



IE's Contribution to the Undergraduate Research Experience: 2011-2012

In 2011-2012, 251 undergraduates enrolled in the IE Pre Grad Internship. They worked in 12 of UT's colleges and schools, representing 48 academic disciplines, and

were paired with 120 graduate student mentors and over 70 members of the faculty. 59% of interns are first generation and/or underrepresented students.

A large number of IE students conduct original research and/or collaborate on research projects with their graduate student mentor or faculty supervisor as a key component of the Pre Grad Internship. For many this is their first research experience, frequently leading to additional research in subsequent semesters.

Thanks to funding from ten of UT's deans, 2011-2012 IE Pre Grad interns and mentors traveled to academic and professional conferences in such places as: Leipzig (Germany), Los Angeles, San Francisco, Chicago, Montreal, New Orleans, St. Louis, Houston, San Antonio, Washington, Dallas, Hartford, Albuquerque, Memphis, Atlanta, and others.

In addition, Sarah Kettles (Psychology IE Pre Grad Intern and Member of the "IE Citizen Scholars" student organization) was awarded Researcher of the Month by the Senate of College Councils in October; the award is for research she began as an IE Pre Grad Intern.

http://www.utexas.edu/know/2011/10/03/undergrad_kettles/

<http://www.screencast.com/users/SarahKettles/folders/Default/media/a82dd5b4-0bec-46da-be12-f708dd58eb42>

Also of note: Ashley Garcia's (RTF/LAS) involvement in the IE Pre-Grad Internship led her to the prestigious Ralph Bunche Institute at Duke University; her research paper was one of only 10 selected for presentation at the American Political Science Association conference in September. She and her mentor were invited to speak at Gone to Texas.

http://www.utexas.edu/know/2012/01/04/ie_pre_grad/

<http://www.youtube.com/watch?v=SzpzI-yDQIU>

As part of UT's 2012 Research Week over 30 IE students presented their research at poster sessions sponsored by various academic units. 12 of these students participated in the IE Citizen Scholars Poster Contest. Several winners were featured in a story published by the College of Communication:

<http://communication.utexas.edu/features/clarified-career-path>

Below are 45 of the research projects IE students undertook in 2011-2012. Note the variety of research in the humanities, sciences, arts, and social sciences—representing 12 of UT's colleges/schools. Students were energized, learning about research inside and outside of their own areas of study. Through IE they became members of a larger research community.

A Sample of 2011-2012 IE Pre Grad Internship Research

Pharmacy/Medicinal Chemistry

The purpose of the research is to make swellable particles made by oligoguluronate of alginate for antibiotics delivery through inhalation.

Communication Sciences and Disorders

Conducting a pilot study to assess early childhood intervention for bilingual children.

Biomedical Engineering

Working in a research lab to create hydrogels that can be used for nerve regeneration and wound healing.

Sociology

Doing research on LGBT studies. Specifically researching Latino LGBT: focusing on lesbian, gay, bisexual and transgender cases that deal with hate crimes.

Integrative Biology

Conducting research to discern how females of the same species can support two different color morphs within the same population, and how the dynamics of this fluctuate with respect to different variables.

Evolutionary Psychology

Studying the relationship between evolutionary markers (such as testosterone and facial symmetry) and jealousy in long-term couples.

Biomedical Engineering

Doing research to create an alternative to organ transplantation. Specifically, using mesenchymal stem cells to create the inner lining of blood vessels in lung tissue taken from rats to determine whether they are successfully differentiating into endothelial cells which can be used to redevelop the interior lining of blood vessels in our tissue replacement project.

Radio-Television-Film

Doing research on representations of gender within the “emo” subculture, specifically

how the youth within this particular subculture create their gender identities in opposition to the dominant gender ideologies that are presented in popular media texts.

Anthropology

Research on a project in physical anthropology: doing primary data collection of measurements of the vertebrae of Capuchin monkeys using radio-graph imagery.

Business

I am doing research on management/human resource styles by collecting a series of published material that will give me insight as to how businesses run their human resources department effectively.

Communication Sciences and Disorders

Working with my faculty mentor on a stuttering study of children and adults. We film them watching a video with different pictures and then track their eye movements from picture to picture.

Counseling Psychology

Researching stress levels among minority students at predominantly white institutions and the ways in which they seek help for their stress.

Law

Doing research on the relationship between philosophy and law—in particular, the relationship between morality and legal systems.

Community and Regional Planning

Research on commercial real estate development and how city governments deal with private interests.

Music (Musicology)

I am conducting research about semiotics, its use in music theory, and also about music cognition and perception.

LBJ School of Public Affairs

I am researching the media reaction to the flooding in Pakistan and the amount of aid

sent from different countries (mainly the U.S., India, China, Australia and possibly a few ME countries).

History

I am assisting in researching the evolution of religious authority in Syria and Egypt in the 20th century. The research will be done in a foreign language (Arabic and Shami) and I will be looking at mainly newspapers and magazines.

Biomedical Engineering

Doing research on using liposomes, artificially created vesicles made of lipids or "fats", to treat cancer.

Communication Sciences and Disorders

Doing research at HABLA Lab. We are currently preparing for a project dealing with research on how language develops in bilingual children. We are also tracking those who speak one language only in order to compare the differences in their development.

Social Work

Research is in developing curriculum, helping my mentor design a class on Clinical Social Work with Military Personnel and Families. It's designed for students who want to gain more knowledge about social work's role in addressing the unique needs of military personnel and their families in a clinical setting.

Neurobiology

Researching the visual field of rhesus monkeys.

Anthropology

Conducting research on female philopatry and affiliative behavior with a mouse lemur colony.

Educational Psychology

Research on neuropsychology in the context of improving educational outcomes.

Biomedical Engineering

Research on biomaterials to serve as anti-adhesive scaffolds. The goal of this scaffold is for it to be placed inside of the body after a surgery, in order to prevent adhesion

formation.

Speech and Language Pathology

Working on a study that examines the technique of self-disclosure for a person who stutters, and the effect it has on the listeners' perceptions of the conversation.

Child Development

Working in the child development lab: conducting a study that tests joint attention and synchronization in children who are at high risk or low risk of developing autism.

Theatre and Dance

My mentor and I are doing a project on "Once Upon a Weekend," where we both were playwrights.

Linguistics

Exploring the historical reconstruction of Amazonian languages spoken by hunter-gatherer societies.

Mathematics

My mentor and I are studying polynomial factoring problems over some rings. These problems aren't yet even fully tackled in real numbers, so this is definitely a diverse enough area from which to get unsolved problems.

Communication Sciences and Disorders

Participating in 4 different studies/research projects. The primary research is called STEP which measures perception in stuttering adults and children, word recognition and eye-tracking.

Deaf Education

Working on a research project that studies children at the Texas School for the Deaf to determine their vocabulary development in ASL, spoken English and written English.

Biomedical Engineering

Conducting research on tissue engineering and wound healing. Specifically how to advance the process of wound healing by creating three dimensional scaffolds that

mimic natural tissue and also contain other properties to assist in the mechanism.

Interpersonal/Relational Communication

Doing research on the effects of video games on interpersonal romantic relationships.

Communication Sciences and Disorders

Doing research on how children who are Deaf most effectively learn vocabulary skills.

Bilingual Education

Focusing on language outcomes of bilingual children.

Sociology

Researching the relationship between hate crimes, hispanic ethnicity, and sexual orientation.

Pharmacy/Neuroscience

Supporting research efforts in a lab -- handle/play with animals (rats), assist in perfusions (where we extract the rat brain), help set up for surgery, slice rat brains for analysis.

Sociology

Researching how TLGBQ people experience hate crimes, focusing mainly on Latinos/as. Specifically looking at how these hate crimes are portrayed in the media and whether there are any similarities in the victims.

Social Work

Working with a team doing research on Obesity.

Biomedical Engineering

Doing research on creating different types of biomimetic materials, in particular evaluation vascular networks using vascular corrosion casting.

Curriculum & Instruction

Researching the intersection of cultural studies and curriculum and instruction.

Chemistry

We are synthesizing a new anti-biotic from bacteria streptomycetes. The problem is that the anti-biotic has been created in vitro and we are trying to create it in vivo, so this involves multiple steps to isolate the gene and add it to the bacteria, then duplicate it and test to see if it reacted correctly.

Speech Pathology

Working on research recently begun in the "Clear Speech Project," which studies international TA's and how accents correspond with intelligibility.

Anthropology

Research on anthropological genetics, specifically working to determine the natural selection factors causing nocturnal lemurs to retain their color vision.

Biomedical Engineering

Doing research to develop and test a film barrier that can be used to help patients with spinal cord injuries.