

Call for Applications – Deadline October 14, 2009

MAE - Duke Energy Undergraduate Energy-Related Research Grants

Proposal Overview

Duke Energy has generously provided funds to support 8 MAE students for conducting undergraduate research in the broad area of energy under the supervision of a faculty mentor. Each award consists of a \$2,000 stipend and a \$500 operating budget for the student's mentor. The award period consists of the fall and spring semester. New first-time applications are encouraged, however, this grant may be renewed by reapplying.

The deadline for applications is October 14, 2009. Only electronic submissions will be considered. Students who are awarded grants are expected to participate in a future NC State Undergraduate Research Symposium, held each spring semester.

(see <http://www.ncsu.edu/ugrs/>)

Eligibility

Only MAE undergraduate students may apply; there is no GPA requirement, but students must be in good academic standing and have the commitment (and signature) of a tenured or tenure-track faculty sponsor for their research, or the Department Head's approval. A letter of recommendation is required from the mentor. The objective of providing these stipends is to support interest and involvement in energy-related research.

Energy-Related Research is defined here as faculty mentored scholarly research that can involve team efforts in addressing new or improved energy innovations in fossil fuel use, plug-in hybrid transportation, power transmission, energy distribution, wind and nuclear energy, combustion, photovoltaics, topics related to sustainability, environmental impact, exploration for new sources, and consumer-based conservation and use.

Application

Following the application page (See the 3rd page of this document), students must describe the research project along with its importance and implications for advancing energy-related knowledge. Students should develop a research plan that includes the question being addressed; hypothesis, problem, or research goals; description in detail of method, procedures, or design; and a statement of the importance and implications for advancing knowledge in the selected discipline. Students should show a link between their research and their curricular/career interests. Students must identify a faculty sponsor for the proposal who has agreed to serve as the official mentor of the project.

Criteria for Selection

Criteria used for selection of students include

- Details of the experimental / creative project goals, design, methods and expected results
- Evidence of how its results will be used

- Connections between the project and candidate's curricular interest
- Recommendation by the research mentor and the awards review committee

Payment

For this award, \$1,000 in payment will be made at the end of each semester. In addition, \$500 as operating support for the student will be provided to the faculty mentor. It is encouraged the part of this support be used to pay for the printing cost of a poster.

Additional Requirements and Understandings

- Tenured or tenure-track faculty are eligible for the faculty operating cost supplement. Non-tenure track faculty may receive the operating cost supplement with a supporting letter from the department head.
- The student and faculty mentor must complete the research project proposal. Proposals must be sent via email attachment to Ms. Crystal Hansen (crystal_hanson@ncsu.edu) with the words "Duke Energy UG research application" in the subject line.
- Part of the intent of this award is that students spend quality research time with a faculty mentor, which precludes a faculty member from taking on a large number of students. Typically a one-on-one student and faculty partnership is required with the expectation that the student will conduct independent research that may contribute significantly to a larger group or departmental research mission.
- Students with mentor guidance will complete a report at the end of the academic year for which they accepted the research award. The report is posted on the MAE web site.
- A student may earn a maximum of \$2,000 with this award.

Application Submission

You will need to submit your completed application AND research proposal for consideration of the award grant. Both of these should be combined in one file (application page followed by your research proposal). Your faculty mentor will also need to submit a letter of recommendation (single paragraph sufficient). These documents should be emailed to Ms. Crystal Hansen (crystal_hanson@ncsu.edu) by midnight of the posted deadline.

Interim Report and Final Report

At the end of the project the student will complete a final report of his/her research and submit an electronic version of this to his/her faculty advisor for approval AND then the approved version to Ms. Crystal Hansen (crystal_hanson@ncsu.edu) via email attachment. An interim report is also due prior to the end of the fall semester. Payment will be processed when this interim report is submitted. The final report is posted on the MAE web site.

MAE – Duke Energy Undergraduate Energy-Related Research Grants Proposal Application

Deadline for submissions is Midnight October 14, 2009

Student Information:		Mentor Information:	
Name		Name	
ID Number		College & Dept.	
Local Phone		Phone	
Email		Email	

Student Local Address:

Address 1	
Address 2	
City, State, Zip	

Class Standing: __ FR __SO__JR__SR **Expected Graduation Date:** _____

Please complete each point for your proposal:

1. Research Title:
2. Research Hypothesis and Keywords:
3. Research Plan (include the question being addressed; problem, or engineering goals; describe in detail your proposed methods, procedures, or design) (**maximum** of 500 words):
4. Statement of the importance and implications for advancing disciplinary knowledge (maximum of 250 words):
5. Describe the connection between this project and your curricular interests (maximum of 250 words):
6. Describe the time commitment anticipated for this project (hours per week):

Deadline for submissions is midnight on October 14, 2009.

Application submission directions:

Give complete and thorough answers to each point above. Save your final proposal application as a Word .doc or .PDF file. Print a copy of the document to have your mentor review. You must have your mentor's approval and agreement to work with you this proposal. You will need to email your application (i.e. this completed page) AND your proposal (one file) to Ms. Crystal Hanson (crystal_hanson@ncsu.edu) with the words "Duke Energy UG research application" in the subject line by the submission deadline. Your faculty mentor will also need to submit a letter of recommendation (one paragraph sufficient). This should also be sent to Ms. Crystal Hanson.