Infusing System Design and Sensor Technology in Education (INSIGHT)
An NSF GK-12 Program at Kansas State University

GK-12 STEM Fellowship Application Form
(June 1, 2014 – May 31, 2015)

Program Purpose: This program supports graduate fellowships and associated training that will enable graduate students in the sciences, mathematics, engineering, and technology to serve as resources to teachers in K-12 schools, particularly at the upper elementary through high school level, and to enhance their own research and communication skills. It builds on prior programs involving Kansas State University and rural school systems within the state of Kansas. Graduate students in Computer Science, Biological and Agricultural Engineering, and related Engineering fields are encouraged to apply. The focus of the program is on precision agriculture, telemedicine and related fields.

The goal is for Fellows to integrate and apply their current research findings into education at the K-12 level. Through this effort, graduate students can gain a deeper understanding of their own research and how it impacts society, and acquire value-added skills such as communicating results to technical and non-technical audiences, leadership, and team-building. We expect Fellows to split their time between two teachers for lesson planning, classroom exercises, field trips, and regular meetings and workshops. Expected outcomes include improved communication and teaching skills for the Fellows, enriched learning by K-12 students, professional development opportunities for K-12 teachers, and strengthened partnerships between institutions of higher education and local school districts.

Graduate Fellowships are awarded for a 12-month period beginning 1 June ($30,000 stipend per year). The stipends are renewable for a second year. Benefits include full tuition and fees. All teachers and Fellows are expected to attend an early summer training and orientation workshop that precedes the start of the K-12 academic school year. This workshop will be held on the campus of Kansas State University in Manhattan, Kansas in June (tentatively, June 6-17). Housing and transportation costs will be provided.

For more information, see: http://gk12.cis.ksu.edu.

Overall GK-12 Project Goals

National Science Foundation: To develop partnerships between schools and universities with Science, Technology, Engineering, and Mathematics (STEM) graduate students working with teacher colleagues to improve STEM education at the K-12 level and to improve the research and communication skills of GK-12 Graduate STEM Fellows.

Kansas State University: To promote the academic and professional development of K-12 and university-level participants by building long-term partnerships between K-12 school districts and Kansas State University researchers in Sciences, Technology, Engineering, and Mathematics (STEM), and to enhance the educational opportunities for graduate students.
Some Basic GK-12 Fellow Responsibilities and Expectations

- An average of 15 hours/week dedicated to activities with K-12 students and teachers, including those listed below (about two-thirds of this time is spent in the classrooms or communicating remotely with teachers and students in the classroom). Roughly five hours per week will be spent with each teacher. Each fellow is assigned two teachers.
- Work with K-12 teachers in their classroom to develop activities related to subject areas in your research discipline. Hold weekly 30-minute conferences with your K-12 teacher to exchange ideas and plan future lesson activities based on your written classroom/subject syllabus.
- Participate in meetings for planning of activities, communication with PI’s, and exchange of ideas and experiences. There will be opportunities to present the information developed to at least one group of colleagues and professionals at conferences, workshops, or symposia (travel expenses provided).
- Attend a two-week summer training workshop June 1-15 that precedes the start of the K-12 academic year (held on the K-State campus in Manhattan, KS).
- Understand and appreciate the goals and objectives of this program.
**GK-12 STEM Fellowship 2014-2015 Application Form**

**To apply, you should:**
- Be a US Citizen or Permanent Resident
- Submit a completed, signed application form
- Submit a Statement of Purpose (described below)

**Statement of Purpose**

*Please write a one-page statement of interest that summarizes your educational and career objectives and why you should be considered for a GK-12 STEM Fellowship. As a guide, please address the questions listed below in your essay. Please indicate if you wish to be considered for a 1 or 2 year appointment.*

1. Why do you want to participate in the GK-12 STEM Fellowship program?
2. What qualities do you feel you possess that make you a good mentor for K-12 teachers and students?
3. Describe any experiences do you have working in a K-12 setting. Briefly describe those experiences.
4. What do you see as some of the challenges of effective K-12 science, engineering, and technology education?
5. What specific disciplines (e.g., physical education, robotics, vocational agriculture, physics, environmental science, etc.) and levels (upper elementary, middle school, and/or high school) do you feel most qualified to teach and provide expertise to K-12 teachers and students?
6. Review the section of the GK-12 website that includes activities and on-line materials. How might you contribute or facilitate innovative programs, ideas, or lessons?

**FOR QUESTIONS CONCERNING ANY ASPECT OF THE GK-12 PROGRAM, CONTACT:**
Mr. Nathan Bean, Program Coordinator, at 785-532-6350 or (nhb7817@k-state.edu), or Dr. Mitchell Neilsen, Program Director at 785-532-7918 or (neilsen@k-state.edu).

Send completed application and supporting documentation to nhb7817@k-state.edu, or mail to:

**NSF GK-12 INSIGHT PROGRAM**
Dept. of Computing and Info. Sciences
234 Nichols Hall
Manhattan, KS 66506-2302

Ph: (785) 532-6350
**GK-12 STEM Fellowship 2014-2015 Application Form**

**Please Print Clearly or Type**
**Contact Information:**

Name: ______________________________________ K-State EID __________________________

Mailing Address:

_________________________________________ Office Phone # _____________________________
Street/PO Box

_________________________________________ Cell/Home Phone # ___________________________
City, State  Zip

E-mail Address ________________________________________________________________

**Residence and Citizenship Information:**

___ Resident of Kansas
___ US Citizen
___ US National
___ Permanent Resident

**Education:**

*Current Degree Sought:* ____________________ *Ultimate Degree Sought:* ________________

**Educational Background:**

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How many hours of graduate work will you have completed at the time of the award? ____

**Post High School Employment and Professional Experience:**

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GK-12 STEM Fellowship 2012-2013 Application Form

References:
Please list two (2) individuals who are willing to serve as a reference for you. If you are currently enrolled at K-State, one of those references should be your current research advisor. If you are just applying for admission to K-State for the Fall semester, you can list the same references used on your admission application form. Note: Research advisors or other faculty members are strongly encouraged to join and support GK-12 STEM Fellows in their K-12 partnership activities as time allows.

____________________________________________________________________________
Name, Position
Address, City, State, Zip
Phone Number Email Address

____________________________________________________________________________
Name, Position
Address, City, State, Zip
Phone Number Email Address

I certify that all general information given on this application is complete and correct. I also agree to the responsibilities of a GK-12 STEM Fellow as described in this application, including participation in required meetings, seminars, and workshops.

____________________________________________________________________________
Name
Address, City, State, Zip
Phone Number Email Address

Signature of Applicant Date

No person shall be excluded from participation, denied the benefits of, or be subject to discrimination under any program or activity sponsored or conducted by Kansas State University on any basis prohibited by applicable laws, including, but not limited to, race, color, national origin, religion, sex or handicap. Underrepresented groups and women are especially encouraged to apply.