

Langston University

AN INTENSIVE SUMMER ACADEMY IN MATHEMATICS,
SCIENCE, AND TECHNOLOGY

FOR

HIGH SCHOOL SOPHOMORES, JUNIORS, AND SENIORS

*Langston University
Langston, Oklahoma*

June 1st – 14th, 2014

(Funded By Oklahoma Regents for Higher Education)

In Partnership with:

The National Science Foundation

NASA

Alpha Phi Alpha Fraternity, Inc

APPLICATION

AN INTENSIVE SUMMER ACADEMY IN MATHEMATICS, SCIENCE AND TECHNOLOGY

LANGSTON UNIVERSITY, LANGSTON, OKLAHOMA

To The Applicant: *Please type this application. Be sure to attach one letter of recommendation on school stationary from a high school mathematics or science teacher. Also, provide a current transcript. Applicant must be a student entering his/her sophomore, junior, or senior year of high school in the Fall of 2014.*

Application Deadline: April 7, 2014.

Name _____
Last
First
Middle

Mailing Address _____
Street/Route
City
County
State
Zip Code

Telephone _____ Social Security Number _____

Required by State of Oklahoma for Honorarium

Sex: Male _____ Female _____ Date of Birth _____ Email _____

Describe Yourself: ___ Black ___ American Indian ___ White ___ Hispanic ___ Asian

Parents' or Guardians' Names in Full _____

Address _____ Telephone _____
Street
City
State
Zip Code

High School _____ City _____

**Math Courses in 9th, 10th, and 11th grades
(Letter grades for first and second semester)**

	Course	Grade	Course	Grade
9 th				
10 th				
11 th				

**Science Courses in 9th, 10th, and 11th grades
(Letter grades for first and second semester)**

	Course	Grade	Course	Grade
9 th				
10 th				
11 th				

List 1st, 2nd, and 3rd choice of areas preferred for research

_____ Biology ___ Chemistry ___ Precalculus ___ Calculus ___ Technology

Mail to arrive no later than April 7, 2014 to:
 Dr. Alonzo F. Peterson, Director
 Intensive Summer Academy in Mathematics, Science and Technology
 P.O. Box 1500
 Langston University: Mathematics
 Langston, Oklahoma 73050

AN INTENSIVE SUMMER ACADEMY IN MATHEMATICS, SCIENCE & TECHNOLOGY
FOR

High School Sophomores, Juniors, and Seniors

June 1st – June 14th, 2014

(FUNDED BY OKLAHOMA STATE REGENTS FOR HIGHER EDUCATION)

*IN PARTNERSHIP WITH:
The National Science Foundation*

High School Sophomores, Juniors, and Seniors are invited to apply to this Academy. During this residential academy, you'll work with scientists to investigate the following:

◆ **BIOLOGICAL SCIENCES**

FUNGI INOCULATION, CULTURING, AND GROWTH
IMMUNOCYTOCHEMISTRY
SEPARATION OF PLANT PIGMENTS USING PAPER CHROMATOGRAPHY
ANATOMICAL DISSECTION

◆ **CHEMISTRY**

STOICHIOMETRIC MEASUREMENTS AND CALCULATIONS
MOLECULAR MODELING
CHROMATOGRAPHY/ ANALYSIS (HAIR, DETERGENT, AGE OF PAPER)

◆ **MATHEMATICS**

CALCULUS THEORY & FUNCTIONS
Use Educo multi-media tutoring and assessment program. Educo is comprised of materials and tools that address the five major areas of mathematics and science.

◆ **ACT PREPARATION AND TESTING (Early Exposure)**

ACT SECTIONS ON MATHEMATICS, SCIENCE, SCIENCE REASONING, ENGLISH, AND READING PROBLEMS WILL BE REVIEWED DURING THE WEEK. STUDENTS WILL BE ACQUAINTED WITH PROVEN TEST STRATEGIES. PRE AND POST ACT TEST WILL BE ADMINISTERED.

◆ **FIELD TRIPS**

LANGSTON UNIVERSITY AQUATIC CENTER
RESEARCH EXTENSION CENTER
GOAT FARM
LANGSTON UNIVERSITY LAKE

◆ **EDUCATIONAL HONORARIUM**

EACH STUDENT WILL RECEIVE A **\$100.00 HONORARIUM** TO PURCHASE EDUCATIONAL SUPPLIES, UPON COMPLETION OF THE ACADEMY

Purpose:

Our goal is to provide intensive research and training in the areas of Biology, Chemistry/Stoichiometry, and Mathematics/Calculus-Graphing for 36 of Oklahoma's top math and science students.

Place and Time:

The Academy will be conducted at Langston University, Langston Oklahoma, starting June 1st and ending June 14th, 2014. The students selected will be required to stay the entire length of the course as a resident student of Langston University. They will be housed in the residential halls and eat in the cafeteria. There will be no cost to students while attending the academy except for spending money.

Selection Criteria/Procedure:

Students must be entering their sophomore, junior, or senior year in high school, have a "B" or better average in 9th—11th grade math and sciences courses, and submit two letters of recommendation from a math and science instructor. In addition, students must fill out an application and return it by April 7, 2014. Applications will be reviewed and selections will be announced by May 12, 2014.

Methodology:

The morning sessions will focus on ACT Preparation. The 36 participants will be divided into three 12-member groups that will rotate through the three different ACT subject categories. The afternoon sessions will focus on the three core disciplines: chemistry, pre-calculus, and biological sciences. Each 12-member group will be assigned a specific discipline for the entire week. Pre & Post exams will be held on Sunday and Saturday respectively. At the conclusion of the Academy, there will be an Awards Banquet at which the students will be honored for their academic achievements. Each student will receive a \$100.00 honorarium to purchase educational supplies.

Recreation:

Langston University has two basketball courts, an indoor track, and weightlifting equipment. In addition to on campus activities, there will be an off campus event.

Supervision:

Male and female counselors will reside in the men's and women's dormitory, respectively. They will be responsible for the participants when the students are not in the instructional program. There will also be six additional mentors/tutors available for class and supervisory assistance who will also reside in the respective dormitories. The project director and instructors will accompany the students on all field trips and off campus activities.

Completed applications and questions about the project should be directed to:

Dr. Alonzo F. Peterson, Director
Intensive Summer Academy in Mathematics, Science and Technology
P.O. Box 1500
Langston University: Mathematics
Langston, OK 73050
(405) 466-3341
FAX(405)-466-3638
afpeterson@langston.edu