Republic of the Philippines
Department of Science and Technology
PHILIPPINE NUCLEAR RESEARCH INSTITUTE

21 February 2018

Department of Education
DIVISION OF CAVITE
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RECORDS SECTION

TO: SDSs For your appropriate action, please. God Bless.

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

TO: **All Concerned** April 4, 2018

For information and guidance of all concerned.

CHERRYLOU D. DE MESA
Schools Division Superintendent

Republic of the Philippines
Department of Science and Technology
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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; 1314 Central Quezon City
Tel. Nos. (632) 929-6011 to 19 Telefax (632) 9208763

NUCLEAR TRAINING CENTER
Course Information Bulletin

Course Title:	**Seminar on Nuclear Science for Teachers (SNST)** ***Former: Seminar on Nuclear Science for High School Science Teachers (SNSHSST)***
Schedule/ Duration:	*20 days (160 hours)*
Participation:	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.
Pre-requisite:	A background on algebra, trigonometry, introductory calculus, general biology, chemistry and physics subjects.
Course Goal:	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.
Course Objectives:	At the end of this course, participants are expected to: 1. Describe the atomic nucleus and explain the nature of radioactivity 2. Differentiate types of ionizing radiation and how they interact with matter. 3. Be familiar with the different sources of ionizing radiation. 4. Be familiar with the safety and security issues associated with the use of radioactive materials. 5. Explain the importance of regulating the use of radioactive materials. 6. Be acquainted with the application of radioisotopes in agriculture, medicine, industry and research studies. 7. Understand the basic principles behind the operation of a nuclear power plant.
Nature and Scope of the Course:	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: 1. Examinations (55%) 2. Development and presentation of teaching module incorporating nuclear science topics (30%) 3. Practical exercises (10%) 4. Attendance (5%) A certificate of satisfactory completion will be issued to each participant who demonstrates satisfactory knowledge and skills of the subject matter presented.
Requirements:	(1) Application form with medical certificate; (2) Recommendation letter from principal or division superintendent; (3) Transcript of Records
Course Content:	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 Improvised Cloud Chamber Biological Effects of Ionizing Radiation Basic Radiation Chemistry Basic Radiation Chemistry Experiment on Characteristics of Geiger-Muller Detectors 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 Telefax: 920-87-88
E-mail: ntc@pnri.dost.gov.ph

Course Title: Course Duration:				Recent 1" x 1" ID picture
Surname	First Name	Middle Name	Sex	Status
Date of Birth	Place of Birth		Nationality	
Name of Office and Address Telephone Number: E-mail:			Home Address Telephone Number: 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