

Teaching Ethics in a Technical Discipline

The Two Tasks

Redeeming the Soul, Redeeming the Mind

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Common Ground

- We must provide a solid learning environment for students
- We teach ethics from a Christian perspective
- We work in a technical/scientific environment
- We have a mandate to include ethics in our curriculum

Western Kentucky University

- State-supported comprehensive university
- About 19,000 students, largest regional university in Kentucky
- Many first-generation students
- About half live on campus, half commute, many from family home
- Computer Science accrediting board requires a strong ethical component

Popular Misconception

- Many people believe that scientists can't also have a Christian faith.
- In fact, it is often easier for scientists to accept the reality of God than for those who believe there is no right or wrong answer for any question.

Definition of Ethics

The means by which we decide what to do.

It may reflect a philosophy or faith.

Ethics can vary from one person to another.

Many people have no idea how they decide what is the appropriate way to behave.

Computer Ethics is the study of how we decide what to do when computers are involved.

Overview of Ethical Teachings

- Hammurabi's Babylonian code
- Hebrew law
- Indian writings: (Vedic philosophy)
- Buddha: "enlightened one"
- Lao-Tzu and Confucius
- Socrates, Plato, Aristotle
- Stoics
- Epicureans

Major Ethical Theories

- Relativism
- Universalism
- Consequentialism
- Utilitarian
- Deontological
- Egoism
- Descriptive vs. Normative
- Negative and Positive Rights

Policies and Regulations

- ACM Professional Code of Conduct
- WKU Computing Ethics Policy
- Copyright laws
- Patent laws
- Fair-use doctrine
- Privacy laws
- and more . . .

Case studies

- Apply ethical theories, laws, rules.
- Expectation: it is possible to determine an ethical response.
- Require students to support their responses.
- Begin with small, familiar cases.
- Move to larger, more complicated cases.
- Consider stake-holders, their risks and responsibilities.

Popular Cases for Class

- Pornography and the Harvard Dean
 - Use or misuse of University resources
 - Reveal some details as the story unfolds
- Malfunction of the Therac-25
 - Responsibility for injury or death
 - Consider technicians, programmers, system designers, manufacturers, health professionals

Student Assignments

- Classroom participation
- Group activities
- Textbook – *Ethics and Computing* by Kevin Bowyer
- ACM and WKU computing ethics codes
- Case studies
- Tests
- Project – written and presented to class

Summary

- Technical and science students are ready to accept that something can be right or wrong. Build on that.
- Be ready, when asked, to share your faith both in and out of class. Always show it.
- Be respectful of other's faith, as well.
- Show that actions are not arbitrary and that they carry consequences.
- Prepare them for next classes, graduation.