

Texas A&M University
Department of Electrical & Computer Engineering
RESEARCH EXPERIENCES FOR UNDERGRADUATES
APPLICATIONS

Have you participated in a research program before?
If so, where?

List areas of concentration in ECE where you are
interested in performing research:

To apply for this program, please:

**COMPLETE THIS APPLICATION, SIGN IT BELOW
AND RETURN IT ALONG WITH ONE FACULTY
RECOMMENDATION LETTER AND A CURRENT
OFFICIAL TRANSCRIPT TO THE FOLLOW
ADDRESS BY:**

5:00 PM MARCH 31, 2011

Address:
Dr. Deepa Kundur
Department of Electrical & Computer Engineering
Texas A&M University
3128 TAMU
237D Wisenbaker Engineering Research Center
College Station, TX 77843-3128
Phone: (979) 862-8684 Fax: (979) 862-4630
E-mail: dkundur@tamu.edu

X _____
Student Signature

Date

Visit our web site: <http://www.ece.tamu.edu/~reu>



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Texas A&M University - Department of Electrical & Computer Engineering
RESEARCH EXPERIENCES FOR UNDERGRADUATES
May 31, 2011 - Aug 5, 2011



**RESEARCH EXPERIENCES FOR
UNDERGRADUATES (REU)**



**SMART ENERGY AND
SMART SYSTEMS:
ENABLING THE FUTURE
THROUGH ELECTRICAL AND
COMPUTER ENGINEERING**

Program Guidelines

<http://www.ece.tamu.edu/~reu>

May 31, 2011 - Aug 5, 2011

Program Basics

The Department of Electrical & Computer Engineering at Texas A&M University offers undergraduate students an opportunity to participate in ongoing research with faculty members. The Research Experiences for Undergraduates (REU) program funded by the National Science Foundation (NSF) spans 10 weeks and involves undergraduate students from Texas A&M University as well as students from other colleges and universities. The program focuses on research topics related to smart energy and smart systems. REU students will participate in developing the next generation of algorithms, protocols and prototype technologies leveraging advances in intelligent signal processing, computation, microelectronics and nanoscale device synthesis. Electrical & computer engineering faculty members will serve as mentors for REU students. This year's program will involve approximately 9 students.

During the summer research experiences, participants work closely with faculty members and graduate students on current research projects, are exposed to lab and facility tours, participate in ethics seminars, attend seminars on graduate school and GRE review sessions, and present a poster of their research experience at a symposium held at the end of the program.

Funding

- Each grant (stipend) will be \$5,100 for support of the student for ten weeks. The program will also: 1) pay tuition and fees for one credit hour of required independent study/research course, 2) provide and pay for housing in campus facilities (for on-campus housing requirements), 3) pay a weekly meal allowance, and 4) pay partial reimbursement for travel expenses.
- Arrangements for equipment, supplies and other miscellaneous items will be coordinated with the Faculty mentor with whom the student will work.

Method of Award

Each student applicant will submit a completed application, one faculty recommendation letter and a current official transcript. Be sure to include a description of special research area(s) of interest within your field. This description will aid in pairing the applicant up with a faculty mentor. It is not the intent of this activity to stimulate "student generated" research ideas; rather, the purpose is to seek contributions to ongoing faculty research thrusts. Each application will be reviewed upon receipt.

Student Requirements

- Students selected for grant support may not be enrolled in additional courses during either summer school session.
- Research hours to be worked are determined by individual faculty members (typically 40 hours/week).
- Each student will be required to give two brief presentations on his/her respective project during the course of the program.
- Each student will be required to prepare an abstract and a poster presentation describing the results of his/her research.
- Applicants must be U.S. Citizens or permanent residents.

Faculty Mentors and Topics

Dr. Karen Butler-Purry: active management of the smart grid

Dr. Robert S. Balog: powering the smart grid sensor system

Dr. Deepa Kundur: smart grid cyber security analysis

Dr. Jose Silva-Martinez: power-efficient smart grid electronics

Dr. Haiyan Wang: semiconductors for smart power distribution

Dr. Le Xie: integration of renewable energy resources

Dr. Takis Zourntos: smart grid stabilization, multi-agent control

Please check www.ece.tamu.edu/~reu for current information on research mentors and topics, and links to mentor webpages.

Purpose

The purpose of the program is to involve in a summer research program outstanding students who have completed at last their sophomore year and are interested in pursuing graduate studies. It is hoped that these students will make a contribution to ongoing faculty research and, more importantly will gain an appreciation for and an interest in a research career.

The success of this program will be measurement in two ways:

- (a) the proportion of participants who apply for and enter graduate programs;
- (b) the proportion of those students supported for research activities during the year(s) following participation in the summer research program.

Announcements of acceptance will be made no later than **April 6, 2011**. Review of applications will be conducted by ECE REU faculty coordinators.

Texas A&M University Department of Electrical & Computer Engineering RESEARCH EXPERIENCES FOR UNDERGRADUATES APPLICATIONS

Last Name First Name Middle Initial

University Major

School Mailing Address

City State Zip

Phone # (please include area code)

Permanent Address

City State Zip

Phone # (please include area code)

E-mail Address

Citizenship:

US Citizen Permanent Resident Other

Ethnicity:

African Am. Hispanic Am. Native Am.
 Asian Am. Anglo Am. Other

Gender: F M Cumulative GPA _____

Expected Date of Graduation:

Spring Summer Fall _____ Year

Freshman Sophomore Junior Senior

Number of hours completed: _____

Upon graduation, are you planning on attending graduate school: Yes No

Please complete other side of form.