Computing Ethics for Engineers
31 hour professional course

Course Introduction

This course examines the ethical concepts and contexts which are relevant to computer engineering. Drawing from contemporary research in ethical philosophy, and from concrete engineering case studies, the course provides a challenging but accessible guide for practising computer engineers to develop an in-depth understanding of the ethical dimensions of their work.

The course focuses on moral responsibility, and explores the difficulties of assigning and taking moral responsibility when working in computer engineering. Learners examine in detail various ethically complex contexts, clarifying and exploring the ethical concepts required to fully understand what is at stake in each situation.

This includes the development and employment of AI and automation, the nature of free speech and censorship on social media platforms, representation of violence and gender in video games, and the problems involved with protecting privacy in the face of increased surveillance and data collection.

Course topics
- Introduction to Computer Ethics
- Responsibility
- Hacking
- Licensing and Intellectual Property
- Online Ethics
- Gaming Ethics
- Surveillance and Privacy
- Big Data
- Artificial Intelligence
- Autonomous Systems

Learning outcomes
- Fully understand the ethical issues at stake when working in computer engineering.
- Develop a clear understanding of central ethical concepts, such as privacy, free speech and moral responsibility, and appreciate their importance to computer engineering.
- Be aware of the social impacts that future technological advances might result in, and be able to discuss how to assign responsibility for the consequences.
- Be able to identify what is at stake, in particular, ethically complex situations relevant to computer engineering.

Course content may be subject to change or updates. Please contact the IET for the latest course content.
Learn more

By providing access to high quality engineering information, the IET helps engineers, technicians and technologists around the globe fuel innovation, gain competitive advantage and make better informed decisions so that they are well placed to solve the engineering challenges of the 21st century. The IET is an authoritative and trusted source of Essential Engineering Intelligence®

Expert multidisciplinary e-courses for engineers at all career stages

Course Units – Computer Ethics

- Section 1: Introduction to Computer Ethics
- Section 2: Responsibility
- Section 3: Hacking
- Section 4: Licensing and Intellectual Property
- Section 5: Online Ethics
- Section 6: Gaming Ethics
- Section 7: Surveillance and Privacy
- Section 8: Big Data
- Section 9: Artificial Intelligence
- Section 10: Autonomous Systems
- Final Assessment

What makes the IET Academy online courses different?

The IET Academy is developed by the Institution of Engineering and Technology (IET), Europe’s largest professional engineering body, in partnership with leading universities and industry organisations ensuring the highest standard in engineering e-learning.

In-depth learning

Courses range up to 31 hours in full and can be studied in whole or in bite size units allowing companies and individuals to invest in the most suitable training programme for them.

Trusted content

The IET Academy is an industry-leading, online learning solution, providing reliable, high calibre engineering courses in a broad range of technical and professional subjects.

Tailored for engineers

The e-learning solution is designed to meet companies’ training and development objectives for engineers at all levels: from bridging the skills gaps of new entrants right up to enhancing the multidisciplinary knowledge of experienced engineers.

Cost effective & flexible

For many engineers staying informed of changing technology in order to remain current in their role is paramount, however, finding the time and budget to attend external training is challenging. The IET Academy’s flexible learning platform allows access to training ‘anytime, anywhere’ or the course content can be quickly and easily integrated into your existing learning management system.

Who should take this course?

This course is for practising computer and software engineers, computer and data scientists, graduates of computer engineering courses, or other professionals in industry who want to understand the ethical dimensions of computing.

Other Engineering Courses

- Engineering Ethics
- Entrepreneurship for Engineers
- Management & Leadership
- Power Systems Engineering
- Mobile Communications
- Risk & Safety Management for Engineers
- Railway Safety
- Cybersecurity
- Connected Autonomous Vehicles

Course Units – Computer Ethics

- Section 1: Introduction to Computer Ethics
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- Section 3: Hacking
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