Online Ethics Center
FOR ENGINEERING AND SCIENCE

Ethics in the Classroom Bibliography

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Description

A collection of resources on methods for introducing ethics instruction into the classroom. Includes sections on "embedded ethics" or "micro-insertion", teaching ethical theory, and ethical decsion-making frameworks.

Body

“Embedded Ethics” or "Micro-Insertion"

Micro-insertion is the small-scale insertion of ethics instruction into technical courses or training programs, resulting in a dozen or so “ethics mini-lessons,” each lasting only a few minutes. Rather than an outside lecture or devoting one class period on ethics, students are exposed to ethics through small case discussions, technical problems with underlying ethical issues, and other assignments interspersed throughout the training period. In many cases, existing assignments can be altered slightly to include ethics without much change to the overall course or time spent on other topics.

“**Ethics In-Basket**”

The Ethics-in-Basket is the online portion of a project lead by Michael Davis at the Illinois Institute of Technology sought to develop, assess, and disseminate a series of “micro-insertion” problems to help integrate ethics into the graduate engineering curriculum. In a series of workshops, engineering faculty and graduate students were asked to develop technical problems that include underlying ethical issues. By giving normally abstract technical problems a realistic context, students are now asked to make professional decisions. The problems developed through this project are available to be downloaded and used by instructors through the Ethics-in-Basket website, and you are invited to submit your own problems for inclusion.

For more information on the project see:

Davis, Michael. “Integrating Ethics into Technical Courses: Micro-insertion” Science and Engineering Ethics 12 (October 2006) 717-730.

Riley, Kathryn, Michael Davis, Apryl Cox, & James Maciukenas. "Ethics in the Details: Communicating Engineering Ethics via Micro-Insertion" IEEE Transactions on Professional Communication 52:1 (March 2009) 95-108

Teaching Ethical Theory

The importance of introducing students to ethical theory in ethics instruction is often debated. Many instructors of professional ethics are wary of including moral theory in their curriculum, and indeed, it may not be necessary to if you are attempting to include only a small amount of professional ethics instruction in your course or program. Problems often arise when moral theories are presented in unhelpful or confusing ways; either students become overwhelmed when all the details of a theory are presented, or instructors present only the briefest synopsis of a theory that is too sketchy to provide any real benefit for the students. However, moral theories are one way to assist an individual in setting aside the feelings, desires, and ambitions that often tend to skew one’s moral vision and look at a problem from a rational viewpoint. The following articles discuss some methods of teaching ethical theories in a clear way.

Peach, Lucinda. “An Introduction to Ethical Theory.” in Penslar, Roben Levin, ed. 1995. Research Ethics: Cases and Materials. Bloomington:

Indiana University Press.
Focusing on research ethics, the author of this short chapter introduces the reader to some of the main types of ethical theory and shows how they can be used to think about ethics questions that often come up in the course of research.

Newton, Lisa. "Doing Good and Avoiding Evil" Society for Ethics Across the Curriculum, 1998.
Dr. Lisa Newton has allowed a manual she has used in teaching classes on practical and professional ethics to be published online. Along with a number of case studies, the manual include three sections that give a succinct description of how ethical theories and moral reasoning work.

Henderson, Bernard. "A Reminder on Recognizing Ethical Problems as Practical: Distinctions in Teaching Theory and Practice." Teaching Ethics. 2:2 (Spring, 2002) pp.14.
This article discusses some of the differences that exist in how philosophers and practitioners discuss ethics, and how this difference can be bridged through the use of a common language and case studies whose ethical problems are easily understood, familiar, and relevant to the practitioner, so they can to relate to their own experiences during discussion of the case. The author then outlines his own approach in teaching applied ethics to police recruits and students in criminal justice studies.

Ethical Decision-Making Frameworks

For instructors who do not wish to include ethical theory in their instruction, many authors suggest using an ethical decision-making framework for leading discussions. The following resources introduce different frameworks and discuss how they can be used in a class or training setting.

Davis, Michael, "Developing and Using Cases to Teach Practical Ethics." Teaching Philosophy 20:4, December 1997, pp. 353-385.
After giving a brief history of the use of case studies in teaching, Davis discusses the types of ethics case studies that can be used in teaching practical and professional ethics, introduces the seven-step method for ethical decision making as a framework for leading an ethical discussion, and some general guidelines for how to use cases in ethics instruction.

University of Northern Colorado Center for Ethical Decision Making Site
This web resource provides a series of frameworks based on ethical theories to help guide users through the deliberation process for sorting out his/her ethical options. Users can view the deliberation process of other users (who are anonymous) and looks at three different frameworks for arriving at a decision to their own questions: consequences (utilitarianism), duty (Kantian, Rawlsian) and virtue (virtue ethics).

Northwestern University - Engineering Ethics in a Design Paradigm
Mark L. Bourgeois and Suzanne A. Olds of the Biological Engineering department of Northwestern University have developed an approach to engineering ethics on the principles of engineering design. Students are asked to approach an ethical problem as they would a design problem, with the principles of the Belmont Report as the design goals.This approach was outlined in a presentation at the ASEE/IEEE Frontiers in Education Conference, October 1-13, 2007 in Milwaukee, WI. “Work in Progress-Engineering Ethics in a Design Paradigm”

You can find more resources in the OEC Education section.

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Resource Type

Bibliography

Parent Collection

OEC Bibliographies

Topics

Pedagogical Approaches

Discipline(s)

Teaching Ethics in STEM