**APPLICATION FOR UNDERGRADUATE RESEARCH EXPERIENCE**

**at Louisiana Tech University, June 2 through August 1, 2014**

**(Please Email this form to sajones@latech.edu)**

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| --- | --- | --- | --- |
| **Name** |  | **Major** |  |
| **College** |  | **Expected Year of Graduation** |  |
| **E-mail** |  | **Home Phone** |  |
| **Campus Phone** |  | **Cell Phone** |  |
| **College GPA (A=4.0)** |  | **Number of Calculus Semester Hours Completed** |  |
| **Country of Citizenship**  **(Note: The National Science Foundation requires that all participants be US citizens or permanent residents).** | |  | |

**Mailing Addresses:**

|  |  |
| --- | --- |
| **Campus** | **Home** |
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**Research Preference:**

Please indicate two or three general areas you are most interested in:

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|  |  | **Micro/nano biosensors** |
|  |  | **Micro electronic components** |
|  |  | **Nanomaterials** |
|  |  | **Carbon nanotubes** |
|  |  | **Biocompatible nanomaterials** |
|  |  | **Microfluidic devices** |
|  |  | **Tissue engineering applications** |
|  |  | **Assessment of cellular function** |
|  |  | **Micro-based thermopiles** |

Please indicate two or three applications you are interested in:

|  |  |  |
| --- | --- | --- |
|  |  | **Fuel cells** |
|  |  | **Blood coagulation** |
|  |  | **Cancer** |
|  |  | **Neural/Brain dysfunction** |
|  |  | **DNA Sequencing** |
|  |  | **Drug Delivery** |
|  |  | **Joint dysfunction** |

What work or research experience have you had outside of your academic studies? (Note: Even non-scientific hands-on experience could be relevant).

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What interests you about participating in research at Louisiana Tech University?

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What are your current plans after graduation with your undergraduate degree?

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1. REFERENCS (name, telephone, E-mail): Please provide the names, phone numbers and email addresses for one reference. Your reference may be a faculty member at your institution, an employer, or someone else who is familiar with your work.
2. Please email this form and a scanned copy of your transcripts to [sajones@latech.edu](mailto:sajones@latech.edu).

Have your references e-mail a letter of recommendation to: [sajones@latech.edu](mailto:sajones@latech.edu)

Applications will be accepted until all positions are filled.

**Undergraduate Research Experiences in Micro and Nano Engineering**

*Program Highlights*

This Research Experiences for Undergraduates program will work with 10 students per year over a 9 week period in the summer to provide a research experience in micro and nano engineering, train them more formally on engineering research issues, and make them aware of issues related to reporting, patenting, and marketing of research results.

Participants will primarily be students who are in undergraduate programs in Engineering, or the Sciences, who maintain at least a 3.2 grade point average (on a 4 point scale), and who will have taken at least 8 semester hours of calculus by the start of the program.

Over the 10 week experience, the students will achieve the following outcomes:

1. Conduct research that answers a specific question in micro or nanoengineering.
2. Complete instructional modules in the Scientific Method, the Engineering Design Process, and their sub-components, Project Planning and Experimental Design.
3. Complete instructional modules on literature searching, communication, statistical analysis, hypothesis testing, data analysis, and ethics.
4. Apply project planning, quality control, and ethics to a major current event.
5. Write a proposal based on his/her laboratory experience and research ideas.
6. Communicate the research project in written and oral form.
7. Complete pre- and post-program surveys related to research attitudes.

Students will receive a stipend of $540/week and will be provided with a room in the Louisiana Tech dormitories (shared room) and a partial meal plan. Each dorm room will have internet access.

The experience will culminate in an end-of-summer research symposium at the Institute for Micromanufacturing at Louisiana Tech.

**Questions about the program should be addressed to sajones@latech.edu.**