



Workshops for Science Teachers

The NSF- funded Institute for Functional Nanomaterials and NASA- funded Center for Advance Nanomaterial of the University of Puerto Rico is offering workshops for science teachers during the Second Semester 2011- 2012. These interdisciplinary inquiry-based materials that bring nano and environmental sciences concepts into the classroom.

Participants will:

- Receive training in the use and implementation of hands-on interdisciplinary materials at all levels.
- Borrow the equipment to implement the activities at their school.
- Certificate of training including contact hours.
- Teachers who participate in all workshops will be eligible to become Master Teachers.

Register on line: <http://ifn.upr.edu>

For more information call Luz Gonzalez at 787 765-5170 x 2065

Workshop 1 “Diffraction of Light and Molecule of Life”

Offered on Saturday January 28, 2012 at University of Puerto Rico – Rio Piedras
Simulation of DNA Diffraction, Extraction of DNA
How to Prepare a Homemade Electrophoresis Apparatus?
Maximum capacity 30 teachers

Workshop 2 “Scientific Method and Models”

Offered on Saturday February 25, 2012 at Esc. San Antonio Sabad, Humacao
Scientific Method
Solar Cells
Maximum capacity 30 teachers

Workshop 3 “The Contribution of Humans to Water Contamination”

Offered on Saturday April 28, 2012 at University of Puerto Rico – Rio Piedras
Go with the Flow
Endocrine disruptors in Trophic Chains
Water Quality
Maximum capacity 30 teachers

Workshop 4 “Photosynthesis”

Offered on Saturday May 5, 2012 at University of Puerto Rico – Rio Piedras
What color am I?
Solar Cells
Maximum capacity 30 teachers

For more information call Luz Gonzalez at 787-765-5170 x. 2065

Workshop 1

Diffraction of Light and Molecules of Life

Registration Deadline: Friday January 20, 2012

When: Saturday January 28, 2012 8:00 am – 3:00 pm

Where: Resource Center For Science and Engineering, 3rd Floor Facundo Bueso Building, University of Puerto Rico – Rio Piedras Campus

Simulations of DNA Diffraction- Help explain the key elements of the structural determination of B-DNA by using an optical transform slide and a pocket laser to observe diffraction patterns.

How to Prepare a Homemade Electrophoresis Apparatus?- Students Will Prepare an electrophoresis chambers using household materials and will separated a mixture of organic dyes

Workshop 2

Scientific Method and Models

Registration Deadline: Friday February 10, 2012

When: Saturday February 25, 2012 8:00 am – 3:00 pm

Where: Escuela San Antonio Abad, Huamacao, PR.

Scientific Method- Participants will do a series of hands on activities to explore the scientific method

Solar Cells-Participants will be able to learn about the conversion of solar energy into useable electrical energy by simulating photosynthesis

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Workshop 3:

The Contribution of Humans to Water Contamination

Registration Deadline: Friday April 6, 2012

When: Saturday April 28, 2012 8:00 am – 4:00 pm

Where: Resource Center For Science and Engineering. 3rd Floor Facundo Bueso Building, University of Puerto Rico – Rio Piedras Campus

Go with the Flow -Participants will create a model of a drainage basin and explore the factor that can affect water quality in water sheds

Water Quality-Participants will study the quality of different water samples using graphic calculator sensors.

Endocrine disruptors in Trophic Chains- Participants will study how trophic chains are affected by contaminants in the water streams.

Workshop 4:

Photosynthesis

Registration Deadline: Friday April 20, 2012

When: Saturday May 5, 2012 8:00 am – 4:00 pm

Where: Resource Center For Science and Engineering. 3rd Floor Facundo Bueso Building, University of Puerto Rico – Rio Piedras Campus

What color am I?- Participants will be able to relate the molecular structure to the color of the pigments present in plants.

Solar Cells-Participants will be able to learn about the conversion of solar energy into useable electrical energy by simulating photosynthesis

For more information call Luz Gonzalez at 787-765-5170 x. 2065