DEPARTMENT
OF
ELECTRICAL AND COMPUTER
ENGINEERING
THE UNIVERSITY OF TEXAS AT EL PASO

PROFESSIONAL AND ETHICAL CONDUCT

department of electrical and computer engineering
PROFESSIONALISM

✓ A professional must be able to properly balance competing values in making decisions that affect both society and the client, especially where personal, societal, and cultural values conflict.

✓ Engineering requires creativity (invent something new) and dedication (put the necessary effort) to succeed.

✓ Engineers must get involved with their profession and with the society.

✓ AS AN ENGINEERING STUDENT YOU ARE EXPECTED TO BEHAVE PROFESSIONALLY.
STUDENT ORGANIZATIONS WITHIN ECE DEPARTMENT

- Institute of Electrical and Electronics Engineers (IEEE) and Eta Kappa Nu (HKN) – EE Honor Society
  - Office for UTEP Student branch within IEEE Student Lounge
- HKN has become a branch of IEEE and will now be called IEEE-HKN. Also new HKN inductees must be IEEE members as well
- Student Chapter of the IEEE Robotics and Automation Society
THE ACADEMIC CRITERIA FOR ETA KAPPA NU MEMBERSHIP:

- Junior (60 hours including Circuits II).......................... 3.35
- Senior* (90 hours)............................................................... 3.10**
- Graduate (9 hours).............................................................. 3.75
- Note: GPA to be calculated with classes that apply toward degree.
  *Must not be graduating this semester.
  ** Seniors that have at least a 3.0 GPA may be considered for initiation on a case by case evaluation by officers (please see HKN President, Elliot Gurrola, for more information).
- Qualifying students must fill an application form.
IEEE & HKN OFFER:

✓ Tutoring
  ❖ This semester they will offer:
    ❖ HKN: Tutoring for EE students.
    ❖ IEEE: Workshops on MATLAB and webcasts for LabView

✓ Special speakers

✓ Competitions (IEEE-Xtreme Coding, Organized Robotic events for schools in region, etc.)

✓ Senior Banquet

✓ Opportunity to develop professional/leadership skills

✓ Mentorship of High School robotics

✓ Contacts, connections, & experience
STUDENT ORGANIZATIONS
COLLEGE-WIDE

- Tau Beta Pi (ТБΠ) – Engineering Honor Society
- Society of Hispanic Professional Engineers (SHPE)
- National Society of Black Engineers (NSBE)
- Society of Women Engineers (SWE)
- Mexican-American Engineering Society (MAES)
# Research Experiences for Undergraduates

## On-Campus Opportunities
- Exposure to research
- Operations
- Source of support while attending UTEP
- Attending UTEP

## External Opportunities
- Travel costs
- Housing or allowance
- Stipend
- Participation in NSF-sponsored research
- Visit another university

---

Department of Electrical and Computer Engineering

The University of Texas at El Paso
PLAN BEYOND GRADUATION

- Plan on Professional Licensure. Some jobs require a valid state Professional Engineer License.

- Participating in an internship or in a Co-op experience in an engineering job has several benefits:
  - Gain experience in your field
  - Be paid a pre-professional wage
  - Possibility to earn academic credit

- Students need an overall GPA of 2.0 or greater to graduate.
- Students need an in-major GPA (EE courses only) of 2.0 or greater to graduate.
- Graduate school requires at least a 3.0 GPA for admission.
- Companies and graduate programs will give priority to hire or accept a graduate with a good GPA.

- Students with better grades are more likely to obtain a better salary when hired.
LICENSURE – FE AND P.E.

• Professional licensure protects the public by enforcing standards that restrict practice to qualified individuals who have met specific qualifications in education, work experience, and exams. A licensed engineer is also known as a “Professional Engineer” or P.E.

• In the United States, licensure for the engineering and surveying professions is regulated by state. Candidates interested in pursuing licensure are encouraged to check the requirements in the state or territory where they plan to practice, as the requirements vary.

• Licensed engineers are a select group. Because the requirements are stringent and because there are some exemptions that allow engineers to work under the supervision of a P.E., not all engineers become licensed. Those who do achieve licensure, however, enjoy the professional benefits that accompany this distinction. Licensed engineers also enjoy more career options. As a P.E., you would be able to perform certain tasks, such as:
  • Stamp and seal designs; Bid for government contracts; Be principal of a firm; Perform consulting services; Offer services to the public.

• Steps to become a P.E. While each state licensing board has its own laws regarding engineering licensure, there is a general four-step process for licensure candidates:
  • Earn a degree from an ABET-accredited engineering program.
  • Pass the FE exam. (Usually while still in college)
  • Gain acceptable work experience (typically a minimum of four years). In most cases, this must be completed under the supervision of a P.E.
  • Pass the PE exam in the appropriate discipline. Check your state’s requirements; some require experience to be earned before you can take the PE.

• More information: http://ncees.org/licensure/
CODE OF ETHICS

✓ Codes of ethics are the value guidelines that a professional must follow in order to remain registered as a member of the profession.

✓ Misinterpreting the codes or ignoring them can result in a person's losing his or her job, or even being expelled from the profession. Thus, understanding value issues and being able to make mature value decisions are just as important as technical knowledge.

✓ IEEE Code of Ethics:

http://www.ieee.org/about/ethics_code/index.html
IEEE CODE OF ETHICS

“We, the members of the IEEE, in recognition of the importance of our technologies in affecting the quality of life throughout the world, and in accepting a personal obligation to our profession, its members and the communities we serve, do hereby commit ourselves to the highest ethical and professional conduct and agree:

• to accept responsibility in making decisions consistent with the safety, health, and welfare of the public, and to disclose promptly factors that might endanger the public or the environment;

• to avoid real or perceived conflicts of interest whenever possible, and to disclose them to affected parties when they do exist;
IEEE CODE OF ETHICS ...

• to be honest and realistic in stating claims or estimates based on available data;

• to reject bribery in all its forms;

• to improve the understanding of technology; its appropriate application, and potential consequences;

• to maintain and improve our technical competence and to undertake technological tasks for others only if qualified by training or experience, or after full disclosure of pertinent limitations;
IEEE CODE OF ETHICS ...  

• to seek, accept, and offer honest criticism of technical work, to acknowledge and correct errors, and to credit properly the contributions of others;  

• to treat fairly all persons and to not engage in acts of discrimination based on race, religion, gender, disability, age, national origin, sexual orientation, gender identity, or gender expression;  

• to avoid injuring others, their property, reputation, or employment by false or malicious action;  

• to assist colleagues and co-workers in their professional development and to support them in following this code of ethics.”
EXAMPLES OF ETHIC PROBLEMS

✓ Piracy

✓ Copying of homework or tests (there is a difference between “collaboration” and “cheating”)

✓ Plagiarism (Proper research and citations eliminate many problems)

✓ False reporting on financial forms

✓ “Borrowing” equipment or office supplies from employer or school, without appropriate approval (remember to return lab tools and parts)

✓ Allowing unapproved individuals to access equipment, software, or facilities Illegal copying of Videos or CD

Department of Electrical and Computer Engineering

THE UNIVERSITY OF TEXAS AT EL PASO

1914 2014
CENTENNIAL CELEBRATION
THE UNIVERSITY OF TEXAS AT EL PASO
WHY ARE ETHICS AND WHISTLE-BLOWING IMPORTANT TO ME?

✓ Professors and TAs are aware of unethical behavior and are always looking for ways to prevent it.

✓ It is your responsibility to report unethical behavior, if you know about it. If you are caught participating in academic dishonesty, this will lead to disciplinary action in conformance with the school’s policy.

✓ Whenever there is a problem try to solve the problem with the course instructor. If the problem persist or is unsolved then you might escalate through the proper hierarchy channel: Instructor → Advisors → Program Director → ECE Chair → Assoc. Eng. Dean for UG → Dean of Students office.

✓ Bottom line: Ethics is important in everyday life. Unethical behavior at school, such as plagiarism and cheating (whether it is yours or someone else’s) denigrates everyone's degree from that institution.
QUESTIONS?

Please contact:
ECE Office at ENG-A325
Ph: (915) 747-5470
Or
vgonzalez3@utep.edu