

The Future Direction of Engineering Degrees: A view from the Engineering Council

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What is sought?

- Practical application, theoretical understanding, creativity & innovation
- Courses developing in line with changing needs of industry
- Effective interaction with industry
- Recognition of importance of teaching
- Regulation which encourages innovation
- High calibre graduates entering industry

There is no single definition or prescription for these

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Is that all?

- Recognition of societal issues
- Intellectual curiosity
- Ability to think and learn
- Ability to communicate
- 'Graduateness'

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Drivers for change

- Government policy - skills and innovation agenda; widening participation
- Financial (!!!) and demographic
- Societal issues (eg sustainability)
- Balance between teaching and research
- Worries about numbers, diversity etc
- International developments
- Self-examination – engineering's speciality

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Current HE policy framework

- Widening participation
- Variable fees (EWNI)
- Employer engagement
- Workplace learning
- Lifelong learning
- Higher Education (or) Higher Skills?

Would a change of government(s) affect this?

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International context

- UK engineering mobile across the whole world
- UK HE has large international market (non-European)
- Bologna (still not well understood?)
- Lisbon agenda (rarely mentioned)
- Other countries are changing too

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Education and Industry

- Need to differentiate possible interactions
- Workforce development – demographics
- What will industry pay for?
- Will employers design degree courses?
- Placements – assessed learning outcomes, credit-rated?
- Need strategic partnership, not just opportunistic response

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Professional Context

- Still living with consequences of 1997 changes
- Need to provide clear pathways to registration
- These must reflect needs of individuals and employers
- Profession must be seen to be inclusive
- Must sustain international recognition and mobility
- Gateways and MSc Professional Engineering

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Accreditation and Innovation

- UK-SPEC allows flexibility and innovation
- Universities should exploit this
- Accreditation process must be able to respond
- Part-time & distance learning
- Work-based learning & assessment
- Employer-designed provision – how do we accommodate?
- Can accreditation system cope?

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Some closing thoughts

- Engineering is a global profession & HE must reflect this
- Means engagement with partners in Europe & beyond
- Diversity is better than uniformity
- Innovation is a requirement for all but it must be focused
- Partnership with industry essential (for both)
- Regulatory systems (accreditation) must support this
- Focus on outcomes, not process

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Thank you!

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