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# Ethical Issues In Engineering By Deborah G Johnson

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Engineering Ethics

Contemporary Ethical Issues in Engineering

Ethics in Engineering Practice and Research

Ethical Issues in Engineering Design; Safety and Sustainability

Emerging Technologies and Ethical Issues in Engineering

Ethics in Engineering

Engineering Ethics

Ethics, Technology, and Engineering

Ethics and Engineering Curricula

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Ethical Engineering

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Engineering Ethics

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Engineering Ethics

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Ethics and Engineering

Ethical Issues in Professional Engineering

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Global Engineering Ethics

Engineering Ethics for a Globalized World

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Engineering Ethics Wiley-IEEE Press  
This text has been revised to coincide with the directive by ABET (the Accrediting Board for Engineering and Technology) to expand the ethics for engineering course. Other topics new to this edition include computer ethics, environmental ethics, corporate loyalty and collegiality.

Contemporary Ethical Issues in Engineering McGraw-Hill Education  
Explore the moral and ethical issues which arise at the intersection of novel technology and engineering In *Ethics, Technology, and Engineering: An Introduction*, a team of distinguished researchers delivers an insightful and thought-provoking exploration of some of the toughest ethical questions found at the crossroads of engineering and technology. The book demonstrates the skills necessary to effectively grapple with ethical issues that arise from the practice of engineering. The authors introduce the "ethical cycle," a unique and systematic approach to dealing with ethical problems. They utilize numerous real-life case studies from the United States, Europe, and elsewhere to shed important light on the ethical issues that arise in the daily work of practicing engineers. They also provide a comprehensive overview of various ethical frameworks used in engineering, including utilitarianism, deontological ethics, virtue ethics, Ubuntu, and Confucianism. Readers will also find: A thorough introduction to a practice-oriented approach to ethical decision-making in engineering Comprehensive explorations of the "ethical cycle," an

approach that encourages students to consider a diversity of ethical viewpoints and come to reasoned and justified judgments Practical discussions of ethical issues in engineering design, technological risks, and moral responsibility Treatments of sustainability and how it affects professionals working in engineering, as well as responsible innovation Perfect for engineers, technologists, and entrepreneurs, *Ethics, Technology, and Engineering: An Introduction* will also benefit businesspeople and founders interested in the ethical implications of a variety of fascinating new technologies.

### **Ethics in Engineering Practice and Research**

New York : J. Wiley  
Featuring a wide range of international case studies, *Ethics, Technology, and Engineering* presents a unique and systematic approach for engineering students to deal with the ethical issues that are increasingly inherent in engineering practice. Utilizes a systematic approach to ethical case analysis -- the ethical cycle -- which features a wide range of real-life international case studies including the Challenger Space Shuttle, the Herald of Free Enterprise and biofuels. Covers a broad range of topics, including ethics in design, risks, responsibility, sustainability, and emerging technologies Can be used in conjunction with the online ethics tool Agora (<http://www.ethicsandtechnology.com>) Provides engineering students with a clear introduction to the main ethical theories Includes an extensive glossary with key terms

Ethical Issues in Engineering Design; Safety and Sustainability National Academies Press

This volume identifies, discusses and addresses the wide array of ethical

issues that have emerged for engineers due to the rise of a global economy. To date, there has been no systematic treatment of the particular challenges globalization poses for engineering ethics standards and education. This volume concentrates on precisely this challenge. Scholars and practitioners from diverse national and professional backgrounds discuss the ethical issues emerging from the inherent symbiotic relationship between the engineering profession and globalization. Through their discussions a deeper and more complete understanding of the precise ways in which globalization impacts the formulation and justification of ethical standards in engineering as well as the curriculum and pedagogy of engineering ethics education emerges. The world today is witnessing an unprecedented demand for engineers and other science and technology professionals with advanced degrees due to both the off-shoring of western jobs and the rapid development of non-Western countries. The current flow of technology and professionals is from the West to the rest of the world. Professional practices followed by Western (or Western-trained) engineers are often based on presuppositions which can be in fundamental disagreement with the viewpoints of non-Westerners. A successful engineering solution cannot be simply technically sound, but also must account for cultural, social and religious constraints. For these reasons, existing Western standards cannot simply be exported to other countries. Divided into two parts, Part I of the volume provides an overview of particular dimensions of globalization and the criteria that an adequate engineering ethics framework must satisfy in a globalized world. Part II of the

volume considers pedagogical challenges and aims in engineering ethics education that is global in character.

Emerging Technologies and Ethical Issues in Engineering Wadsworth Publishing Company

This book is a key introduction to ethics in engineering, providing professionals at all stages of their career with guidance on navigating the increasingly complex world of practising engineering ethically on an international scale. Engineering professionals face a duty to uphold reliable and trustworthy behaviour when working across all disciplines and industries. Accuracy and rigour are essential parts of the modern workplace, and are increasingly of concern to practising engineers. Using case studies to highlight examples of issues within the workplace and how these can be appropriately handled, this book is an accessible tool through which engineers can gain confidence in dealing with ethical dilemmas in the workplace. Touching upon safety, risk, artificial intelligence, autonomous systems, and intellectual property, alongside sustainability and environmental matters, the book focuses on hot topics which are fast becoming day-to-day issues dealt with by engineers. The book will be suitable for engineers of all disciplines, alongside students looking to become professional chartered engineers.

Ethics in Engineering Pearson

CD-ROM contains: Professional society codes -- Additional cases and materials -- Links to some major on-line ethics sites -  
- Ethos System from Taknosys (software).

*Engineering Ethics* Oxford University Press, USA

Exploring key ethical concerns in the

engineering industry, this 2nd edition of *Ethics Within Engineering* is fully revised and updated to educate a new generation of engineers in ethical decision-making. By focusing on critical issues concerning tracking harm, contract work, and collective action, Wade L. Robison provides educational tools and solutions that match the complexity of the engineering landscape today. Two new chapters on the responsibility of the engineer and the ethical issues that arise when teams work together to solve design problems, together with new material on tracking harms in the design process, provide a fuller comprehension of risk and harm in engineering. Robison further enhances this new edition with contemporary examples that highlight the enduring necessity of ethics to engineering. These range from the Boeing 737-MAX to General Motors' controversial 20-gallon fuel tanks. Using real life examples that bring the theory to life, this student-led textbook encourages students to present, challenge, and work through different engineering problems and solutions with confidence and a strong evidence-based approach. Consistent with the 1st edition's emphasis on the original design problem which drives ethical questions in engineering, this new edition positions the nascent engineer as its focus for driving positive change in practice, design, and delivery.

**Ethics, Technology, and Engineering**  
Prentice Hall

An exploration of the ethics of practical engineering through analyses of eighteen rich case studies *The Ethical Engineer* explores ethical issues that arise in engineering practice, from technology transfer to privacy protection to whistle-blowing. Presenting key ethics concepts and real-life examples of

engineering work, Robert McGinn illuminates the ethical dimension of engineering practice and helps students and professionals determine engineers' context-specific ethical responsibilities. McGinn highlights the "ethics gap" in contemporary engineering—the disconnect between the meager exposure to ethical issues in engineering education and the ethical challenges frequently faced by engineers. He elaborates four "fundamental ethical responsibilities of engineers" (FEREs) and uses them to shed light on the ethical dimensions of diverse case studies, including ones from emerging engineering fields. The cases range from the Union Carbide pesticide plant disaster in India to the Google Street View project. After examining the extent to which the actions of engineers in the cases align with the FEREs, McGinn recapitulates key ideas used in analyzing the cases and spells out the main lessons they suggest. He identifies technical, social, and personal factors that induce or press engineers to engage in misconduct and discusses organizational, legal, and individual resources available to those interested in ethically responsible engineering practice. Combining probing analysis and nuanced ethical evaluation of engineering conduct in its social and technical contexts, *The Ethical Engineer* will be invaluable to engineering students and professionals. Meets the need for engineering-related ethics study Elaborates four fundamental ethical responsibilities of engineers Discusses diverse, global cases of ethical issues in established and emerging engineering fields Identifies resources and options for ethically responsible engineering practice Provides discussion questions for each case

*Ethics and Engineering Curricula* Thomas Telford

The first edition of Caroline Whitbeck's *Ethics in Engineering Practice and Research* focused on the difficult ethical problems engineers encounter in their practice and in research. In many ways, these problems are like design problems: they are complex, often ill defined; resolving them involves an iterative process of analysis and synthesis; and there can be more than one acceptable solution. In the second edition of this text, Dr Whitbeck goes above and beyond by featuring more real-life problems, stating recent scenarios and laying the foundation of ethical concepts and reasoning. This book offers a real-world, problem-centered approach to engineering ethics, using a rich collection of open-ended case studies to develop skill in recognizing and addressing ethical issues.

*Engineering Ethics* Cambridge University Press

A discussion of ethical issues in the business of forensic engineering.

*Ethical Engineering* Bloomsbury Publishing

"In *SOCIAL, ETHICAL, AND POLICY IMPLICATIONS OF*

*ENGINEERING*, engineers, faculty, and students will find an informative guide to the professional, societal, and ethical responsibilities that face practicing engineers today. Through an integrated approach to the theory of engineering ethics and practical real-world issues, this comprehensive book offers readers an in-depth analysis of technology's current social role. Drawing on readings and case studies first published in *IEEE Technology and Society Magazine*, this easy-to-read text will develop readers' understanding of the important

issues surrounding "macroethical" public policy debates, including discussions of sustainable development, public health, risk and product liability, and telecommunications. These cases and readings also provide an opportunity to apply the theory in real-world situations. *SOCIAL, ETHICAL, AND POLICY IMPLICATIONS OF ENGINEERING* will help students meet the new accreditation criteria for engineering adopted by the Accreditation Board for Engineering and Technology (ABET). In addition, contemporary issues presented in this far-reaching book will allow students and practicing engineers to gain greater insight into how social and ethical concerns shape contributions to the engineering field. For more information and related articles

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*Engineering Ethics* Guyer Partners

Using the space shuttle programme as the framework, this book examines ethical decision making in engineering.

**Contemporary Ethical Issues in Engineering** John Wiley & Sons

*Global Engineering Ethics* introduces the fundamentals of ethics in a context specific to engineering without privileging any one national or cultural conception of ethics. Numerous case studies from around the world help the reader to see clearly the relevance of design, safety, and professionalism to engineers. Engineering increasingly takes place in global contexts, with industrial and research teams operating across national and cultural borders. This adds a layer of complexity to already

challenging ethical issues. This book is essential reading for anyone wanting to understand or communicate the ethics of engineering, including students, academics, and researchers, and is indispensable for those involved in international and cross-cultural environments. Takes a global-values approach to engineering ethics rather than prioritizing any one national or regional culture Uses engineering case studies to explain ethical issues and principles in relatable, practical contexts Approaches engineering from a business perspective, emphasizing the extent to which engineering occurs in terms of profit-driven markets, addressing potential conflicts that arise as a result Provides extensive guidance on how to carry out ethical analysis by using case studies, to practice addressing and thinking through issues before confronting them in the world

*The Decision Makers* Springer

The only treatment of ethics from a scientific and engineering perspective

The pursuit of science and engineering requires freedom of thought and, in the academic sense, unrestricted communication. It is through the professionalism of the members of these disciplines that world knowledge and technology advances. Yet there are continuous reports of unethical behavior in the forms of data manipulation, cheating, and plagiarism at the highest levels. The motivations for this behavior are varied, such as the need to advance one's career or to obtain research funding. This book gives an account of scientific and engineering disciplines and examines the potential for unethical behavior by professionals. Documented examples are presented to show where the matter could have been halted before it became an unethical issue. The

authors also look to the future to see what is in store for professionals in science and engineering and how the potential for unethical behavior can be negated.

#### Ethics in Science and Engineering

Cambridge University Press

For use in undergraduate engineering programs incorporating ethics topics. The purpose of this book is to provide a text and a resource for the study of engineering ethics and to help future engineers be prepared for confronting and resolving ethical dilemmas that they might encounter during their professional careers.

#### **Engineering Ethics** IGI Global

This text, first published in 1998, examines the ethical responsibilities of engineers for the environment - of interest to all engineers.

#### **Ethical Problems in Engineering** John Wiley & Sons

This text bridges the gap between theory and practice in engineering ethics. The authors provide real-life cases, structured methodology for analyzing cases, and examples of cases that have been analyzed to give students a true understanding of what is involved in practicing ethical engineering. Codes of Ethics are also provided and discussed. This book helps engineering students to carry over their natural analytical talents into a new area: moral deliberation. It shows them the importance of being analytical, stressing the fact that many apparent moral disagreements are really disagreements over the facts or over the definitions of crucial terms, and that the locus of moral disagreement can only be discovered by analysis.

#### Ethics in Engineering Cambridge University Press

For most professions, a code of ethics



exists to promote positive behavior among practitioners in order to enrich others within the field as well as the communities they serve. Similar to the medical, law, and business fields, the engineering discipline also instills a code of ethical conduct. Contemporary Ethical Issues in Engineering highlights a modern approach to the topic of engineering ethics and the current moral dilemmas facing practitioners in the field. Focusing on key issues, theoretical foundations, and the best methods for promoting engineering ethics from the pre-practitioner to the managerial level, this timely publication is ideally designed for use by engineering students, active professionals, and academics, as well as researchers in all disciplines of engineering.

**Ethics for Engineers** McGraw-Hill Science, Engineering & Mathematics Ensuring that their work has a positive influence on society is a responsibility and a privilege for engineers, but also a considerable challenge. This book addresses the ways in which engineers meet this challenge, working from the assumption that for a project to be truly ethical both the undertaking itself and its implementation must be ethically sound. The contributors discuss varied topics from an international and interdisciplinary perspective, including | robot ethics; | outer space; | international development; | internet privacy and security; | green branding; | arms conversion; | green employment; and | deliberate misinformation about

climate change Important questions are answered, such as | what is meant by engineering ethics and its practical implications; | how decisions made by engineers in their working lives make an impact at the global as well as the local level; and | what ethics-related questions should be asked before making such decisions. Ethical Engineering for International Development and Environmental Sustainability will be a valuable resource for practising and student engineers as well as all who are interested in professional ethics, especially as it relates to engineering. Researchers and policy makers concerned with the effects of engineering decisions on environmental sustainability and international stability will find this book to be of special interest.

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