



Republic of the Philippines
Department of Education
Region VII, Central Visayas
DIVISION OF DUMAGUETE CITY
Dumaguete City

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April 16, 2018

DIVISION MEMORANDUM

No. 173 s. 2018


SEMINAR ON NUCLEAR SCIENCE FOR TEACHERS

To: Chief, Curriculum Implementation Division
Chief, School Governance and Operations Division
Education Program Supervisors
Public Secondary School Heads
All Others Concerned

1. Enclosed is a Regional Memorandum No. 0278 s. 2018 entitled, "**Seminar on Nuclear Science for Teachers**" for information and guidance to all concerned.
2. For details, refer to the attached Memorandum and other related documents.
3. Immediate dissemination of and compliance with this Memorandum is desired.

For the Schools Division Superintendent:

EVANGEL M. LUMINARIAS, Ph.D., CESO V
Schools Division Superintendent


NELSON A. CADAY, Ed.D.,
Chief, SGOD
Officer-in-Charge

EML/nac/sgod



REPUBLIKA NG PILIPINAS
REPUBLIC OF THE PHILIPPINES
KAGAWARAN NG EDUKASYON
DEPARTMENT OF EDUCATION
REHIYON VII, GITNANG VISAYAS
REGION VII, CENTRAL VISAYAS
Sudlon, Lahug, Cebu City



APR 13 2018

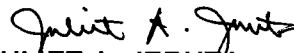
REGIONAL MEMORANDUM

No. **0278**, s. 2018

SEMINAR ON NUCLEAR SCIENCE FOR TEACHERS

To : Schools Division Superintendents/OICs

1. Enclosed is a Memorandum from Dr. Lorna Dig Dino, Undersecretary, Curriculum and Instruction, re **Invitation to Participate in the Seminar on Nuclear Science for Teachers**, for your appropriate action.
2. For details, refer to the attached communication, and other related documents.
3. For inquiries and clarifications, you may contact Ms. Abigail D. Clemente-Dagasdas of the Nuclear Training Center through the following:
Telephone No.: (02) 929-6011-19 local 236
Telefax No.: 920-8788/920-1646
Email: ntc@pnri.dost.gov.ph
4. Immediate dissemination of this Memorandum is desired.


JULIET A. JERUTA
Director III
Officer-In-Charge

JAJ/STJ/mgb

Office of the Director (ORDir), Tel. Nos.: (032) 231-1433; 231-1309; 414-7399; 414-7325; Office of the Assistant Director, Tel. No.: (032) 255-4542
Field Technical Assistance Division (FTAD), Tel. Nos.: (032) 414-7324 Curriculum Learning Management Division (CLMD), Tel. Nos.: (032) 414-7323
Quality Assurance Division (QAD), Tel. Nos.: (032) 231-1071 Human Resource Development Division (HRDD), Tel. No.: (032) 255-5239
Education Support Services Division (ESSD), Tel. No.: (032) 254-7062 Planning, Policy and Research Division (PPRD), Tel. Nos.: (032) 233-9030;
414-7065 Administrative Division, Tel. Nos.: (032) 414-7326; 414-4367; 414-7366; 414-7322; 414-4367
Finance Division, Tel. Nos.: (032) 256-2375; 253-8061; 414-7321

“EFA 2015: Karapatan ng Lahat, Pananagutan ng Lahat”



Republic of the Philippines
Department of Education
DepEd Complex, Meralco Avenue, Pasig City, Philippines
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348494

Undersecretary for Curriculum and Instruction

MEMORANDUM
DM-CI-2018-00098

TO : Regional Directors
School Division Superintendents
Heads of Public Secondary Schools
All Others Concerned

FROM : *Lorna A. D. Dino*
LORNA DIG DINO
Undersecretary for Curriculum and Instruction

SUBJECT : Invitation to participate in the Seminar on Nuclear Science for Teachers

DATE : 4 April 2018

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

Seminar on Nuclear Science for Teachers is designed for secondary school teachers in science, mathematics, physics, biology and chemistry teachers who are holders of a bachelor's degree in education, science and engineering.

The application form, medical certificate and other details of the program are enclosed in this memorandum.

For further inquiries and clarifications, you may contact Ms. Abigail D. Clemente-Dagasdas of Nuclear Training Center at (02)929-6011-19 local 236: Telefax: 920-8788: 920-1646 or thru email at ntc@pnri.dost.gov.ph

Immediate dissemination of and appropriate action for this memorandum is desired.

Annex A: Application Form
B: Medical Certificate
C: Course Information

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:			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
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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



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) 9208788

NUCLEAR TRAINING CENTER
Course Information Bulletin

Course Title:	Seminar on Nuclear Science for Teachers (SNST) <i>Former: Seminar on Nuclear Science for High School Science Teachers (SNSHST)</i>
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: <ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> 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:	<p>Basic Nuclear Physics</p> <p>Nuclear Reactions</p> <p>Radioactivity and Radiation</p> <p>Quantities and Units in Radiation Protection</p> <p>Exercise on Nuclide Chart and Nuclear Data</p> <p>Interaction of Radiation with Matter</p> <p>Radiation Detection and Measuring Instruments</p> <p>Experiment on Radiation Detection Using an Improvised Cloud Chamber</p> <p>Biological Effects of Ionizing Radiation</p> <p>Basic Radiation Chemistry</p> <p>Experiment on Characteristics of Geiger-Muller Detectors</p> <p>Basic Principles of Radiation Protection</p> <p>The PNRI Regulatory Function</p> <p>Statistics of Counting</p> <p>Experiment on Statistics of Counting</p> <p>Concept of a Teaching Module</p> <p>Radiation Control and Handling Practices</p> <p>Radiation Shielding</p> <p>Experiment on Absorption of Gamma Radiation</p> <p>Security of Radiation Sources</p> <p>Safe and Secure Transport of Radioactive Materials</p> <p>Radiation Monitoring</p> <p>Exercise: Radiological Survey of a Radiation Facility</p> <p>Radioactive Waste Management Practices</p> <p>Emergency Planning, Preparedness, Procedures and Response</p> <p>Exercise on Emergency Drill</p> <p>Radioisotopes in Agriculture</p> <p>Experiment: Radiosensitivity of Planting Materials</p> <p>Food Irradiation</p> <p>Experiment on Fruit Irradiation</p> <p>Radioisotopes in Geological Studies</p> <p>Radioisotopes in Medicine</p>

Radiol isotopes In Industry
Radiol isotopes 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