THE FORD RENEWABLE ENERGY SUMMER PROGRAM 2007 (FRE-SP)

For High School students completing 9th – 11th grades

SESSION 1: June 25 – June 29, 2007

SESSION 2: July 9 – July 13, 2007

Sponsored by the Biological Engineering Program at North Carolina Agricultural & Technical State University Greensboro, NC
APPLICATION: PERSONAL INFORMATION

Applications MUST be postmarked by **June 15**
Only completed applications will be reviewed

GUIDELINES FOR COMPLETING THE APPLICATION PACKET

- **PERSONAL INFORMATION**
  Complete the personal information below.

- **TRANSCRIPT**
  A copy of your school transcript must be submitted with the application showing your cumulative grade point average. We realize that your last reporting evaluation (June) may not be available. An attendance report must also be included with your transcript.

- **LETTERS OF RECOMMENDATION**
  Two letters of recommendation must be included. The letters must be typewritten on official letterhead or white bond paper (notebook paper is not acceptable). One of the letters must come from a representative of your school; the second letter can be written from your pastor or someone who can speak about your character.

- **QUESTIONS**
  The questions in this packet must be answered in your own handwriting, signed and dated by the student. One paragraph is all that is required to answer the questions in the space provided.


  Today’s Date: ___________ Session you would like to attend (Session 1 or Session 2): ________________________________

  Name: ___________________________________________ ___________________________ ___________________________ MIDDLE INITIAL

  Address: ________________________________________________________________

  CITY ___________________________________________ STATE/ZIP ____________ SS#: __________________________

  Parent/Guardian: ______________________________________________________ Phone #: __________________________

  School: ________________________________________________________________

  NAME ________________________________________________________________

  ADDRESS ________________________________________________________________ CITY __________________________

  Gender: female ___ male ___ Race: __________________________ Birth Date: __________________________ Age: __________

  (for reporting purposes only)

  **Current Grade for 2006–2007 School Year**: circle one: 9th 10th 11th

  **Cumulative Grade Point Average**: __________

  **Must have completed one Algebra course**

  Last Math course completed: ___________________________ Next Math course to take: ___________________________

  Math  Verbal

  **PLEASE RETURN THE COMPLETED APPLICATION PACKET TO:**

  Ghasem Shalbazi, Professor and Director
  Biological Engineering Program
  Department of Natural Resources and Environmental Design
  North Carolina A&T State University
  1601 East Market Street
  Greensboro, NC 27411
1) What is fossil fuel?

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__________________________________________________________________________________
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__________________________________________________________________________________

2) What is renewable energy?

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3) What is the predominant fuel used to produce electricity in North Carolina?

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__________________________________________________________________________________
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4) What fuel do people use in their family cars? Are there any renewable fuels that can be used in our family cars?

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5) What is the “Greenhouse Effect” and what causes it?

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Student signature ___________________________________________      Date _______________________

The Ford Renewable Energy Summer Program (FRE-SP) is a summer outreach program conducted in the months of June and July to provide pre-college research opportunities to high school students. The candidates will be selected from the high school student applicants (9th thru 11th graders). This program is sponsored by the Biological Engineering Program with funding from the Ford Foundation.

The purpose of the FRE-SP program is to familiarize students with contemporary energy issues such as energy production, energy consumption, energy efficiency, energy conservation as well as renewable energy and biofuel. Activities will include conducting experiments that illustrate basic energy concepts and renewable energy production models. A major part of the workshop will focus on the flexible fuel vehicles, their design principles and the fuels they use. Renewable transportation fuels such as ethanol, hydrogen, natural gas (methane), and biodiesel will be given special coverage. The instructors for the energy component consist of faculty, graduate and undergraduate students.

The FRE-SP curriculum will address some of the energy issues as they relate to student lives. We will discuss how energy lights our homes and cities, how energy powers our cars, how energy warms our homes, cooks our food, and gives us pictures on television. We will demonstrate how various energy types are generated, converted to another type of energy, and demonstrate a method for quantifying each type of energy. Students will be introduced to non-renewable energy and renewable energy concepts as they conduct experiments in solar energy, hydrogen fuel cells, ethanol, and biodiesel production. The goal of FRE-SP is to raise student awareness about energy and environmental issues and alert them about the need for energy conservation.

FRE-SP is a one-week long, non-residential educational program which will meet daily from 8:30 a.m. to 4:30 p.m. Field trips may be taken to expose students to many innovative energy production and utilization facilities in North Carolina.

There is no cost to students to attend this summer program.

Please return the completed Application Packet along with a Transcript and Letters of Recommendation to:

Ghasem Shahbazi, Professor and Director
Biological Engineering Program
Department of Natural Resources and Environmental Design
North Carolina A&T State University
1601 East Market Street
Greensboro, NC 27411