



Department of Education  
Region III  
**DIVISION OF CITY SCHOOLS**  
Angeles City



Jesus Street, Pulungbulu, Angeles City  
Tel. Nos. (045) 322-5722; (045) 322 4101/Fax Nos. (045) 322-4702;

**DIVISION ADVISORY**

No. 91, s. 2018

RELEASED

APR 06 2018

To: Public Elementary, Junior and Senior High Schools  
From: Schools Division Superintendent  
Subject: **SEMINAR ON NUCLEAR SCIENCE FOR TEACHERS**  
Date: April 4, 2018

DepED Angeles City  
Division of City Schools

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Please be informed of the attached Advisory No. 113, s. 2018, dated March 23, 2018, from the Office of the Regional Director, entitled "*Seminar on Nuclear Science for Teachers*", for your reference and information.

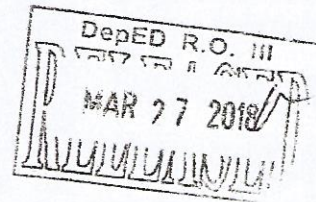
  
**LEILANI S. CUNANAN, CESO VI**  
Schools Division Superintendent





Republic of the Philippines  
**DEPARTMENT OF EDUCATION**  
**REGION III-CENTRAL LUZON**

Matalino St., D.M. Government Center, Maimpis, City of San Fernando, Pampanga  
Website: [www.deped.gov.ph/regions/region-iii](http://www.deped.gov.ph/regions/region-iii) ✕ Email: [region3@deped.gov.ph](mailto:region3@deped.gov.ph)  
Telephone Numbers: (045) 598-8580 to 89 loc. 102; 103



**Advisory**


No. 113s. 2018

To: Schools Division Superintendents  
From: Regional Director  
Subject: Seminar on Nuclear Science for Teachers  
Date: March 23, 2018

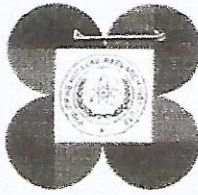
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This is to inform all concerned that the Nuclear Training Center of the Philippine Nuclear Research Institute will hold the Seminar on Nuclear Science for Teachers from April 26 to May 11, 2018 at PNRI, Diliman, Quezon City.

Attached is a letter from Dr. Soledad S. Castañeda, Officer-In-Charge, for reference and information.

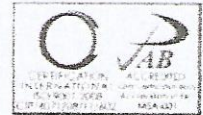
  
**MALCOLM S. GARMA, CESO V**  
Director III  
Officer-In-Charge  
Office of the Regional Director



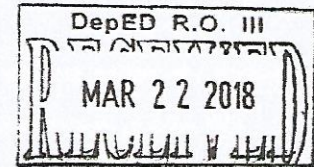


Republic of the Philippines  
Department of Science and Technology

**PHILIPPINE NUCLEAR RESEARCH INSTITUTE**



21 February 2018



Subject: Invitation to participate in the Seminar on Nuclear Science for Teachers, April 16 – May 11, 2018.

Sir/Madam:

The Nuclear Training Center (NTC) of the Philippine Nuclear Research Institute (PNRI) will hold the Seminar on Nuclear Science for Teachers (SNST) from 16 April - 11 May 2018. The lectures will be conducted within the premises of the PNRI in Diliman, Quezon City.

In this connection, we would like to invite your qualified staff to participate in the abovementioned course. Please find the enclosed Application Form and Information Bulletin containing the details of the course.

Interested participants should submit the requirements of the course not later than Monday, 2 April 2018 to:

Nuclear Training Center  
Philippine Nuclear Research Institute  
Commonwealth Avenue, Diliman, Quezon City  
Tel. No.: 9296011-19 local 236; Telefax: 9208788; 9201646  
Email: ntc@pnri.dost.gov.ph

Very truly yours,

SOLEDAD S. CASTAÑEDA, Ph. D.  
Officer-in-Charge





Republic of the Philippines  
Department of Science and Technology  
**PHILIPPINE NUCLEAR RESEARCH INSTITUTE**  
Commonwealth Avenue, Diliman, Quezon City 1101 Philippines  
P.O. Box Nos. 213 UP Quezon City, 932 Manila, 1214 Central Quezon City  
Tel. Nos. (632) 929-6011 to 19 Telefax (632) 9268-113

## NUCLEAR TRAINING CENTER

### Course Information Bulletin

<b>Course Title:</b>	Seminar on Nuclear Science for Teachers (SNST) <i>Former Seminar on Nuclear Science for High School Science Teachers (SNSHSST)</i>
<b>Schedule/ Duration:</b>	20 days (160 hours)
<b>Participation:</b>	For high school science, mathematics, physics, biology and chemistry teachers who are holders of a bachelor's degree in education, science and engineering. A minimum of ten (10) participants is required to push through with the course. A maximum of thirty (30) participants will be accepted.
<b>Pre-requisite:</b>	A background on algebra, trigonometry, introductory calculus, general biology, chemistry and physics subjects
<b>Course Goal:</b>	To provide science teachers with sufficient knowledge of the fundamentals of nuclear science and its beneficial application in different fields. Enable participants to contribute to the high school science curriculum by introducing suitable nuclear science topics and experiments in teaching physics, chemistry and biology
<b>Course Objectives:</b>	At the end of this course, participants are expected to: <ol style="list-style-type: none"><li>1. Describe the atomic nucleus and explain the nature of radioactivity</li><li>2. Differentiate types of ionizing radiation and how they interact with matter</li><li>3. Be familiar with the different sources of ionizing radiation</li><li>4. Be familiar with the safety and security issues associated with the use of radioactive materials</li><li>5. Explain the importance of regulating the use of radioactive materials</li><li>6. Be acquainted with the application of radioisotopes in agriculture, medicine, industry and research studies</li><li>7. Understand the basic principles behind the operation of a nuclear power plant.</li></ol>
<b>Nature and Scope of the Course:</b>	This course will consist of lectures, exercises, a workshop and examinations. The staff of the Nuclear Training Center (NTC), PNRI lecturers and guest lecturers will conduct the course. The participant's performance in the seminar will be evaluated through the following: <ol style="list-style-type: none"><li>1. Examinations (55%)</li><li>2. Development and presentation of teaching module incorporating nuclear science topics (30%)</li><li>3. Practical exercises (10%)</li><li>4. Attendance (5%)</li></ol> A certificate of satisfactory completion will be issued to each participant who demonstrates satisfactory knowledge and skills of the subject matter presented.
<b>Requirements:</b>	(1) Application form with medical certificate, (2) Recommendation letter from principal or division superintendent, (3) Transcript of Records
<b>Course Content:</b>	Basic Nuclear Physics Nuclear Reactions Radioactivity and Radiation Quantities and Units in Radiation Protection Exercise on Nuclide Chart and Nuclear Data Interaction of Radiation with Matter Radiation Detection and Measuring Instruments Experiment on Radiation Detection Using an Improved Cloud Chamber Biological Effects of Ionizing Radiation Basic Radiation Chemistry Basic Radiation Chemistry Experiment on Characteristics of Geiger-Müller Detector Basic Principles of Radiation Protection The PNRI Regulatory Function Statistics of Counting Experiment on Statistics of Counting Concept of a Teaching Module Radiation Control and Handling Practices Radiation Shielding Experiment on Absorption of Gamma Radiation Security of Radiation Sources Safe and Secure Transport of Radioactive Materials Radiation Monitoring Exercise: Radiological Survey of a Radiation Facility Radioactive Waste Management Practices Emergency Planning, Preparedness, Procedures and Response Exercise on Emergency Drill Radioisotopes in Agriculture Experiment: Radiosensitivity of Planting Materials Food Irradiation Experiment on Fruit Irradiation Radioisotopes in Geological Studies Radioisotopes in Medicine



Radioisotopes in Industry  
Radioisotopes in Environmental Research  
Radiation Processing  
Nuclear Energy for Power Generation  
Introduction to Reactor Technology: Overview of Different Nuclear Reactors in the World  
Neutron Interactions  
Experiment: Neutron Activation and Half Life Determination  
Presentation of Teaching Modules  
Tour of PNRI Facilities



## APPLICATION FOR TRAINING COURSE



**NUCLEAR TRAINING CENTER**  
**PHILIPPINE NUCLEAR RESEARCH INSTITUTE**  
Commonwealth Avenue, Diliman, Quezon City  
Telephone No.: 929-60-11 to 19 local 236  
E-mail: ntc@pnri.dost.gov.ph

Telefax: 920-87-88

Course Title:			Recent 1" x 1" ID picture	
Course Duration:				
Surname	First Name	Middle Name	Sex	Status
Date of Birth	Place of Birth		Nationality	
Name of Office and Address			Home Address	
Telephone Number:			Telephone Number:	
E-mail:			E-mail:	
Position				
Brief Description of Work				
Educational Attainment				
Degree: _____ School: _____ Year Graduated: _____				
Others _____				
Honors and Distinctions				
Training and Experience in Research (state nature and duration)				
Scientific Publications			Membership in Technical Societies	
Nucleonic instruments available or will be available in your organization				
Brief statement of purpose in applying for the course				
Date			Signature	



### MEDICAL CERTIFICATE

*NOTE: To be completed by a registered medical practitioner after thorough clinical and laboratory examination including chest x-ray.*

Name of Candidate

Sex

Status

Is the person examined at present in good health and enjoying full work capacity?

Is the person examined able physically and mentally to undergo training?

Is the person examined free from infectious diseases which could present risks for both the candidate and his contacts during his training?

Does the person examined have any condition or defect which might require treatment during his training?

Full Name and Address of Examining Physician

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Examining Physician