



UK-SPEC

United Kingdom Standards
for Professional Engineering Competence

UK-SPEC



- *“Registration as a professional engineer or technician is open to all who can demonstrate competence and commitment” (SARTOR 3)*
- UK-SPEC strengthens that competence-based approach
- *“Registration... is open to everyone who can demonstrate competence to perform professional work to necessary standards, and commitment to maintain that competence and work within professional codes...”*

UK-SPEC



- Maintains three Registration Categories – CEng, IEng, Eng Tech
- Three elements leading to registration
 - Education (underpinning knowledge and understanding)
 - Professional Development (IPD)
 - Professional Review



CEng and IEng Competence (A)

- Use....engineering knowledge and understanding to optimise the application of existing and emerging technology (CEng)
- Use...engineering knowledge and understanding to apply existing and emerging technology (IEng)



CEng and IEng Competence (B)

- Apply appropriate theoretical and practical methods to the analysis and solution of engineering problems (CEng)
- Apply appropriate theoretical and practical methods to design, develop, manufacture..... Engineering products, processes, systems and services (IEng)



CEng and IEng Competence (C)

- Provide technical and commercial leadership (CEng)
- Provide technical and commercial management (IEng)

CEng and IEng Competence (D)



- Demonstrate effective interpersonal skills (CEng and IEng)



CEng and IEng Commitment (E)

- Demonstrate a personal commitment to professional standards, recognising obligations to society, the profession, and the environment (CEng and IEng)
- (And in particular....)

Undertake engineering activities in a way which contributes to sustainable development (E3)

- Operate and act responsibly, taking account of need to progress environmental, social and economic outcomes simultaneously
- Use imagination, creativity and innovation to provide products and services which maintain and enhance the quality of environment and community, and meet financial objectives
- Understand and encourage stakeholder involvement

Some related competences

- Engage in creative and innovative development of engineering technology and continuous improvement systems (CEng A2)
- Use sound evidence-based approach to problem-solving and continuous improvement (IEng A2)
- Identify potential projects and opportunities (CEng B1)
- Identify, review and select techniques, procedures and methods to undertake engineering tasks (IEng B1)

Some related competences (Continued)

- Conduct appropriate research and undertake design and development of engineering solutions (CEng B2)
- Contribute to the design and development of engineering solutions (IEng B2)
- Implement design solutions and evaluate their effectiveness/contribute to their evaluation (CEng/IEng B3)
- Bring about continuous improvement through quality management (CEng C4)
- Manage continuous quality improvement (IEng C4)

What next?

- UK-SPEC offers framework for profession to make promotion of sustainability mainstream activity
- Needs to be reflected in learning outcomes from education (and will be)
- Professional institutions need to reflect it in their requirements
- Engineers can become leaders in this area.