The Engineering Council

This engineering lens has been developed by Vitae and the Engineering Council.

The Engineering Council is the UK regulatory body for the engineering profession, responsible for setting and maintaining internationally recognised standards of professional competence and ethics, and holding the Registers of professionally qualified engineers and technicians.

Licences are granted by the Engineering Council to discipline-specific professional engineering institutions, allowing them to assess candidates for inclusion on its register of professional engineers and technicians, and to accredit academic programmes and professional development schemes. To gain CEng status, you must be a member of a licensed professional engineering institution, who will act as the awarding body for your registration.

For further information about the Engineering Council see www.engc.org.uk

Information about CEng registration is available see www.engc.org.uk/ceng

UK-SPEC for Chartered Engineer

Chartered Engineers are characterised by their ability to develop appropriate solutions to engineering problems, using new or existing technologies, through innovation, creativity and change. This might involve developing and applying new technologies, promoting advanced design and design methods, introducing new and more efficient production techniques, marketing and construction concepts, or pioneering new engineering services and management methods.

There are five headline competence and commitment standards for Chartered Engineers:

- Use a combination of general and specialist engineering knowledge and understanding to optimise the application of existing and emerging technology
- Apply appropriate theoretical and practical methods to the analysis and solution of engineering problems
- Provide technical and commercial leadership
- Demonstrate effective interpersonal skills
- Demonstrate a personal commitment to professional standards, recognising obligations to society, the profession and the environment

Each is further explained with exemplar activities at:

www.engc.org.uk/ukspec

"The RDF 'engineering lens' will be a very useful tool. It will certainly be of interest to both researchers and potential employers in understanding the set of skills and competencies of professional engineers."

> Daniela Bultoc Skills Development Programme Manager, Graduate School, University College London

To protect and maintain the integrity of the Vitae Researcher Development Framework and the Researcher Development Statement (RDS)² and to ensure a consistent approach to the development of lenses on the RDF, anyone wishing to create a lens on the RDF should seek permission from Vitae, and must adhere to the RDF Conditions of Use³. Enquiries regarding the development of a lens on the RDF can be directed to: rdf@vitae.ac.uk

For further information about the range of Vitae activities go to www.vitae.ac.uk or contact website@vitae.ac.uk

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Employment

Engineering Council

Engineering lens on the Vitae Researcher Development Framework and the Engineering Council's UK Standard for Professional Engineering Competence

Overview

The Vitae Researcher Development Framework (RDF) underpins a major new approach to developing world-class researchers. The framework has been developed by and for researchers working in higher education as an aid to planning, promoting and enhancing professional and career development. It articulates the knowledge, behaviours and attributes of successful researchers and encourages all researchers to realise their potential.

This is one of a series of lenses on the Vitae Researcher Development Framework.

For further information about the Vitae Researcher Development Framework visit www.vitae.ac.uk/rdf

For further information about the UK Standard for Professional Engineering Competence (UK-SPEC) published by the Engineering Council visit www.engc.org.uk/ukspec

Supporting materials relating to this lens are available at www.vitae.ac.uk/rdflenses

What is this lens?

This lens is for researchers in engineering and technology who aspire to achieve Chartered Engineer (CEng) status. It provides a bridge between the Vitae Researcher Development Framework and the competence and commitment standard for CEng status that is set out in UK-SPEC¹, published by the Engineering Council.

The CEng title is awarded to those who can demonstrate the requirements published in UK-SPEC, and the assessment process includes a review of submitted documentary evidence. Evidence can be derived from a range of sources, for example research, managing research contracts, industry-related activity, taught modules and public engagement. This lens demonstrates the strong link between the UK-SPEC requirements for CEng and the development of an engineering researcher's knowledge, understanding, skills, competence and attributes. It is intended to help researchers to make these links and assist them in identifying elements of their research activity that could demonstrate CEng competence. It can also be used as a professional development tool/planner to identify further areas of development. Gathering evidence around Phases 2 and 3 in the RDF will help in demonstrating CEng competence.

Why become registered as a Chartered Engineer?

Having CEng after your name carries considerable prestige. It demonstrates that you have achieved the high standards of competence and commitment that are required for this internationally recognised professional title. It sets you out as a key player in the world of engineering and technology, makes your skills more marketable in an international environment and commands respect from industry.

How to become registered?

www.engc.org.uk

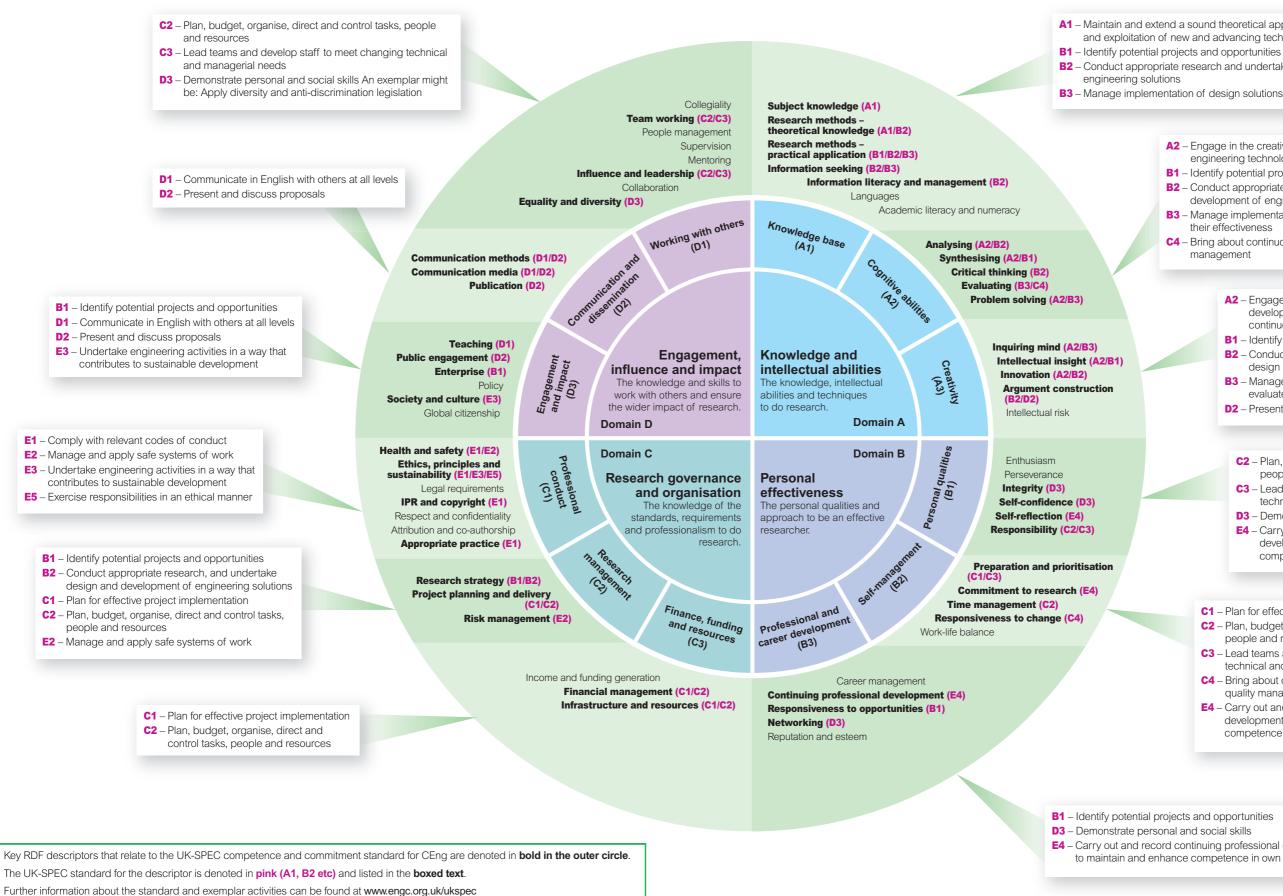
Institutions are usually able to put you in touch with a mentor who will support you through the registration process. You need to plan and document the development of your skills and competence for CEng. The lens over the page will help you to make the link between what you do as a researcher and the UK-SPEC standard for CEng registration.



If you don't already belong to a professional engineering institution, then joining one is the first step on the way to achieving CEng status. A list of engineering institutions that are licensed to assess candidates for registration is available at

Engineering lens on the Vitae Researcher Development Framework





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Researcher **Development** Framework

A1 - Maintain and extend a sound theoretical approach in enabling the introduction and exploitation of new and advancing technology

B2 - Conduct appropriate research and undertake design and development of

B3 – Manage implementation of design solutions, and evaluate their effectiveness

- A2 Engage in the creative and innovative development of engineering technology and continuous improvement systems B1 - Identify potential projects and opportunities
- B2 Conduct appropriate research, and undertake design and development of engineering solutions
- **B3** Manage implementation of design solutions, and evaluate their effectiveness
- C4 Bring about continuous improvement through quality management

	 A2 – Engage in the creative and innovative development of engineering technology and continuous improvement systems B1 – Identify potential projects and opportunities B2 – Conduct appropriate research and undertake design and development of engineering solutions B3 – Manage implementation of design solutions, and evaluate their effectiveness D2 – Present and discuss proposals
	 C2 - Plan, budget, organise, direct and control tasks, people and resources C3 - Lead teams and develop staff to meet changing technical and managerial needs D3 - Demonstrate personal and social skills E4 - Carry out and record continuing professional development necessary to maintain and enhance competence in own area of practice
C2 - C3 - C4 -	 Plan for effective project implementation Plan, budget, organise, direct and control tasks, people and resources Lead teams and develop staff to meet changing technical and managerial needs Bring about continuous improvement through quality management Carry out and record continuing professional development necessary to maintain and enhance competence in own area of practice

E4 – Carry out and record continuing professional development necessary to maintain and enhance competence in own area of practice