investment established UKTI Education to work with overseas governments, states and businesses that want to engage UK partners in large-scale education projects. UKTI Education's purpose is to ensure potential overseas partners can easily access UK expertise for their education priorities.

UKTI Education is strategically placed within Government to bring together UK organisations to deliver effective, comprehensive solutions in areas including:

- Education and training provision
- Educational technology and resources
- Qualifications, assessment and quality assurance
- Teaching and leadership
- Supporting educational delivery
- Financing education projects

The UK's approach is to adapt its education offer to meet each partner's needs and cater for all requirements from vocational and technical training, continuing professional development and leadership training to higher education, English language training and schools.

This prospectus provides a brief introduction to the areas of educational and training expertise that the UK can offer to the oil and gas industry overseas with examples of projects undertaken by UK organisations.

We look forward to working with you.

Dominic Jermey
Chief Executive,
UK Trade & Investment

Martin Donnelly
Permanent Secretary,
Department for Business,
Innovation & Skills



Introduction: The UK's expertise in oil and gas education and training

Over several decades of successful exploration and production of North Sea oil and gas reserves, the UK has developed extensive expertise in all aspects of exploration and production.

The UK's oil and gas industry has traditionally worked very closely with the UK's education and training sector to ensure that education for professionals working in the industry provides all levels of training necessary, including:

- Technical and vocational skills
- Undergraduate and postgraduate studies and research
- Quality assurance and training standards
- Distance and blended learning solutions
- Developing teaching expertise
- Qualification
- English language training for the oil and gas industry
- Health and Safety

The main UK universities, colleges and private training providers have established training programmes for overseas clients including national and international operators, service companies and non-government institutions and organisations in the majority of the producing regions in Latin America, the Middle East, North Africa and Northern Europe.

In the following pages we set out a short summary of the UK's expertise and a number of case studies illustrating how UK providers have designed and delivered bespoke training programmes to meet overseas clients' requirements.

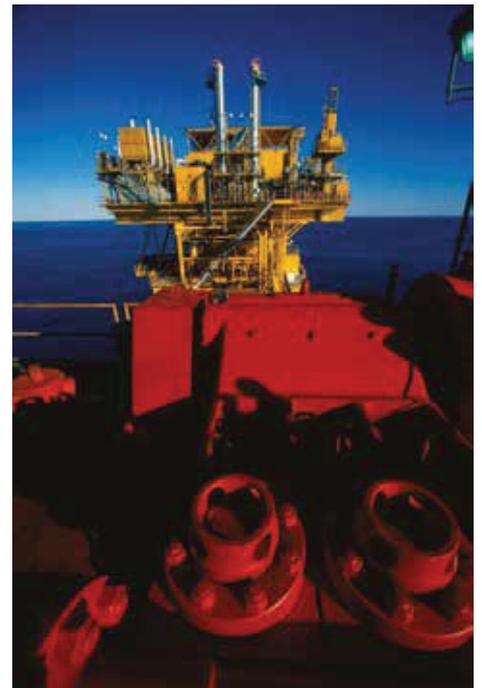


Image: punchstock

Technical and vocational skills

Vocational and technical training can prepare students for employment, improve teachers' skills and knowledge, or be delivered in the workplace to employees who need to improve their skills.

Vocational and technical training can be provided at various levels, from technicians up to highly specialised professional staff. There are different ways of providing training, whether in country or in the UK, a well-established course or a bespoke programme, where a specific course is designed solely for a company or group of students and their needs.

This type of training covers a number of subject areas, including maintenance and repair; project management; training in static and dynamic positioning; technician training (electrical, mechanical, welding); training in onshore, operations and maintenance; and professional development based on competency and education systems. The case studies below and on the following page give examples of this type of provision being delivered to meet the needs of the oil and gas industry.



Image: Pembrokeshire College

CASE STUDY

Employee training and apprenticeships

UK vocational training provider Pembrokeshire College sent two tutors to Peru for a two-year contract to deliver oil and gas skills training to employees who had been selected to operate a new Liquid Natural Gas (LNG) plant for the Peruvian national oil company, COLP. The programme was based on the college's UK oil and gas apprenticeship programme then running with the Pembroke Chevron oil refinery. The curriculum followed the Pembrokeshire College programme, using qualifications developed by UK awarding bodies City & Guilds and Edexcel. The college worked with TECSUP, a Peruvian college in Lima, to deliver the training. TECSUP was initially audited for its resources and staff skills. TECSUP staff were then trained by the Pembrokeshire College staff to deliver the bulk of the programme. This required delivery of teacher training skills as well as focus on the content and teaching methodology of the engineering modules. Pembrokeshire College staff undertook some delivery and also monitored quality, assessment and outcomes, liaising with the awarding bodies and COLP.

CASE STUDY

Apprenticeship for offshore oil and gas production

At BP Anglo request, Hull College has run an Advanced Modern Apprenticeship programme for trainees who will be working offshore in oil and gas production - giving the trainees practical experience and knowledge for working within the industry. The Advanced Modern Apprenticeship encompasses elements of technical competency (for instance, preparing and using lathes for turning operations, maintaining mechanical devices and equipment); functional skills (English, Mathematics and Information, Communications and Technology); technical certification (for example, electro, pneumatic and hydraulic systems and devices, industrial plant and process control, and industrial process measurement) and employers' rights and responsibilities. In recognition of the quality of work and engineering education provided, the Hull College training has been awarded the BP Helios Award for outstanding performance.

CASE STUDY

Specialist training in the UK

ASET International Oil & Gas Training Academy, a wholly owned subsidiary company of Aberdeen College, is a specialist training provider within the oil, gas, marine, electrical, transportation and health & safety industries. In 2013, ASET finalised a contract with Learning Resources Nigeria to train 23 Nigerian nationals for a career in the oil industry. ASET carried out a process to select a group of Nigerian nationals to undertake specialist training to enable them to find employment in the industry. The 25-week Oil and Gas Technician Programme in mechanical and electrical disciplines is delivered in Aberdeen.

CASE STUDY

Training the local workforce

Since 2009, the UK training provider Petrofac's Sakhalin Technical Training Centre (STTC) has helped Exxon Neftegas Limited (ENL) develop a competent local workforce in Russia. The centre has trained more than 300 technicians in their respective disciplines. This comprehensive, end-to-end solution for ENL covers recruitment screening; competency profiling; English language instruction; technical, mandatory Russian Federation training; and health and safety and environment training. STTC holds the requisite Russian Federation education licence and is internationally certified by City & Guilds, OPITO and a number of industry manufacturers. All the courses and programmes conform to the rigorous requirements of the Russian Federation of Mandatory and Vocational Training.

Undergraduate and postgraduate studies and research

The UK offers high-level specialised training and research programmes from short courses to undergraduate and postgraduate degrees at centres of excellence which offer sophisticated equipment and research tools.

These programmes cover a number of subject areas, including petroleum engineering; offshore prospecting and production engineering; reservoir management; drilling engineering; ocean technology; environment engineering and environment management; international law and petroleum law; international business, finance and economics; project, maintenance and asset management; and supply chain management. The case studies below and on the following page give examples of the type of provision being delivered to meet the needs of the oil and gas industry.



CASE STUDY

From short courses to Master's degrees

Robert Gordon University (RGU) in Aberdeen works closely with leading oil and gas companies, including Shell and BP, to deliver customised programmes for international clients, from two-week deepwater engineering to full Master's degrees. These can be delivered anywhere in the world through blended learning, where online programmes are supported by local workshop delivery.

In addition, RGU offers a portfolio of first and higher degrees covering most aspects of petroleum production. This includes an MSc Drilling and Well Engineering, MSc Petroleum Production Engineering and MSc Oil and Gas Engineering, which can be studied either full time or via distance learning. The University's oil and gas expertise also extends to a wide range of associated courses from IT to management and accounting.



CASE STUDY

Postgraduate and professional development

Brazil has been the world leader in the development of deep and ultra-deep water offshore assets for the last two decades. In developing offshore fields in what are often described as frontier locations, the Brazilian industry has faced many challenges with complex geology, in particular for the so-called "pre-salt" fields. The University of Aberdeen has built strong relationships with Brazil's oil industry since 2004, supporting it in both solving technical challenges and developing a highly educated domestic workforce to carry lessons forward into the future. In particular, the university has partnered with the national oil company Petrobras and multinational operator BG Group (through its Brazilian operations) to improve understanding of the offshore geology in the Campos Basin and elsewhere. This has included several major collaborative research projects, collaborations with a number of Brazilian universities (most notably the Universidad do Rio Grande do Sul), and provision of education and training for students at both Master's and PhD level for periods of between 12 weeks to three and a half years.

Qualifications

Students and employers may wish to pursue UK qualifications or UK-style training in their home countries.

Various types of UK organisations can help to do this, including UK awarding bodies, colleges and training providers. This approach can prove to be a cost-effective way of enabling students to gain the skills and qualifications they need to further their careers or progress onto the next stage of their education. It is also possible to develop courses and qualifications tailored to specific needs that, for example, meet the strict requirements of the UK qualifications framework and which can then be accredited by a UK awarding body.



Image: TQ

CASE STUDY

UK qualifications in oil and gas

UK awarding body City & Guilds has partnered with TQ Education and Training, the UK operator of the Saudi Petroleum Services Polytechnic in Dammam, Saudi Arabia in the provision of a number of National Vocational Qualification (NVQ) level 2 technical programmes and International Vocational Qualification (IVQ) level 3 qualifications in oil and gas engineering. City & Guilds became involved in January 2011 to support student achievement of suitable industry standard qualifications, in particular at level 3. City & Guilds assisted TQ to develop a plan to use the IVQ, including additional examination dates, to address those students who had not had access to the work environments normally necessary for NVQ level 3. TQ is delivering the training, which runs over two years. The first year covers English language and key skills. The second year is the technical programme of an NVQ in performing engineering operations followed by a specialisation in mechanical maintenance, electrical maintenance or drilling operations. TQ developed and now delivers the curriculum for all of this training, with both the NVQ and IVQ accreditation provided by City & Guilds.

Quality assurance and training standards

UK academic, technical and vocational education providers and suppliers have a well-deserved reputation for excellence worldwide and countries that wish to improve the quality and relevance of their oil and gas training and education may find the UK expertise and experience useful.

CASE STUDY

Quality and training linked to industry

OPITO is a UK not-for-profit industry-owned organisation. It exists to deliver innovative solutions that assist the energy industry, developing a safe workforce of the appropriate size and ability to meet business demands and sustain the offshore industry in the long term. The OPITO Approvals process is widely recognised and respected by government bodies, companies and trade associations throughout the UK and internationally. The process gives customers and stakeholders confidence that standards of training in emergency response and safety-related roles, as defined by the industry, are delivered as specified by them and in a safe environment.

OPITO's main areas of business include emergency response standards and approval of training delivery; workforce competence; and petroleum open learning.

Distance and blended learning solutions

Distance and blended learning can enable students to access high-quality education in a way that is responsive to learners' needs.

The UK's distance learning providers have been at the forefront of incorporating the latest technological advances into education and training. This is particularly relevant for the oil and gas industry as training can be delivered to the workforce no matter whether they are based on or offshore. The qualifications achieved through distance learning meet national standards and are equivalent in value to those gained through face-to-face delivery.



Image: Atlas Knowledge

CASE STUDY

Blended training for technicians

When a major oil company recently sought to bring its trainee technicians from the Gulf to the UK for on-site training using local plant facilities, Teesside University was able to offer the trainees high quality, concurrent, certified vocational training to Higher National Certificate (HNC) level. While the trainees are gaining on-site experience they will be able to commence study of appropriate distance learning engineering programmes, with the benefit of immediate support from tutors based in Middlesbrough. When their training in the UK is complete they will be able to continue and complete their studies in their home country using the same distance learning materials, accessing the same learning support by phone or email.

The distance learning programmes at Teesside University were developed some 25 years ago for the North Sea oil industry. They have had some 30,000 student engagements and cover the internationally recognised Edexcel Business and Technology Education Council (BTEC), HNC and Higher National Diploma (HND) courses in chemical engineering, electrical & electronic engineering, instrumentation & control engineering, mechanical engineering, process engineering and petroleum engineering.

CASE STUDY

Using learning technologies to ensure rapid induction training

A multinational oil and gas company that had invested in operating platforms and LNG plants in Australia required a more effective induction and on-boarding training solution. Responding to this need, UK provider Atlas Knowledge offered the latest learning technology including effective induction training using innovative 3D training and mobile devices, backed by adaptive learning assessments. A 90% pass mark was required to complete the induction. More than 110 hours of e-learning were produced for the project, over an 18-month period, which was one of the largest learning projects developed by the client for its Australian business. The courses are now being deployed and are having an immediate impact on reducing training time and speed to competency for key engineering and technical workers within the client's operations. Using innovative 3D modelling also improved the learning experience and engagement of learners and will ensure a greater uptake of the courses.



Developing teaching expertise

Skilled and confident teachers are essential for successful and high-quality education and training.

UK universities and teacher training institutions have an excellent record of developing effective teaching skills in new teachers and enabling experienced teachers to use fresh approaches.

CASE STUDY

Building capacity

Newcastle University developed an intensive capacity building programme for higher education professionals in response to a request from the Petroleum Technology Development Fund of Nigeria for training to be provided for Nigerian university lecturers. The programme, delivered over ten weeks in Newcastle, involved expert tuition in academic practice and teaching approaches in relation to petroleum technology. Newcastle University also provides bespoke programmes for continuing professional development and academic leadership.

CASE STUDY

Intensive language training for teachers

UK provider ILS English has developed a working relationship with the management of the Petroleum Training Qualifying Institute (PTQI), which is one of two specialist training centres for the Libyan National Oil Company. ILS has provided intensive language training for engineering teachers from PTQI covering general and academic English, enabling personnel to prepare for their Master's programmes at UK universities and the Certificate in Teaching English to Speakers of Other Languages (CELTA) teacher training. ILS also had an agreement with PTQI to assist with capacity building of PTQI's English programmes in Libya.

English language training

With years of accumulated experience and in-depth understanding of the sector, the UK is a world leader in providing specialised English language courses for the oil and gas industry.

The trans-global nature of the extractive industry has placed increased significance on communication skills, with procedural compliance and health and safety being major concerns in addition to the day-to-day need for effective collaborative working. With English as the main operating language across much of the industry, the demand for proficient speakers is high but supply is often too low. English language training, both face-to-face and increasingly online, bridges the linguistic and cultural gaps that could otherwise have negative effects on productivity.



CASE STUDY

Industry support for English in the national curriculum

In Algeria, a five-year partnership between the British Council, oil company Andarko Petroleum and the Algerian Ministry of Education has produced a step change in the way English is taught in Algerian state middle schools. At ministry level, the British Council is collaborating with policy makers to overhaul the English language curriculum to make it more skills based and change assessment practices to reflect the need for confident communicators of English in the workforce. This successful initiative is to be extended to secondary schools with the support of another extractive company, HESS, and replicated across the Maghreb.

CASE STUDY

Relevant training to increase confidence, accuracy and fluency

LSI Language School Portsmouth is an official provider of Executive Training Services to LUKOIL Overseas Service in Russia. LSI Portsmouth addresses the needs of the Russian market and the oil and gas industry through the delivery of specifically-tailored training solutions based on their communication requirements. To meet the training and linguistic needs of LUKOIL Overseas Service, LSI Portsmouth sets objectives for participants of its 'English for Professional Communications' programmes to increase confidence, accuracy and fluency in a variety of business contexts; to extend the range of communicative competence and confidence; to enhance intercultural awareness through interaction; and to practise and develop the relevant functional language in realistic and challenging situations (e.g. meetings, negotiations, presentations). The flexible format of the training includes both individual coaching and group sessions. Impact is measured through student progress reports and client return rate and these show that the LSI Portsmouth training consistently achieves the professional development targets set by the HR departments of oil and gas clients.



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CASE STUDY

Business English and maritime studies

UK provider Bournemouth Business School International (BBSI) provided a twelve week programme in Business English & Maritime Studies for an oil and gas client from Qatar. The aim of the programme was to expand professional knowledge and understanding of maritime terms, to enable familiarity with the technology and terminology associated with the subject and to develop managerial and commercial knowledge of shipping. The training took place at BBSI in Bournemouth, UK and included several relevant professional excursions in the UK such as to a dockyard, to a commercial port and to a coastguard rescue centre.

CASE STUDY

Business English training for oil and gas professionals

Members of Business English UK, the UK's national association for business and professional English training, offer assured quality training which equips professionals with essential communication skills required by jobs in both upstream and downstream environments. Training for those who work in the upstream environment, for example, can include understanding and giving instructions, using precise technical terminology, explaining a problem or situation, following health and safety procedures, and working within a multi-cultural team. For those who work in downstream sectors, the training can range from understanding and interpreting oil and gas market news, writing tenders or price reports, giving production briefings, negotiating contracts, presenting planning solutions and general cross-cultural understanding.

Health and safety

Promoting competence in health and safety in the oil and gas industry is a priority the world over.

As one of the best regulated working environments in the world, the UK has developed and offers a highly sophisticated range of training programmes and competence assessment methods in areas including health, safety, environmental management, survival and management of emergencies.



Image: Lowestoft College

CASE STUDY

Oil and gas operational safety

NEBOSH (The National Examination Board in Occupational Safety and Health) is recognised as a world-leading provider of health, safety and environmental qualifications, which are offered at award, certificate and diploma levels. In partnership with the University of Hull, NEBOSH also offers Master's Degrees in Occupational Health, Safety and Environmental subjects.

In response to international demand, the NEBOSH International General Certificate in Occupational Health and Safety can now be studied and examined in a number of languages including Arabic for delivery in Saudi Arabia and other Middle East countries. It is widely accepted within the oil and gas sector and features in the competency matrix of a number of major companies in the sector. The specialist NEBOSH International Technical Certificate in Oil and Gas Operational Safety focuses on international standards and management systems, enabling students to work safely both onshore and offshore. It also highlights the importance of process safety management within the industry.

Financing education projects

The design, construction and equipping of new buildings and infrastructure for education and training can involve major capital expenditure and can lead to short term pressure on budgets.

Overseas governments and other sponsors of such projects may therefore be interested in ways of spreading the cost with the help of attractive credit terms supported by UK Export Finance (UKEF) - the UK government's official export credit agency. This is possible if the goods and services required for the project are supplied by UK companies (for example, designers, architects and construction companies).

UKEF regularly supports finance for similar export projects in sectors such as healthcare, office buildings and hotels, and is ready to support UK companies involved in the education sector.

The UK also has considerable expertise in other ways of mobilising project finance for public sector programmes, including by public-private partnership.

Further information on UKEF's range of products and services can be found at www.gov.uk/government/organisations/uk-export-finance



CASE STUDY

Support for UK exports to Brazil

In 2011, a US\$1 billion line of credit to Petroleo Brasileiro Sociedade Anonima (Petrobras) was announced by UKEF. This financing support was designed to enable the Brazilian organisation to access the considerable UK expertise in oil and gas built up over decades of oil exploration in the North Sea. Petrobras will select UK companies to work with to access the best UK technology and know-how. This financing arrangement will further develop important links between Brazil and the UK and enable UK drilling and exploration companies to forge strong trading links.

CASE STUDY

Financial support for vocational training overseas

In 2013, UKEF helped secure a deal between a UK consortium of further education colleges North East Surrey College of Technology (NESCOT), Highbury College Portsmouth and Burton and South Derbyshire College, and the Technical and Vocational Training Corporation (TVTC) of Saudi Arabia. The consortium secured a contract to run a women-only vocational training institute in Jeddah. The college offers courses in IT, business administration, beauty, fashion and jewellery design alongside a programme focusing on improving English language skills. The deal was put together by a core team from UKEF working in partnership with UKTI Education. NESCOT needed to obtain a bond from its bank as security for TVTC in order to win the contract. UKEF's ability to provide a guarantee to NESCOT's bank under UKEF's Bond Support Scheme gave the bank the confidence to issue contract bonds on NESCOT's behalf. This is just one of a number of UKEF products designed to support UK exporters.

Further information

Individual prospectuses providing an overview of the UK's education and training capability and detailed information on UK expertise across a range of sub-sectors can be found on the UKTI Education website at

www.gov.uk/ukti-education

For general information or to discuss your requirements, please contact UKTI Education at

utki-education@ukti.gsi.gov.uk

Alternatively, please contact your local UKTI team.



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for further information:
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UKTI Education

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Any enquiries regarding this publication should be sent to us at:

enquiries@ukti.gsi.gov.uk or call +44 (0)20 7215 5000.

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