Summary:
The Integrative Graduate Education and Research Traineeship (IGERT) program has been developed to meet the challenges of educating U.S. Ph.D. scientists and engineers with interdisciplinary backgrounds, deep knowledge in chosen disciplines, and technical, professional and personal skills. The program is intended to establish new models for graduate education and training in a fertile environment for collaborative research that transcends traditional disciplinary boundaries. It is also intended to facilitate diversity in student participation and preparation, and to contribute to a world-class, broadly inclusive, and globally engaged science and engineering workforce. Building upon the IGERT platform the purpose of this IGERT solicitation is to support new models in graduate education in which students are engaged in an environment that supports innovation to learn through hands-on experience how their own research may contribute in new ways to benefit society and to learn the processes for the successful implementation of such contributions.

Proposals submitted to the IGERT program must describe integrative, research-based, graduate education and training activities in emerging areas of science and engineering. The interdisciplinary research proposed may include research represented in any of the sponsoring directorates or offices listed on the program solicitation masthead, including the Directorate for Social, Behavioral and Economics Sciences and the Directorate for Education and Human Resources. This traineeship proposal should be organized around an interdisciplinary theme that is based on transformative interdisciplinary research in science/technology/engineering/mathematical sciences. The interdisciplinary theme should provide a framework for integrating research and education and for promoting collaborative efforts within and across departments and institutions. Students should gain the breadth of skills, strengths, and understanding to work in an interdisciplinary environment while being well grounded with depth of knowledge in a major field. The interdisciplinary theme as well as the collaboration across disciplines should serve as a platform for creating an environment that supports innovation and preparation of the trainees with skills needed for becoming successful innovators. Students should be educated to recognize how their research might be utilized for an economic or societal benefit, and should learn the processes that would be required to implement them in practice through hands-on experience. As an opportunity for faculty to devise new approaches to graduate education, the IGERT project should provide students with experience relevant to both academic and nonacademic careers. Please see the NSF solicitation for further important information and a summary of the elements of the competition that have been REVISED.

Proposal Limitations:
Because the university is limited to submitting one Letter of Intent to NSF in response to this solicitation where we are the lead institution, we will utilize the following procedures for an internal Notice of Intent (NOI) process to select the project that will be submitted on behalf of the university.

Internal NOI Due Date: 27 April 2012, COB 5:00 p.m. CDT, to OSP
Selection Process:
The University is limited to the submittal of one Letter of Intent to NSF. Therefore, should more than one NOI be received by the deadline of 27 April, the Office of The Vice President for Research (OVPR) will implement a review of the NOI submissions, and one applicant will be selected in consultation with the Provost to submit a Letter of Intent to NSF representing the University. The OVPR intends to make this selection by COB 30 April.

The Letter of Intent is due to NSF on 1 May 2012, and the Full Proposal will be due 2 July 2012.

Number of copies: Original and 5 copies

Internal NOI Format:
Proposal pages should have at least 1” margins all around, and use no smaller than an 11-point font.

The internal NOI will duplicate the format and content of the Letter of Intent to NSF described in the solicitation, NSF 11-533, Section V.A.

A one-page LOI including each of the following categories ONLY:

a. Name and departmental affiliation of the Principal Investigator
b. Names and departmental affiliation(s) of the Co-PI(s)
c. The lead institution and any other participating institutions
d. Project title: The project title should begin with “IGERT:” and should reflect the interdisciplinary theme
e. Synopsis (maximum of 200 words in this section). Provide a brief statement of the vision and goals of the proposed training program including a brief statement of the interdisciplinary theme.
f. Key Words: Up to four key words that reflect the established disciplines whose boundaries will be crossed in the interdisciplinary theme, in order of their emphasis in the proposal. (For example: Biology, Economics, Engineering, Physics.)