E-190, Winter 2013

PROFESSIONAL RESPONSIBILITIES OF ENGINEERS

MW, 10:30-11:50 am, 1001 Giedt Hall

Lead Instructors:
Spyros Tseregounis (3114 Bainer Hall, stserego@ucdavis.edu)
Hector Baldis (3011 Ghausi Hall, habaldis@ucdavis.edu)
Lead TA: Nicolas Mallory (njmallory@ucdavis.edu)

1. Course Description

PROFESSIONAL RESPONSIBILITIES OF ENGINEERS covers three aspects of the engineering profession:

a. ***Legal principles,*** applicable to the engineering profession that the Engineer should be aware of: Tort law, contract law, agency, partnerships, corporations, professional liability, products liability, intellectual property (patents, copyrights, trademarks, & trade secrets), and employment law (discrimination, retaliation & sexual harassment).

b. ***Ethical principles*** of the engineering profession and ethics issues that the Engineer may encounter throughout his/her career.

c. ***Professional development and values*** that the Engineer has to be aware as she/he pursues her/his career.

In addition, seminar(s) by experts in these three areas will strengthen the students' understanding of the class material covered in class. The class meets twice a week for a total of three hours per week.

2. Course Objectives

a. To introduce engineering students to **legal issues** they will likely encounter in their profession: contracts, agency, partnerships, corporations, real property, professional liability, products liability, intellectual property (patents, copyrights, trademarks, trade secrets); and employment law (discrimination, retaliation and sexual harassment).

b. To understand **ethical issues** and principles that engineers will confront throughout their professional careers.

c. To orient engineering students to the **professional world** they are about to enter.

3. Course Requirements

Material that the students need to study will be posted in the SmartSite for the class. Additional references that the students may find useful are listed below:

a. "Engineers and Their Profession", John D. Kemper and Billy R. Sanders, Oxford University Press, Fifth Edition, 1991.

b. "Ethics in Engineering", Mike W. Martin and Roland Schinzinger, McGraw Hill, Fourth Edition, 2005.

c. "Engineering Ethics, Concepts and Cases", Charles E. Harris, Jr., Michael S. Pritchard, and Michael J. Rabins, Wadsworth, Fourth Edition, 2009.

4. Participation

The information presented in this course is primarily learned through the class lectures and class discussions. Participation through class attendance is therefore required, and will count towards 10% of the final grade. Understanding of the course

materials is possible only if the student personally attends and participates in each class discussion.

5. Grading

A student's final grade for the quarter is based on the following allocation of points:

400 - Law Midterm

500 - Final Exam

80 - Lecture participation through attendance (17 lectures @ 5 points per lecture). Five points are deducted for each unexcused lecture absence. On a case-by-case basis, the Instructor will determine whether or not an absence is excused.

20 – Special attendance of the career fair and short feedback report.

1,000 - Total Points

6. Instructors

i. The Instructor for the Tort Law portion of the course is **Margaret Z. Johns**, J.D., Senior Lecturer at the School of Law. Professor Johns earned her B.A. in French at the University of California, Santa Barbara, in 1970 and her J.D. at the University of California, Davis, in 1976. She founded the King Hall Civil Rights Clinic which represents clients in the United States District Court and the Ninth Circuit Court of Appeals. In addition to extensive practice experience, Professor Johns has published numerous books and articles on the United States Legal System, Civil Procedure, Civil Rights, and Tort Law. She has received awards for pro bono service to the courts as well as the UC Davis Public Service Award and the School of Law Distinguished Teaching Award.

ii. Professor **Peter Lee** will discuss intellectual property issues. Professor Lee graduated from Yale Law School, where he was a member of The Yale Law Journal and a student director of the international human rights clinic. He joined the King Hall faculty after clerking for Judge Barry G. Silverman of the Ninth Circuit Court of Appeals. He received his undergraduate degree from Harvard University, where he studied the history and philosophy of science. Professor Lee has continued to examine the intersection of science and society in his legal research, which explores the patent system's impact on scientific and technological progress. In a related vein, Professor Lee's work has also addressed the broader question of how intellectual property affects the creation and dissemination of ideas.

iii. The Contract Law section will be taught by **John Hunt**, Acting Professor of Law. Professor Hunt earned an A.B. in Russian and Soviet Studies in 1991 from Harvard College, a J.D. in 1995 from Yale Law School, and an M.F.E. (Masters in Financial Engineering) in 2007 from the U.C. Berkeley Haas School of Business.

iv. The Instructor for the Ethics Portion of the Course is Dr. **Spyros Tseregounis**, Ph.D., Associate of the Chancellor, Lecturer in the Department of Chemical Engineering and Materials Science, and Faculty Coordinator for Corporate Relations in the Office of Research. Dr. Tseregounis earned his B.S. in Chemical Engineering in 1977 at Aristotelian University of Thessaloniki, Greece; and his M.S. and Ph.D. in Chemical Engineering in 1981 and 1984 at the University of California, Los Angeles.

v. The instructor for the Professional Development portion of the course is Professor **Hector Baldis**, Ph.D., Professor in the Department of Mechanical and Aerospace

Engineering. Professor Baldis obtained his M.S. and Ph.D. in Physics in 1968 and 1971 respectively, from the University of British Columbia, Canada. Professor Baldis has extensive experience in Research and Development, including the management of large teams of scientists and engineers, in a number of programs and companies in Canada, France and US.

7. Special Seminars

   i. **David McGee,** the Executive Director for UC Davis InnovationAccess which provides services that connect research to the marketplace and is focused specifically on protecting and commercializing intellectual property, and fostering entrepreneurship within the campus community. Prior to joining UC Davis in 2004, from 1987 to 2003 Dr. McGee was co-founder and Chief Operating Officer of Large Scale Biology Corporation (LSBC), a biotechnology healthcare firm that developed new pharmaceuticals, including patient-specific cancer vaccines in plants using viral vectors. From 1982 to 1987, he was a founding member and Vice President of Operations at Sungene Technologies Corporation, a plant biotechnology company that improved major commercial crop species using genetic engineering and tissue culture. Dr. McGee received his Ph.D. from Louisiana State University where he also served as a faculty instructor of zoology and genetics. David is a registered patent agent with the U.S. Patent and Trademark Office.

   ii. **Pam Swartwood**, Coordinator, Engineering & Physical Sciences Program, Internship & Career Center BS UC Davis, MS California State University. For 20 years Pam has advised BS, MS and PhD students in the engineering, computer science and physical sciences fields on career development. Pam has provided strategies and skills through workshops and individual advising appointments to assist students in successfully achieving their career goals. Pam works with employers to provide support and resources for their recruiting needs.