



Guidance for the Teaching of Engineering Ethics

Background

1. The IET has adopted the Royal Academy of Engineering (RAEng) definition of Ethics (see the Statement of Ethical Principles¹). It is recognised that ethical principles can be subjective and different interpretations may be allowable if a rational explanation is provided for these differences.
2. It is recommended that engineering ethics be integrated into existing modules so that the subject can be understood in context. Teaching as a separate module is also acceptable as long as it is appropriate for the programme and in context.
3. It is recommended that ethics be taught by Engineering Department staff so that the concepts can be explained in a pragmatic and practical way.
4. It is recommended that delivery of engineering ethics be performed at all levels of study so that it may be a recognisable theme throughout the programme.
5. It is recommended that the assessment of engineering ethics be integrated into existing assignments such as, coursework, discussion group exercises and project reports.
6. Examples of effective forms of delivery of engineering ethics are:
 - On an introductory level; teaching that plagiarism demonstrates unethical behaviour
 - Inviting guest speakers from industry to provide industrial context and present case studies to illustrate the importance of ethical awareness
 - Within all types of project work, where the student may produce a risk assessment of the ethical implications of their decisions
 - Using visual aids such as presentations and video material
 - By including an international context, where students are made aware that there are different definitions of ethics around the world
7. It is recommended that the RAEng and Advance-HE (previously The Higher Education Academy) be asked for further examples of teaching engineering ethics. Particular reference should be given to the engineering ethics curriculum map¹ published by the RAEng, as well as to useful case study material by the former HEA Engineering Subject Centre.
8. Useful Resources:
 - [Royal Academy of Engineering](#)
 - [Advance-HE 2](#)
9. Appendix 1 contains a recommended reading list.

¹ Search 'Ethics' at raeng.org.uk

Recommended Resources in Support of the Embedding of Ethics into the Curriculum

1. Royal Academy of Engineering (RAEng) **Policy Publications (raeng.org.uk)**

The Academy has undertaken a range of collaborative activities on engineering ethics, bringing together the profession to agree a set of aspirational principles and working with engineering educators to explore ways of teaching engineering ethics.

The Academy's work on engineering ethics covers ethics in engineering education, ethics in practice and the issues surrounding emerging engineered technologies. Through events, publications and teaching resources, the Academy has sought to enrich thinking about engineering ethics and provide materials and inspiration for engineers interested in the wider impact of their work.

2. Inter-Disciplinary Ethics Applied: a Centre for Excellence in Teaching and Learning (IDEA CETL, University of Leeds) **<https://ahc.leeds.ac.uk/ethics/>**

This is the website of the Inter-disciplinary Ethics Applied Centre for Excellence in Teaching and Learning (IDEA CETL). This CETL was awarded to the University of Leeds to integrate inter-disciplinary ethics into the curricula of 14 disciplines at the University and facilitate further development across the UK and beyond. The Centre collaborated with the Engineering Subject Centre during its first year to support the teaching of ethics to engineers.



3. An introduction to Ethical Thinking: A Customisable Teaching Package **academia.edu/9533645/Introduction_to_Ethical_Thinking_Tutor_Notes**

Authored by Dr Nafsika Athanassoulis, this teaching resource introduces students to ethical thinking and is suitable for students in any academic discipline who may not have been taught any ethics before. It can be used either by tutors who are new to teaching ethics, or those who have more experience but want some further ideas and inspiration.

This is a flexible and customisable resource, which can be tailored to suit the needs of your discipline and provides all the support materials required. Tutors can pick just one or two sessions and include them as part of another module, or choose to run all ten as a module in its own right.

Each session comes with easy-to-use Tutor Notes, which suggest a variety of possible teaching methods and include suggestions for specific disciplines (for example, Business, Life Sciences, Engineering, Journalism etc.), further readings and assessment exercises.

Note: This document is reviewed and updated regularly. Please ensure you have the most up to date version of this guidance, available via the IET website.

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