

TEXETHICS NEWSLETTERS

Communicating Engineering Professionalism and Ethics
in Texas

Volume 4 Number 2 Fall 1993

sponsor

Texas State Board of Registration for Professional Engineers

publisher

Murdough Center for Engineering Professionalism

Box 41023, TEXAS TECH UNIVERSITY, Lubbock, Texas 79409-1023

ETHICS PROGRAMS PLANNED FOR ENGINEERING RELATED FIRMS AND AGENCIES IN TEXAS

The Texas State Board of Registration for Professional Engineers continues their Professional Development Program (PDP) for 1993-95. Previous PDP elements have concentrated on ethics programs for engineering education, as reported in this issue of *TexethicS*.

The 1993-95 program will continue the college program on a scaled down basis. The major thrust of the PDP for the next biennium will be to develop ethics materials that can be utilized by practicing engineers in industry, private practice and governmental agencies in Texas.

To help determine the needs of engineering firms and agencies in the area of professional development and engineering ethics, an Industry Advisory Committee to the State Board of Registration on Engineering Professional Development has been formed. Members of this new committee are identified on the last page of this newsletter. Their first meeting is December 6, 1993.

The Murdough Center for Engineering Professionalism at Texas Tech University has been awarded a contract to conduct several tasks associated with the Board's PDP. As part of this effort, several programs (seminars,

workshops or short concept programs) for practicing engineers in Texas will be conducted during the next two years. The initial focus will be on programs for the small to mid-size organizations.

SERIES OF ETHICS WORKSHOPS FOR ENGINEERING FACULTY COMPLETED

As mentioned in the last issue of *TexethicS* (April 1993), a more complete report of the ethics workshops would be included in this issue. These workshops are one element of the Professional Development Program of the Texas State Board of Registration for Professional Engineers. Designed to assist engineering faculty in presenting ethics to students in their technical classes, the workshops involved both academic and industry aspects of ethics. In all segments of the workshops, the invited participants are involved in breakout sessions, discussions, questions, etc., to insure active rather than passive learning.

The first workshop was held in Austin for engineering deans, the second, also held in Austin, was for "key" engineering faculty throughout the state; then a series of nine workshops were conducted at locations convenient to most engineering faculty in Texas.

Over two hundred (200) engineering faculty from 18 engineering colleges in

Texas have attended the workshops. In addition, several faculty from the University of New Mexico and New Mexico State University have attended. One faculty member from Monterey Tech in Monterey, Mexico attended the Austin

workshop. Examples of topics covered, the overall goal of the workshops, the materials distributed, a list of workshop speakers, and a list of participants in the workshops are included in this newsletter.

REPORT ON ETHICS WORKSHOPS FOR ENGINEERING FACULTY

BACKGROUND

Since August of 1991 the Murdough Center for Engineering Professionalism, through a contract with the Texas State Board of Registration has conducted eleven ethics workshops involving over 200 engineering faculty and administrators. As indicated in the lead story of this issue of **Texethics**, these workshops involved engineering deans and faculty throughout Texas. The initial "Deans" workshop was partially funded by the National Science Foundation. The second workshop invited "key" faculty from each of the engineering schools in Texas identified by their dean. Its purpose was to have a program for faculty who would later be contact persons at the respective institutions for planning, designing, and conducting the nine workshops held on engineering campuses throughout Texas.

PURPOSE

Acceptance of professional and technical responsibilities as well as the ability to function ethically are key requirements of a true professional. Therefore, with the advice and assistance of deans of engineering and practicing engineers, the Board made available instructional materials, short courses and/or workshops to engineering faculty in Texas schools. The aim of this component of the Program was to assist engineering educators in developing their own materials and methods for presentation in technical courses, seminars or formal classes in ethics. The idea is that formal and informal presentations in ethics will result in:

- 1. an increased awareness of ethical theories, public concerns and potential conflicts,*
- 2. a greater familiarity with codes of conduct,*
- 3. an appreciation for the frequency with which ethical dilemmas are encountered by engineers in their work experiences,*

- 4. a heightened ability to recognize ethical dilemmas,*
- 5. a better understanding of one's own values, and, most importantly,*
- 6. an enhanced ability to resolve ethical dilemmas by applying traditional engineering inquiry methods of getting the facts, listing options, testing options, making a decision and acting.*

The hope is that a higher level of ethical conduct will result and that widespread recognition of engineers as true professionals in the finest sense of the word will follow.

CONTENT

- Introduction to Basic Ethical Philosophies
- Points of View from Industry and Engineering Societies
- Applications Presented as Examples
- Critiques of the Applications Presentations
- Basic Problems with Presenting Ethics in Engineering Classes and Possible Resolutions
- Major Types of Ethical Problems (Case Studies)
- Examples of Methods of Presenting Engineering Ethics in Engineering Classes
- Breakout Sessions on Working Examples

MATERIALS

Participants in each workshop received a notebook consisting of up to 200 pages of professionalism and ethics resource materials, including numerous case studies suitable for reproduction and distribution in engineering classes. The principal points made by the various speakers were also in the notebook. *[Most of this material is available on diskette at cost from the Murdough Center for Engineering Professionalism.]* Each participant

also was given a copy of "**Ethics in Engineering**" by Mike Martin and Roland Schinzinger, McGraw-Hill, 2nd Ed., which contains an excellent presentation of many ethics issues confronting engineers.

SPEAKERS

A total of twenty-one (21) speakers and staff have been involved in presenting the series of ethics workshops.

1. Bill BakerMurdough Center, Texas Tech University
2. Bob Bethea Texas Tech University
3. Dave DorchesterState Board, TSPE, NCEES, Indus
4. Trish DiersMurdough Center, Texas Tech Univers
5. Earnest GloynaTexas State Board of Registratio
6. Ed Harris Texas A&M University
7. Derrell JohnsonTexas State Board of Registrati
8. Jesse Jones Texas Tech University
9. Dan Kile Bell Helicopter Textron
10. Mike MartinChapman University, Orange, Califo
11. Margaret Maxey University of Texas at Austin
12. Charles NemirTexas State Board of Registratio
13. Steven NicholsUniversity of Texas at Austin
14. Mike PritchardWestern Michigan University
15. Mike Rabins Texas A&M University
16. Roland SchinzingerUniversity of California/Ir
17. John L. "Jack" Shultz General Dynamics
18. Carl Skooglund Texas Instruments
19. Jimmy SmithMurdough Center, Texas Tech Univer
20. Pennington VannMurdough Center, Texas Tech Un
21. Caroline Whitbeck Massachusetts Institute of

NATIONAL INSTITUTE FOR ENGINEERING ETHICS SETS GOALS

The National Institute for Engineering Ethics (NIEE) was created by the National Society of Professional Engineers (NSPE) in July 1989. The mission of NIEE is to promote ethics within the engineering profession. The principal thrusts of NIEE are: **Communication, Program Development, Education, and Practice Applications.**

NIEE developed and distributed a highly successful engineering ethics video, "**Gilbane Gold**," which has been used at most engineering colleges in the nation as well as in industry and society presentations. The newsletter **Engineering Ethics Update**, published by NIEE, keeps members informed about national ethics activities.

NIEE and NSPE are considering major changes in the organization in order to better serve the entire engineering community. The changes being discussed involve a closer association with the engineering societies and AAES. **Texethics** will report on future developments regarding NIEE.

In order to acquaint the reader of the scope of NIEE, its mission, objectives and planned tasks are included here.

Mission Statement: The mission of NIEE is to promote ethics within the engineering profession.

Objectives:

- ▣ Communicate issues related to engineering ethics among the various engineering disciplines.
- ▣ Promote the importance of Engineering Ethics as an essential component of the engineering profession.
- ▣ Develop and distribute materials and programs for infusing professionalism and principles of engineering ethics into engineering curricula and the engineering profession.

The mission, objectives and tasks will be accomplished by the Institute and its three Commissions.

- ▣ Commission on Program Development and Communication
- ▣ Commission on Education
- ▣ Commission on Practice Applications

Future Programs of the Institute and its Commissions:

1. Develop and implement an effective **ELECTRONIC COMMUNICATIONS MECHANISM** such as an electronic bulletin board through which members, societies,

and companies can exchange information, ideas, and developments in the area of engineering ethics.

2. Develop and distribute **ETHICS PROGRAM MODULES** including case studies and **VIDEO PRESENTATIONS** for use in education, industry, private practice and government.
3. Develop and publish an "**ETHICS DIGEST**" that condenses major articles on engineering ethics to one or two pages. Distribute to members as a service during development phase (first 3 years).
4. Identify a **NETWORK OF USERS** of ethics materials who are willing to share their experiences in utilizing these in presentations at colleges of engineering and technical and professional society meetings.
5. Develop **VIDEOS** similar to "Gilbane Gold." Also produce a dubbed or subtitled version of "Gilbane Gold" in several other languages (a Spanish version has recently been requested by engineers in Mexico).
6. Host a **USA/MEXICO/CANADA CONFERENCE** focused on developing a consensus about the issues of Engineering Ethics aspects of the NAFTA (North America Free Trade Agreement). Note: This has been discussed at the Engineering Roundtable I, held at the Texas Tech Murdough Center for Engineering Professionalism in Lubbock (June 1992), and at the Engineering Roundtable II held in Cuernavaca, Mexico (November, 1992).
7. Plan and make **PRESENTATIONS** (seminars, workshops, reports, etc.) to make the resources of NIEE accessible.
8. Develop a **PROTOTYPE PILOT PROGRAM** for use in small to medium size companies.
9. Develop a plan for an NIEE Ethics Award for companies who exhibit outstanding achievements in development of in-house ethics programs.
10. Develop effective mechanisms for improving **COOPERATIVE EFFORTS** in the engineering ethics area among all engineering societies.
11. Design and implement a **MEMBERSHIP** development plan for technical engineering society members, professional engineering society members, and for all others interested in promoting Engineering Ethics.

12. Develop strategies for greater CORPORATE AND FOUNDATION INVOLVEMENT in NIEE projects and objectives. Seek joint support from private and public foundations and industry sponsors.

Additional information regarding NIEE can be obtained by contacting Jimmy H. Smith, NIEE President, Murdough Center for Engineering Professionalism, Texas Tech University, Box 41023, Lubbock, TX 79409-1023.

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Texethics is distributed at no charge to engineering faculty members within the State of Texas and to others within the engineering profession who request to be included on the mailing list. **Texethics** is one element of the Professional Development Program of the Texas State Board of Registration for Professional Engineers and is sponsored by that Board. Printing and distribution (2,500 copies) are supported in part by a grant from the **Texas Engineering Foundation**. **Texethics** is not a copyrighted publication; hence it may be reproduced but credit is requested.

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