



An Ingenious case study

Ethics training for professional engineers



The aim

The University of Leeds developed a one-day training course to help professional engineers to identify, analyse and respond effectively to ethical issues as they arise in their day-to-day working practices.

“Engineering is about more than just maths and science; engineers have to make complicated decisions involving people, money, values, resources and their impact. Ethics teaching is as relevant to engineers as it is to lawyers and medics, yet most modern day degree courses still have little or no ethics related content in their curriculum. This course aimed to respond to the needs of professional engineers by addressing this short fall.”

Alex Buckley, Ethics Resource and Training Co-ordinator, IDEA Centre

About the project

Recognised for its unique approach to the teaching of medical ethics, the Inter-Disciplinary Applied Ethics (IDEA) Centre is integrating the study of ethics within a range of disciplines at the University of Leeds and is supporting academics across the UK and beyond through the provision of resources, training and consultancy.

The rising profile of ethics in engineering and the increased attention of the professional bodies, led to the growing need for training in professional ethics across the engineering sector. With its breadth of expertise and experience and a range of engineering partners, the IDEA Centre felt it was best placed to develop a course for the engineering profession that was practical, pertinent and rigorous.

Ingenious funding enabled the centre to devise a one-day course for professional engineers. Led by a steering group of ethicists and engineers, including a representative from The Royal Academy of Engineering (the Academy), the course was purposefully structured

around the Academy’s statement of ethical principles, which focus on:

- accuracy and rigour
- honesty and integrity
- respect for life, law and the public good
- responsible leadership.

Case studies and exercises based on real-life scenarios, enabled participants to explore the ethical implications of engineering in practice. Group discussions were used to encourage participants to:

- approach ethical issues in new ways
- apply critical thinking and reasoning skills to their decision making
- increase confidence to think and argue from an ethical perspective.

The course, which was co-facilitated by an ethicist and an engineer, ran six times during the pilot phase of the project attracting more than 60 engineers, from a range of sectors and organisational levels.

Grant Holder Organisation

Grant type
Grant level
Project period

Professor Christopher Megone, Director
University of Leeds
Inter-Disciplinary Ethics Applied (IDEA)
Centre for Excellence in Teaching and Learning (CETL)
Ingenious public engagement grant
£40,000
2007/ 2008

How did it go?

Course participants reported that they had enjoyed the course very much, finding it directly relevant to their work. In particular, they had benefited from talking to people from different engineering disciplines about the issues they faced and developing different ways to approach and tackle them on a day to day basis.

“The training provided an enjoyable and thought-provoking canter through the minefield of ethical issues we encounter in our everyday work as engineers. It was well presented, the examples used were pertinent and we came away with our perspective on ethics refreshed.”

Graham Lishman, Mouchel

“I found the course to be extremely inspiring. I have been able to ask myself and others difficult questions, and in some cases this has meant that we’ve adopted more thoughtful solutions. This course needs to be a required element in any professional engineer’s development.”

Chris Remigio, Arup

The course also benefited students of engineering degrees at the University:

“Through running the course and working with professional engineers we have been able to develop further teaching materials based on real-life experiences for use with undergraduates – enabling students to understand the relevance and importance of studying engineering ethics. We have also made a lot of contacts who will help us to carry on making ethics in engineering more prominent: enabling engineers to address ethically complex situations and giving them the confidence to make the right decisions -decisions they’re committed to.”

Alex Buckley



What was the biggest challenge you faced?

Promoting the course across the sector in a way which clearly demonstrated the benefits to practising engineers, without it sounding too academic.

Best bit?

“Working with engineers to unpick a tricky ethical issue. We know we make a difference because people come away telling us that the course has really opened their eyes.”

Alex Buckley

What next?

The IDEA Centre now offers the course as part of its professional ethics programme. Engineers can attend open access courses available throughout the year in London and Leeds. Professional bodies have also taken up the offer of the course to their members as part of their continuing professional development provision (eg The Institution of Engineering and Technology, IET), and companies have also opted for a bespoke version of the course for their employees (eg Cummings Turbo Technologies).

In response to the success of the course delivered for the IET, they also commissioned the IDEA Centre to develop a professionalism and ethics web zone for its members. This zone comprises interactive ethics case studies to engage members in critical thinking and ethical reasoning, the site brings to life the IET’s rules of conduct and the ethical concepts which underpin them.

The IDEA Centre is represented on the Academy’s *Engineering Ethics Group* and its *Teaching Engineering Ethics Group* and through them is working on further projects to raise the profile of engineering ethics and ensure engineers throughout the sector have the opportunity to develop the necessary skills to address ethical issues as they arise.