



U.S. DEPARTMENT OF  
**ENERGY**

**Nuclear Energy**

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# **Radiochemistry Traineeship and Options for Additional Traineeships**

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**Office of Nuclear Energy**

**Briefing for the Nuclear Energy Advisory Committee**  
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## DOE-Wide Model For Traineeships

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- **The Secretary has requested a coordinated effort to establish a model for DOE-supported Traineeships that can be deployed by DOE Program Offices to promote workforce development at graduate-level in areas of critical importance to DOE**
- **The Secretary envisions a model for DOE Traineeships as university-led workforce training efforts more structured and aligned with the scope of traineeships offered by NIH and NSF**

#### *Characteristics:*

- Be university-led, but could also include DOE Laboratory partnerships.
- Target 2 years of graduate/Ph.D. level training, but could support terminal MS degree training if the degree requires a thesis project.
- Be relatively small in size, and targeted in scope (STEM training area).
- Cover stipend and tuition/fee support up to a defined amount per student, with universities contributing to other student costs and faculty support.

*To meet the specific training needs, DOE Traineeships could also include elements such as: Modest support for faculty to develop curriculum, or intensive “summer schools” or training workshops at a DOE laboratory with university participation.*

## DOE Traineeship Principles

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- DOE Traineeship programs will be aligned with the Secretary's vision for university-led, targeted training opportunities.
- DOE Traineeships **will not duplicate the efforts of other Federal agencies** and will leverage DOE assets and capabilities where beneficial and practicable.
- STEM training areas of focus in DOE Traineeships will be **derived from an evidence-based assessment of the DOE workforce needs** to be addressed.
- DOE Program Offices will **follow best practices for open, competitive application processes**, including external peer review using established merit review criteria.
- Sponsoring DOE Program Offices will **develop evaluation plans** for Traineeship programs, which will include program goals and mechanisms for tracking program outcomes and evaluating program success.



## DOE Working Group on Traineeships

### Nuclear Energy

DOE Program Office	WG Representative
Office of Science (Chair)	Julie Carruthers
Office of Science (SC)	Adam Kinney
Office of Nuclear Energy (NE)	Michael Worley
Office of Energy Efficiency & Renewable Energy (EERE)	Linda Silverman
Office of Fossil Energy (FE)	Bob Wright
National Nuclear Security Administration (NNSA)	Heather Looney
Environmental Management (EM)	Junita Turner
Office of Economic Impact and Diversity (ED)	Andre Sayles



# New for NE in FY 2016 – Radiochemistry Traineeship

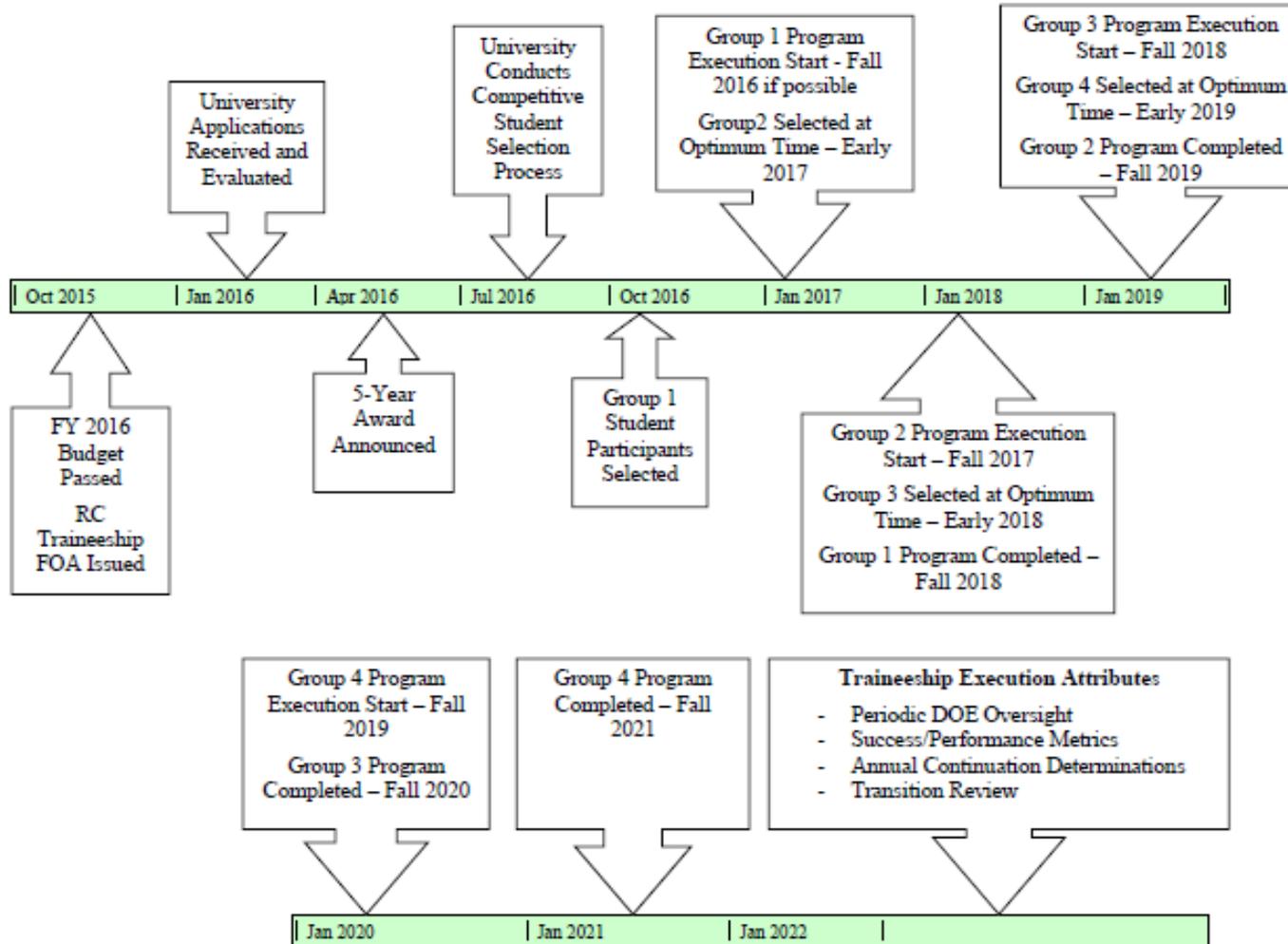
## ■ Radiochemistry Traineeship Attributes

- NE has mission-specific and critical radiochemistry workforce needs
- A competitively-awarded, university led traineeship is the preferred method for providing required unique and innovative radiochemistry curriculum aligned with mission-driven workforce needs
- NE Budget request includes \$2 million for anticipated 5-year award to university-led consortium targeting support for 2 years of each student's master's degree/PhD training in the specific area of radiochemistry
- Training programs will be relatively small and focused, supporting up to 5 new students per year, for a total of up to approximately 20 students
- If funded, Radiochemistry Traineeship likely to be expanded to include EM program objectives (subsurface science/actinide chemistry) and funding

## ■ Key objective is to develop focused curriculum in target areas that endures beyond award period



# Radiochemistry (RC) Traineeship Timeline



# Options For Additional Traineeships

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- As with radiochemistry, out year traineeship topical areas must be supported by evidence-based assessment of workforce needs. To address this need, NE seeks topical and prioritization input from the Nuclear Energy Advisory Committee on potential out year traineeship initiatives
  - NE will also seek input from senior Federal managers, INL Director, and other appropriate sources
  - Sample of Potential NE-sponsored Traineeship topical areas to consider
    - Seismic Engineering
    - Fuels and Materials
    - Reactor Physics / Thermal-hydraulics-incl. modeling & simulation
    - Advanced Instrumentation
    - Safety Analysis & PRA
  - Joint-Sponsorship Opportunities
    - Health Physics (NE, EM, NNSA, NRC?)
    - Power Engineering (NE, FE, EERE, EO)
    - Advanced Manufacturing (DOE-wide crosscutting area)