

# EDITORIAL DYNA 174

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## ENGINEERING ETHICS

Engineering ethics is professional ethics, as opposed to personal morality. It sets the standards for professional practice, and is only learned in a professional school or in professional practice. It is an essential part of professional education because it helps students deal with issues they will face in professional practice. The best way to teach engineering ethics is by using cases—not just the disaster cases that make the news, but the kinds of cases that an engineer is more likely to encounter. Many cases are available, and there are methods for analyzing them.

Engineering ethics can be taught in a free-standing course, but there are strong arguments for introducing ethics in technical courses as well. Engineering is something that engineers do, and what they do has profound effects on others.

If the subject of professional ethics is how members of a profession should, or should not, affect others in the course of practicing their profession, then engineering ethics is an essential aspect of engineering itself and education in professional responsibilities should be part of professional education in engineering, just as it is in law and medicine.

Probably few engineering educators would disagree with these claims; their

implementation in engineering education is another matter. We want to discuss the introduction of engineering ethics into engineering education in terms of four questions: What is engineering ethics? Why should it be emphasized in engineering education? How should it be taught? and When should it appear in the student's education?

Engineering ethics is part of thinking like an engineer. Teaching engineering ethics is part of teaching engineering. Teaching engineering ethics can increase a student's ethical will-power. One might say, "Surely the classroom and laboratory are not the place for that." Think again. Isn't an engineer who knows that he shares a particular standard of conduct with other engineers more likely to follow it than one who believes himself alone? One benefit of discussing ethics in the classroom is that it shows students how much consensus there is on most standards of engineering ethics. It is surprising how many engineering faculty have not read a code of engineering ethics. Needless to say, their students are even less likely to have read a code. Just exposing students to a code is therefore a significant contribution to their ethics education.

Engineering ethics appears to be emerging as a distinct discipline, taking its place

with medical, legal and business ethics. We believe the time is approaching when most if not all engineering schools will have some program for introducing students to engineering professionalism and ethics.

Engineering Ethics: What? Why? How? and When? Charles Harris and others  
Journal of Engineering Education. April 1996 pp 93-96