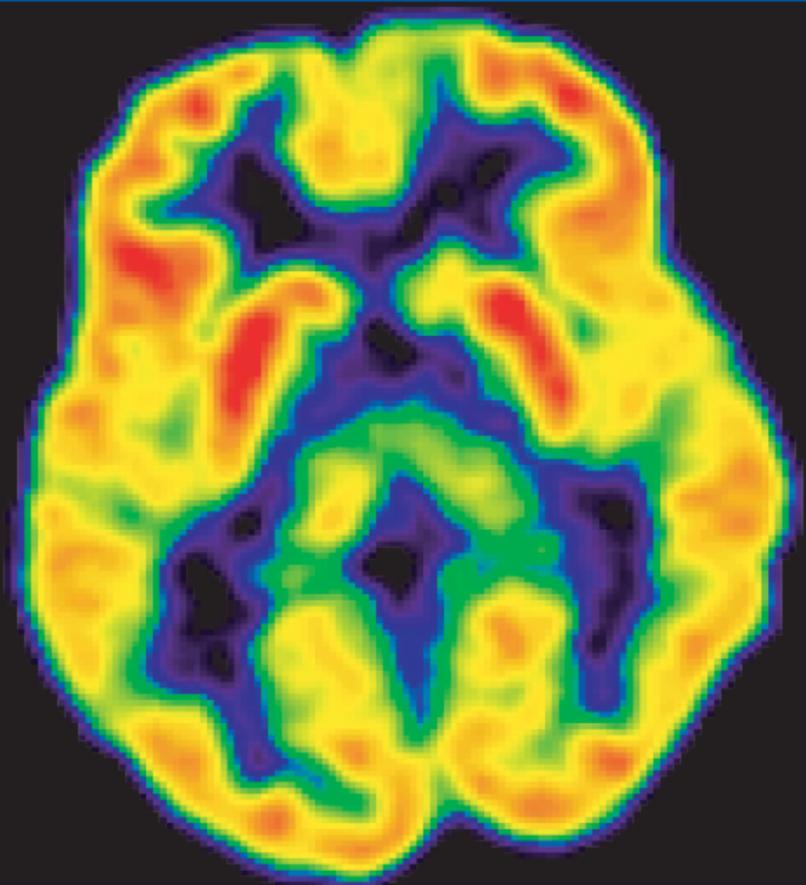




## FALL 2005 UPCOMING EVENTS

IDEAS Institute of Hofstra University  
School of Education and Allied Human Services



## INSTITUTE FOR THE DEVELOPMENT OF EDUCATION IN THE ADVANCED SCIENCES



### What is IDEAS\*?

*\*The Institute for the Development of Education in the Advanced Sciences.*

The Institute for the Development of Education in the Advanced Sciences, based within the School of Education and Allied Human Services at Hofstra University, has been assembled to provide a focus on cutting-edge issues in science and technology for the general public, local public/private school teachers or administrators, and college educators.

The Institute seeks to create public visibility and enhanced understanding of advances in science and technology. It further seeks to encourage greater interest in advanced study in the sciences and enhance the skills of pre-college and college educators in science and technology education, hence encouraging a broader participation in science and technology.

### Why should I attend?

Both our public lectures and professional development workshops offer topics and experiences that cannot be found anywhere else on Long Island. Right in the heart of Nassau County is a venue for developing your interests in science and technology as well as enhancing your professional expertise. As an added bonus, we also offer attendees an opportunity to use our tele-scopes on the clear evenings following each public lecture.

### What is the Cost?

Our public lectures are free and refreshments are served.

There are affordable fees for the professional development workshops to cover expenses, food and materials.

### IDEAS on the Web

IDEAS has had a Web-site for over a year, but something new has been added: video streaming of several of our past lectures.

By visiting the IDEAS Web-site ([www.hofstra.edu/IDEAS](http://www.hofstra.edu/IDEAS)) you can access videos of two of our lectures from last spring. Future presentations will be posted as they become available. Attending in person is always the best way to "experience" an IDEAS event, but you now have the opportunity to "attend" past presentations.

Currently available are the following two lectures:

#### **"The Science Behind The Day After Tomorrow: Global Warming, Ocean Circulation, and Rapid Climate Change"**

Dr. Christa Farmer of the Hofstra University Department of Geology discussed how, by studying the climates of the past, scientists hope to predict the climate of the future.

#### **"Imaging the Consequences of Drug Abuse in the Human Brain"**

Dr. Stephen Dewey, senior scientist at Brookhaven National Laboratory, described how Brookhaven National Laboratory researchers have used new medical imaging techniques to better understand and define the short-and long-term consequences of a wide variety of addictive drugs on brain chemistry and metabolism in the human brain.

The brochure cover photo is a PET (Positron Emission Tomograph) scan of a human brain, which was part of Dr. Dewey's lecture. The cover photo is courtesy of Brookhaven National Laboratory.



Chem/Physics Demo workshop, Spring 2005

# Professional Development Workshops – Fall 2005

**SATURDAY, OCTOBER 1, 2005**

## “Invitations to Writing in the Science Classroom”

Amy Gaddes, Hofstra University Literacy Studies Department  
8:30 a.m.–5 p.m. Hagedorn Hall, South Campus

Amy will present lesson plans and long term project ideas that engage science students in writing tasks designed to stimulate higher order thinking and problem solving. Writing requires critical thinking about a given topic. Participants will use many writing genres to help students broaden their understanding of science concepts. Genres include science poetry; authentic writing in the field; use of children's literature; a “What if...?” series; science fiction; science theatre scripts, and creative lab reports. Designing scoring rubrics for science related writing will be discussed. Participants are encouraged to bring examples of writing assignments they currently use with students.

This workshop may be taken for 8 hours toward in-service credit or 1 semester hour of Hofstra University graduate credit.

Fee: \$95 (does not include cost of graduate credit)

This workshop is appropriate for teachers of science, grades 3-12.

**SATURDAY, OCTOBER 29 AND SUNDAY, OCTOBER 30, 2005**

## “Fossils and Environments of Devonian Seas: A Paleontological Survey of Central New York State for Science Teachers: An Overnight Field Geology Workshop”

Dr. J. Bret Bennington, Hofstra University Geology Department

This two-day field experience will investigate the rich record of marine life preserved in the Devonian rocks of central New York State. Participants will visit a variety of localities to examine the geologic evidence for the transition from shallow water, coral reef environments in the Early Devonian to deep water, shelf and basin environments in the Middle Devonian. This trip will provide excellent opportunities for teachers to collect rock and fossil specimens for use in the classroom, and to create a library of digital images of the geology of New York State.

This workshop may be taken for 16 hours toward in-service credit or 2 semester hours of Hofstra University graduate credit.

Depart Sat. Oct 29 at 7:30 a.m. and return Sunday, Oct. 30 at 6 p.m.

Fee: \$275 (includes lodging and transportation, but does not include cost of graduate credit)

This workshop is appropriate for teachers of science, grades 3-12.

**SATURDAY, NOVEMBER 19, 2005**

## “Constructivism In the Classroom: Lessons that Liberate”

Dr. Jacqueline Grennon-Brooks, Hofstra University Department of Curriculum and Teaching

8:30 a.m.–5 p.m. Hagedorn Hall, South Campus

When we look beyond test scores to see what really matters, we see that students achieve best in settings that offer problem-based curricula, that seek and value their points of view, and that ask them to consider big ideas. This session will engage participants in illustrative examples of constructivist settings, and in the analyses of how these settings keep the curriculum broad, balanced and relevant, while addressing diverse student needs, interests and strengths.

This workshop may be taken for 8 hours toward in-service credit or 1 semester hour of Hofstra University graduate credit.

Fee: \$95 (does not include cost of graduate credit)

This workshop is appropriate for teachers of science, grades 3-12.

**SATURDAY, DECEMBER 3, 2005**

## “Teaching Evolution and the Nature of Science: Pitfalls and Opportunities”

Dr. Ross Nehm, City College of New York School of Education

8:30 a.m.–5 p.m. Hagedorn Hall, South Campus

The workshop will explore students' mental models of evolution and the nature of science, and present approaches for dismantling common misconceptions while respecting the religious and cultural values of students. This session will help science teachers create meaningful lessons surrounding controversial science topics.

This workshop may be taken for 8 hours toward in-service credit or 1 semester hour of Hofstra University graduate credit.

Fee: \$95 (does not include cost of graduate credit)

This workshop is appropriate for teachers of science, grades 6-12.

**SATURDAY, JANUARY 21, SATURDAY, FEBRUARY 11 AND SATURDAY, APRIL 1, 2006**

## “Teachers as Researchers: Professional Development from the Inside Out”

Dr. Janice Koch, Hofstra University Department of Curriculum and Teaching

9 a.m.–2 p.m. Hagedorn Hall, South Campus

Participants must attend all three sessions.

Action Research, also called classroom research or teacher research, is a term used to describe professionals studying their own practice in order to improve it. Applied to teaching, it involves gathering and interpreting “data” to better understand an aspect of your teaching that interests or concerns you. This workshop is designed to facilitate a process that engages you in your own professional development, allowing you to seek answers to your own questions.

This workshop may be taken for 32 hours toward in-service credit or 3 semester hours of Hofstra University graduate credit.

Fee: \$300 (does not include cost of graduate credit)

This workshop is appropriate for all teachers, grades K-12.

# FREE SCIENCE LECTURES FOR THE GENERAL PUBLIC, TEACHERS AND STUDENTS OF ALL AGES

Please note: Teachers receive certificates of attendance for one hour toward in-service credit for attending these talks.

## “Discovery Nights at Hofstra”

Co-Sponsored with Hofstra College of Liberal Arts and Sciences

**Thursday, Sept. 22, 2005**

## “Bones and Bonobos: Making Scientific Sense of Human Evolution”

Dr. Daniel Varisco, Hofstra University Department of Anthropology

7:30–9 p.m., Monroe Lecture Center, South Campus

Dr. Varisco will present an anthropological perspective on human evolution, discussing what we know from the emerging fossil evidence, how to make sense of new hominid discoveries and the importance of ethological studies of primates. He will also talk about Darwin's enduring contributions to the science of human evolution, noting how they are still relevant in the 21st century.

## IDEAS Featured Speaker

**Thursday, October 6, 2005**

### What's Sex Got to Do with It?

#### Issues of Gender and Success in Science

Dr. Vita Rabinowitz, co-director of the Gender Equity Project and

chairperson of the Department of Psychology at Hunter College, CUNY

6:30–8 p.m., Plaza Rooms, Student Center, North Campus

Earlier this year, Harvard President Lawrence Summers caused a firestorm by suggesting that the underrepresentation of women at the highest levels of math and science is caused by possible intrinsic aptitude difference, family commitments, or discrimination in the field. This presentation will evaluate these claims by presenting data on sex disparities in science achievement and by dispelling myths about women's achievement in general. Dr. Rabinowitz will advance evidence-based explanations for gender disparities in science achievement and outcomes, drawing on theory and research from psychology, sociology, biology, and economics. Finally, she will review the institutions that advocate for women and what women themselves can do to improve conditions for their work in science.

**Thursday, Oct. 20, 2005**

## “How Miracle Drugs Create Menacing Microbes: The Evolution of Antibiotic Resistance in Disease-Causing Bacteria”

Dr. Joanne Willey, Hofstra University Department of Biology

7:30–9 p.m., Monroe Lecture Center, South Campus

The initial development of antibiotics was an amazing medical success (saving thousands of lives on the battlefield in WWII and defeating TB). Antibiotics have changed the way we think about health and healthcare; they have been over-prescribed to the point that we are now entering the “second pre-antibiotic” era. Dr. Willey will discuss the nature of antibiotics, how microbes evolve to stay one step ahead of our drugs in a “microbial arms race,” and what the future of antibiotics may or may not be.

**Thursday, Nov. 17, 2005**

## “The Evolution of Earth's Oldest Biosphere: New Ideas in the Search for Ancient Life”

Dr. J. Bret Bennington, Hofstra University Department of Geology

7:30–9 p.m., Monroe Lecture Center, South Campus

The origin and early evolution of life on Earth is an enduring scientific mystery given new significance with the search for life on other planets. If we are to find fossils of ancient life on Mars, we must first learn how to recognize the remains left by the earliest organisms on Earth. Dr. Bennington will review new evidence and new ideas about Earth's oldest biospheres and discuss the challenges of finding life in ancient rocks.

**Friday, Nov. 18, 2005**

## “Application of the Scientific Method to Teaching Social Sciences and the Humanities”

Dr. Ira Kaplan, Hofstra University Department of Psychology

1-2:30 p.m., Hagedorn Hall, South Campus

The scientific method emphasizes experiment, objectivity, measurement, and skepticism. It has contributed to the advancement of physics, chemistry, and more recently, biology. What are the problems, the potential benefits, and the potential harm in applying the standards of physical science, particularly objectivity and skepticism, to other disciplines?

This free seminar is open to Hofstra University and other college faculty.



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