

**Illinois Institute of Technology
Pritzker Institute for Biomedical Science and Engineering
Engineering Center For Diabetes Research and Education
(<http://www.iitdiabetes.org/index.html>)**

**Summer Engineering Research Experiences in Diabetes for Undergraduates
Application Form
Due: February 15, 2009**

1. Personal information

Name: _____

Current academic level: _____

Major: _____

University: _____

Home Address: _____

Phone: _____ Email Address: _____

Gender: Male Female

Ethnicity: American Indian/Alaskan Native Asian/Pacific Islander
 Black, non-Hispanic Hispanic
 White, non-Hispanic Other: _____

Citizenship: United States U.S. Permanent Resident
 Student Visa None of these

Disability: Yes No
 If yes, please specify: _____

2. Academic Information: (a resume can be attached in place of this section)

List all colleges and universities you have attended (start with the most recent):

Name	Location (city, state)	Dates of attendance	Major	Degree granted	GPA

Honors/Awards:**Activities/Organizations:****Employment History:****3. References**

List the two people providing your letters of recommendation. Preferably, one person should be selected who can talk about your academic abilities (i.e. a professor, academic advisor) and the other should be able to talk about your work ethic (i.e. employment supervisor, advisor to a student group you are involved in, research advisor, coach).

Name	Title	University/Affiliation	Phone	e-mail

4. Essays:

Please attach two essays to the application form. The essays should be no longer than one page in length, single spaced, and font no less than 10 pt.

1) Explain why you are interested in this specific REU experience and how it will benefit your future career plans.

2) Describe any research experience you have. If you have not performed research previously, explain why you are interested in gaining this experience. A lack of research experience will not be considered a negative for the applicant.

5. Potential Projects

Below is a list of projects that will be offered during the summer. Please rank the top five projects that you would be interested in from the list (with 1 being the one you are most interested in).

Project: (potential faculty mentors in parenthesis)	<u>Rank</u>
Microparticles and thrombosis in islet transplantation (Hall)	
Altered neovascularization in diabetic tissues (Brey)	
Thermoresponsive hydrogels for treatment of retinopathy (Perez-Luna)	
GlucoSim, an internet-based educational resource (Cinar)	
Ethical and Legal Issues Raised by Diabetes Research (Burger, Andrews)	
Sustained delivery of growth factors for vascularization of transplanted islets (Brey, Opara)	
Physical Characterization of PEG Hydrogels for Islet Encapsulation (Papavasiliou)	
Developmental biology of the insulin-secreting pancreatic beta-cells (Hara)	
Functionalization of nanoparticles for improved glucose monitoring (Bishnoi)	
Combining in Silico and in Vitro Experiments to Engineer a Model of cell migration in diabetic tissues (Gatchell)	
Anti-VEGF drugs for the treatment of diabetic retinopathy (Kang Derwent)	
Materials for treatment of diabetic wounds (Brey, Cheng)	
Modeling metabolic processes of insulin secretion and utilization in diabetes (Cinar)	
Evaluation of new software and hardware capabilities for MRI (Arfanakis)	
Single and multi photon functional imaging of the pancreatic beta cell (Philipson)	
Development of a non-intrusive glucose monitor (Raman)	

The following items are required. The application will not be considered until all items are received. These items are due by **February 15, 2009**. Students will be notified of decisions by March 15, 2009.

- Completed application form (4 pages including this one)
- Two essays
- Official undergraduate transcript
- Two letters of reference

The completed application, essays, transcripts and recommendation letters should be mailed to:

Eric M. Brey, Ph.D.
Summer Diabetes REU Program
Department of Biomedical Engineering
Wishnick Hall
3255 South Dearborn Street
Chicago, IL 60630
damico@iit.edu

The forms and references can also be e-mailed to undergrad_research@iit.edu.

If you need assistance with the application process, please feel free to contact Dr. Eric Brey at undergrad_research@iit.edu or Cathie D'Amico at damico@iit.edu. For additional information see our website at <http://www.iitdiabetes.org/reu/>

I hereby certify that all the above information is complete and accurate to the best of my knowledge.

Signature _____ Date: _____