Contemporary Ethical Issues in Engineering

Part of the Advances in Civil and Industrial Engineering (ACIE) Book Series

Satya Sundar Sethy (Indian Institute of Technology Madras, India)

Description:
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. This book focuses on key issues, theoretical foundations, and the best methods for promoting engineering ethics from the pre-practitioner to the managerial level.

Readers:
This timely publication is ideally designed for use by engineering students, active professionals, and academics, as well as researchers in all disciplines of engineering.


Topics Covered:
- Common Morality
- Decision-Making Process
- Engineering Code of Conduct
- Engineering Education
- Humane Technologies
- International Law
- Professional Development

Hardcover + Free E-Access: $215.00  E-Access Only: $200.00
Foreword
Christelle Didier, Université Lille 3, France

Section 1 Philosophy

Chapter 1 Engineers, Emotions, and Ethics
Michael Davis, Illinois Institute of Technology, USA

Chapter 2 Engineering as Normative Practice: Ethical Reflections on Tasks and Responsibilities
Marc J. de Vries, Delft University of Technology, The Netherlands

Chapter 3 Engineering Ethics in Technological Design
Giridhar Akula, Jawaharlal Nehru Technological University, India

Chapter 4 Engineering Ethics, Global Climate Change, and the Precautionary Principle
Robin Attfield, Cardiff University, United Kingdom

Chapter 5 Ethics is Not Enough: From Professionalism to the Political Philosophy of Engineering
Carl Mitcham, Colorado School of Mines, USA

Chapter 6 Emotional Intelligence: Its Significance and Ethical Implications in Engineering Profession
Satya Sundar Serthy, Indian Institute of Technology Madras, India

Chapter 7 Religious Ethics, General Ethics and Engineering Ethics: A Reflection
P. R. Bhat, Indian Institute of Technology Bombay, India

Section 2 Education

Chapter 8 Ethical Theories and Teaching Engineering Ethics
Michael S. Pritchard, Western Michigan University, USA
Elaine E. Englehardt, Utah Valley University, USA

Chapter 9 Teaching Ethics to Engineering Students in India: Issues and Challenges
Reena Cheruvath, Birla Institute of Technology and Science- Pilani, Goa Campus, India

Chapter 10 Engineering Ethics Education: Issues and Student Attitudes
Balasubramaniam Balakrishnan, Universiti Pendidikan Sultan Idris, Malaysia

Chapter 11 Teaching Engineering Ethics in Classroom: Issues and Challenges
Josep M. Basart, Universitat Autònoma de Barcelona, Spain

Chapter 12 Integrating Ethics into Engineering Education
Chunfang Zhou, Department of Learning and Philosophy, Aalborg University, Denmark
Kathrin Orel-Cass, Department of Learning and Philosophy, Aalborg University, Denmark

Chapter 13 Ethics in Design: Teaching Engineering Ethics
James A. Stieb, Drexel University, USA

Section 3 Practice/Execution

Chapter 14 Widening the Industrial Competence Base − Integrating Ethics into Engineering Education
Pia Lappalainen, Aalto University, Finland

Chapter 15 Conflict Resolution and Ethical Decision-Making for Engineering Professionals in Global Organizations
Charles R. Feldhaus, Indiana University-Purdue University Indianapolis, USA
Julie Little-Wiles, Indiana University Purdue University Indianapolis, USA
Brandon Sorge, Indiana University Purdue University Indianapolis, USA

Chapter 16 Software Engineering Ethics Education: Incorporating Critical Pedagogy into Student Outreach Projects
Gada Kadoda, University of Khartoum, Sudan

Chapter 17 Ethical Issues for User Involvement in Technological Research Projects: Directives and Recommendations
Ainara Garzo, TECNALIA, Spain
Nestor Garay-Vitoria, University of the Basque Country (UPV-EHU), Spain

Epilogue
Afterword
Mark Coeckelbergh, De Montfort University, United Kingdom