

TEACHER IMPROVEMENT GRANT

STATE OF GEORGIA

“Improving 8th Grade Physical Science Instruction”

Course Information: SCED 7060 “Problems in Teaching Science”

This is a course designed to strengthen the classroom instruction in 8th grade Physical Science. Attention will be paid to aligning the content with the Georgia Performance Standards (GPS), and with the current textbook used in Savannah/Chatham Public Schools. The Fully Operational Science System Kits (FOSS) will be used extensively in class. The specific kits will include “Force and Motion”, “Electronics”, and “Chemical Interactions”

We will cover the 4 Domains listed below:

- 1) Chemistry, Atomic and Nuclear Theory and the Periodic Table
- 2) Chemistry, Chemical Reactions and Properties of Matter
- 3) Physics, Energy, Force, and Motion
- 4) Physics, Waves, Electricity, and Magnetism

The End of Course Test (EOCT) covers the academic year coverage of Physical Science Instruction. The GPS aligns with the EOCT. FOSS kits cover the material and are aligned with the GPS.

COURSE DATES:

June 19th through July 2nd M-F 8:00 am until 12:30 pm

This is the day after teacher release at Savannah/Chatham District

INSTRUCTORS:

Dr. Mike Mahan

Head, Middle and Secondary Education. Previously taught Physical and Life Science.

Currently holds valid teaching licenses in Indiana, New Jersey, and Georgia.

Dr. Ed Strauser

Senior Associate Professor of Middle Grades Education

Holds teaching licenses in New York and Georgia as well as experience overseas (Germany)

LOCATION:

University Hall 131, on the Armstrong Atlantic State University campus.

TEXT:

We will be using as a guide the current 8th grade Physical Science Text from Savannah/Chatham Schools.

ACTIVITIES:

Day 1

Introduction to the course
Beginning activities for Physical Science
Atomic and Molecular Theory
Structure of Matter

Day 2

Elements and Mixtures
Chemical and Physical Changes
States of Matter
FOSS Kit on Chemical Reactions

Day 3

Introduction to Energy
Energy Transformations
Forms of Energy

Day 4

Continuation with Energy
How flight works
How to calculate energy expenditure by the student

Day 5

Introduction to Force and Motion
Laws of Nature/Forces of Nature
Calculations of simple problems
FOSS Kit on Force and Motion

Day 6

Continuation with Force and Motion
Gravity
Touch on Space Science

Day 7

Intro to Electricity
Magnetism
FOSS Kit on Electronics

Day 8

Teacher Participants will prepare a lesson plan on one of the topics and present the lesson to the class using Power Point and the WWW to re-enforce the lesson.

Day 9

Teacher Participants will continue presentation of lesson plans.
All participants will share lesson plans with the entire group.

Day 10

Evaluation of Lesson Plans by peers
This allows each participant to have 12-20 lesson plans using technology

Follow up: Dr Mahan and Dr Strauser will visit the teacher's classroom in the Fall semester to work with the Teacher Participants individually on their growth as Physical Science Teachers.

COST:

The cost of the 3 credit hour graduate course is covered by the grant. Each Teacher Participant will receive an additional \$200 stipend at the end of the course. If a teacher does not wish to take the course for credit, arrangements can be made. Teachers should register for the class as a graduate course and then be reimbursed at the end of the class.

APPLICATION PROCEDURES:

All applicants must submit the following to Mike Mahan in University Hall 270, Armstrong Atlantic State University, 11935 Abercorn Street, Savannah, GA 31419.

1. An application for the course (see last page)
2. Applications for those who want to receive graduate credit must be received by May 27th.

IMPROVING 8th GRADE PHYSICAL SCIENCE INSTRUCTION

SCED 7060 Problems in Teaching Science

Participant Application

NAME: _____

SS# _____

(SS# needed to refund course fees and pay stipends)

E-Mail _____

Home Phone _____

School Name _____

School Address _____

Teaching Grade Level _____

Subject _____

Home Address _____

I wish to receive (choose only one)

Graduate credits _____

Undergraduate credits _____

PLU's _____

Applicants choosing graduate credit must be enrolled in the graduate studies program at Armstrong. Tuition must be paid by the applicant, but will be refunded immediately upon completion of the course.