

## Trial Application

### Ernest Hoaby Innovation Scholarship

Ernest Ardell Hoaby (1933 - 1967) was a highly-regarded faculty member in the NDSU EE department from 1957 - 1967, whose main area of interest was Biomedical Engineering. He worked in industry at Autonetics in Anaheim, CA, Wright Patterson Air Force Base in Dayton, OH, Ulteig Engineering in Fargo, ND, Boeing in Seattle, WA, and IBM in Rochester, MN. He was a member of ASEE, Phi Eta Sigma, Sigma Tau, Eta Kappa Nu, and Tau Beta Pi. He played in the state championship basketball game for Lisbon High School in 1950. He served his ROTC commitment in Yaak, MT and attained captain in the USAF reserve. He played in a country and rock'n roll band called the Four Tunes while teaching at NDSU. He built several homes in southeastern North Dakota, including one for his family. He is survived by five children. His wife has remarried and continues to live in Fargo.

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The Ernest Hoaby Scholarship rewards student innovation as defined by:  
An innovative design or device, which improves upon a prior design, device, algorithm, or method of doing something.

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**Ernest Hoaby Innovation Scholarship Due Date:** Friday, 25 March 2011

**Trial Application Due Dates:** 10 December 2010 OR 18 February 2011.

#### Instructions for the Trial Application.

Students can submit a trial application for an innovation on either of the due dates, but not both. A trial application is optional, and is not a prerequisite for applying for the Ernest Hoaby Innovation Scholarship. We *highly recommend* that students read the Tips for Writing a Good Submission, found on the Scholarship page of [www.hoaby-innovation-center.org](http://www.hoaby-innovation-center.org), before writing their Trial Application.

Write up an application as if you are applying for an Ernest Hoaby Innovation Scholarship. If there are aspects of your innovation that are not yet worked out, write it up as best you can given what you know at the time.

As a reminder, a worthy innovation does not require a working model. A description of it that shows the innovation would work, to someone skilled in the art (typically an experienced engineer or faculty member), is sufficient. In some (and perhaps most) cases a student should construct a feasibility prototype in order to better understand whether their idea will work and to understand what its limitations are.

NDSU ECE faculty or a qualified external reviewer will read the trial applications and provide feedback. All external reviewers will hold the applications in confidence.

Allow 2-3 weeks to receive feedback on your trial application.

**Application Form for the  
Trial Application**  
Ernest Hoaby Innovation Scholarship

Write “TRIAL APPLICATION” in the header of each page of the application

- (a) Title or Name of the Innovation or Innovative Design.
- (b) Identify the name and status (3rd year, 4th year, etc.) of each contributor. Do not include GPA as it will not be considered. If you had faculty advisors that aided or coached you in the innovation (or the project containing the innovation), state who they were.
- (c) Brief description of the innovation or innovative design. What does it do?
- (d) What is new or unique about this innovation?
- (e) Describe the prior art (or technology) to your innovation. What is your innovation replacing or improving? Include copies of two recent yet relevant patents from patent searches that help show the prior art that you are improving upon. (Patent copies are not needed for an innovation that is a process.)
- (f) Why or how is this innovation useful? How does it improve upon a prior design, technology, or product. (Examples: new function, better reliability, better maintainability, lower power, higher speed, lower cost, etc.)
- (g) What are the disadvantages of this innovation over the technology it is intended to improve and possibly replace? How does the innovation mitigate these disadvantages or outweigh them with benefits such that the innovation is still worth adopting?
- (h) What applications might your design apply to beyond the ones you originally intended it for?