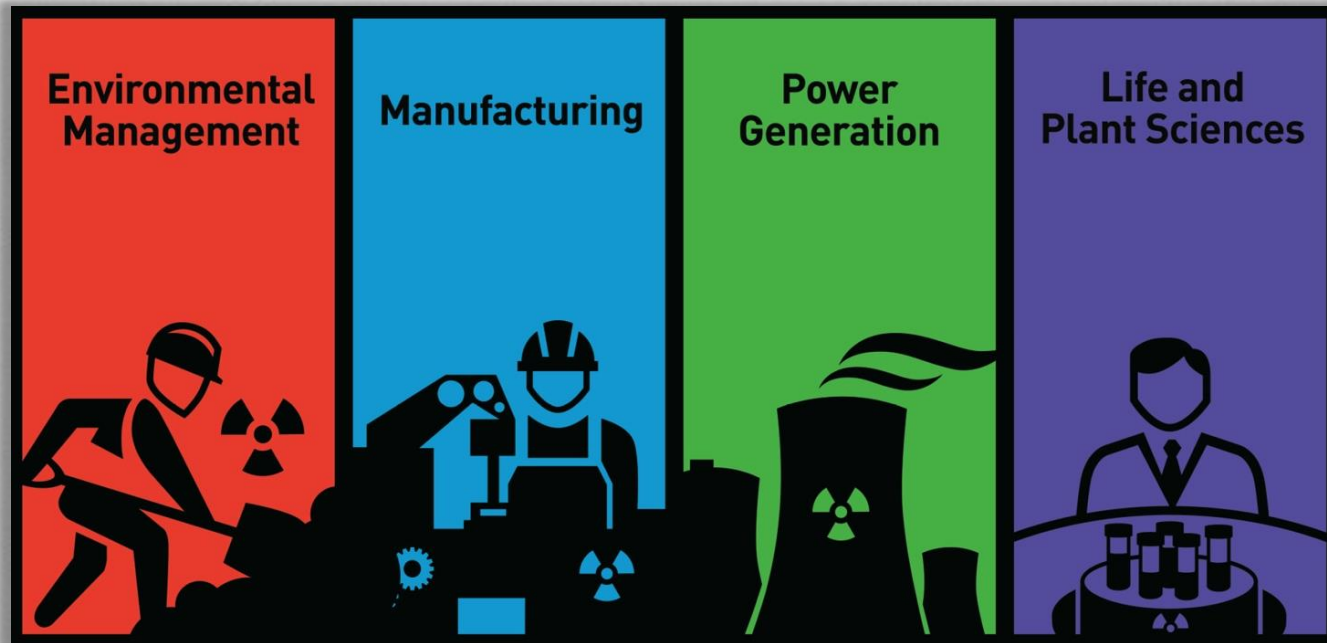


# RCNET Overview

2019 IAEA Workshop

*September 9, 2019 – Miami, FL*



RCNET

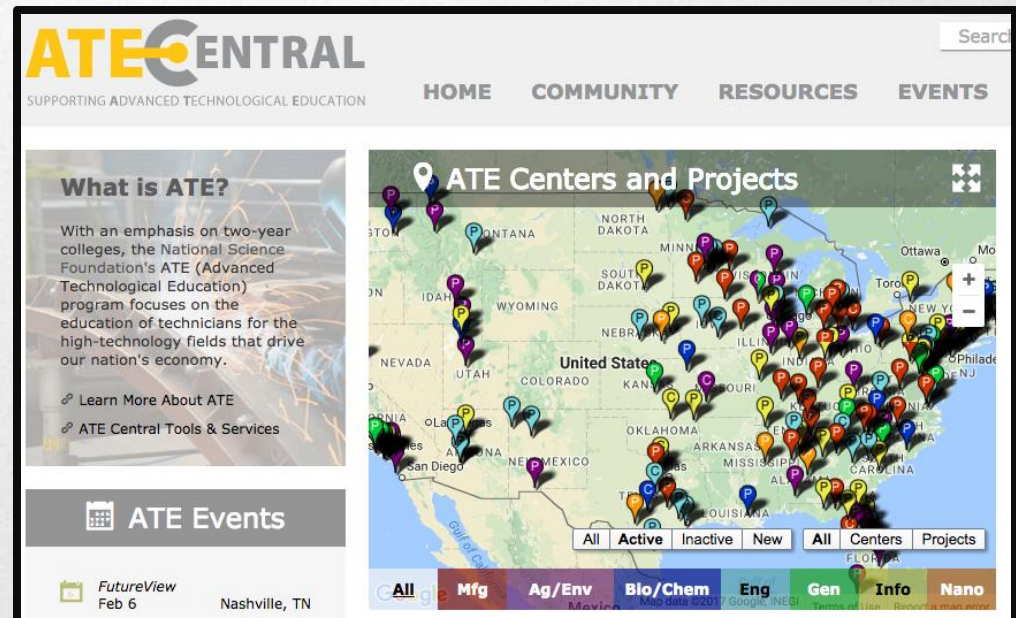
| [www.GoNuke.org](http://www.GoNuke.org)



# What is ATE?

## ATE: Advanced Technological Education

- Is a funding Division of the National Science Foundation under the Education Directorate
- Receives ~ \$65M every year since 1990 to fund community college training
- Approximately schools currently funded
- Highest level of funding (~10 are centers at \$1M/year)



**ATE CENTRAL**  
SUPPORTING ADVANCED TECHNOLOGICAL EDUCATION

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### What is ATE?

With an emphasis on two-year colleges, the National Science Foundation's ATE (Advanced Technological Education) program focuses on the education of technicians for the high-technology fields that drive our nation's economy.

- Learn More About ATE
- ATE Central Tools & Services

### ATE Events

FutureView Feb 6 Nashville, TN

### ATE Centers and Projects

All Active Inactive New All Centers Projects

All Mfg Ag/Env Bio/Chem Eng Gen Info Nano

# What is RCNET

- **RCNET is an NSF ATE Center funded (~\$1m/year) since 2008 to focus on nuclear energy technician training**
- **Through 40+ college partnerships across the nation, RCNET graduates ~ 600 A.S. nuclear technicians per year**
- **RCNET in conjunction with NEI and INPO created a portable nuclear credential for A.S. technicians called the NUCP (Nuclear Uniform Curriculum Program)**
  - **This credential, a National Academy for Nuclear Training Certificate, states that a student has successfully completed nuclear fundamental training objectives as identified in National Academy for Nuclear Training Document ACAD at a 80% or higher and complete all other requirements to graduate with the AS in Energy Technology. Since 2008, over 1,000 technicians have earned this**



# RCNET's Mission & Goals

## Mission

To make sure the demand for skilled nuclear technicians is met in a standardized and systematic way.

## Goals



- 1. Provide certified standardized nuclear curriculum packages.**
- 2. Develop, categorize, and maintain a learning repository for nuclear curriculum.**
- 3. Provide professional development for educators.**
- 4. Embed unique training systems and 21<sup>st</sup> century technologies into the classroom.**
- 5. Provide career and academic pathways.**
- 6. Provide materials and assistance in secondary outreach and diversity recruitment.**
- 7. Promote nuclear careers.**

# National Impact

- Developed and standardized over 1,200 lectures, 16 classes, 1 biographical textbook, and 8 advanced technology modules.
- Graduated 2,229 students with 95% placement at over 100 industry partners.
- Helped 12 colleges launch or expand their nuclear program.
- Developed and launched 4 standardized articulation agreements with Excelsior College, FIU, UF, and Bismarck State College. Over 40 graduates continue on to a 4 year degree programs every year!
- Developed partnership with United States Navy standardizing credit for veterans at partner colleges.
- Developed partnership and funding mechanism with NRC and United Negro College Fund to increase minority ranks in nuclear programs.
- Annually, host over 40 outreach events that directly reach 2,000+ students and 470 educators at 231 schools.
- Annually, host 10 professional development seminars attended by 20+ colleges and 40+ industry partners to share best practices in nuclear training.

# National Impact (cont'd)

- Published a book on nuclear mavericks to teach soft skills needed in the nuclear industry.
- Developed and replicated a remedial Math Program to increase minority engagement.
- Developed curriculum for environmental management track.
- Developed a series of silent videos designed to recruit under-served populations.
- Formalized a partnership with Department of Energy's Savannah River Nuclear Labs (SRNL) focusing on 8-week paid internships to partner technicians with engineers on research projects.
- Formed partnership with Utah State University NSF Project focused on wastewater training.
- Invited to be board member of the American Nuclear Society (ANS) Robotics Division.
- Member of ANS, DOE, NSF, and NRC Advisory Boards

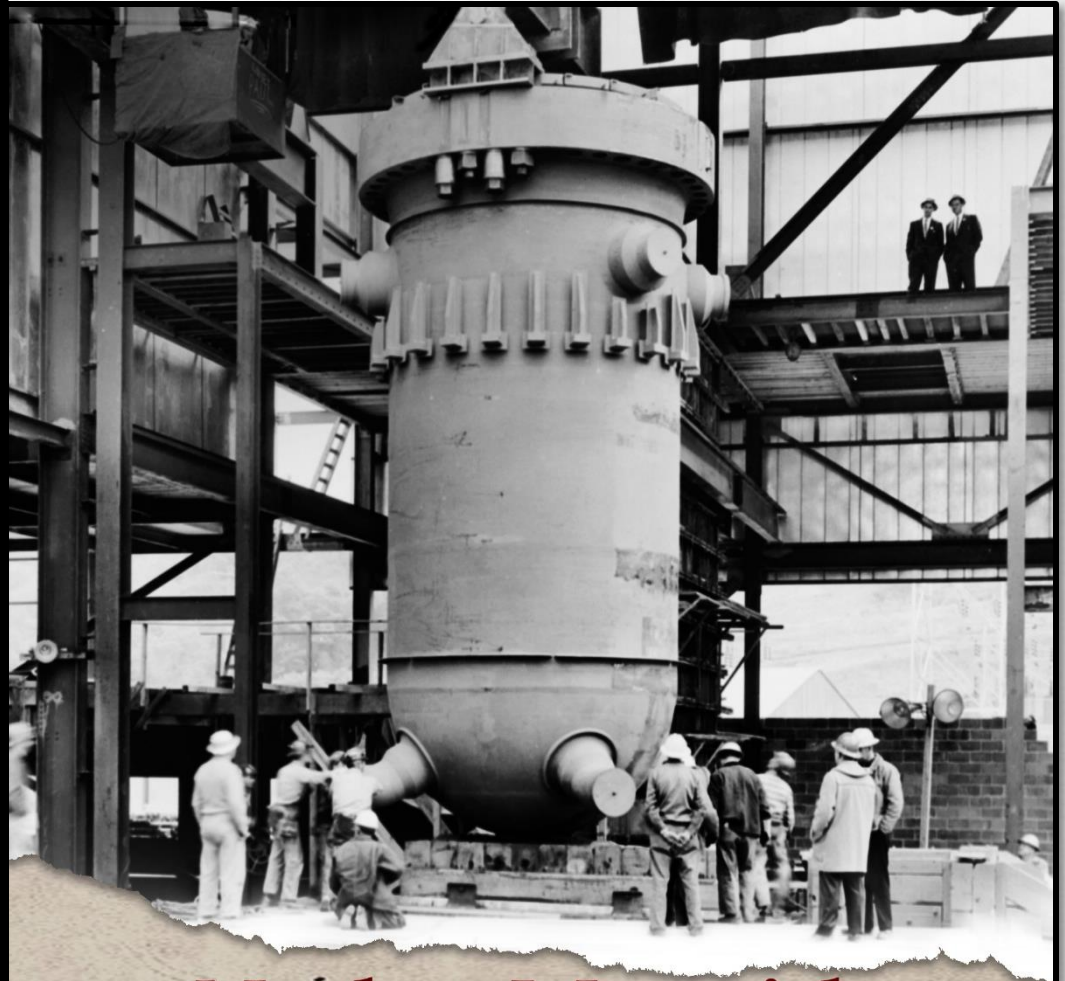
# Details of IRSC's Program

- Formally established in 2006 an FPL partnership (St. Lucie Nuclear Generation Station).
- Informally, IRSC has trained FPL employees for greater than 30 years.
- SACS Accredited 2-year A.S. Program.
- 1<sup>st</sup> Certified NUCP College.
- Certified to offer mechanical, electrical, instrument and controls, radiation protection, and chemistry technician tracks.
- Program articulates to 4 year degree programs at Excelsior College, Thomas Edison State College, Florida International University, and University of Florida.
- Program has 4 full time faculty and 8 SMEs with experience in the field.
- Program mapped to ACAD 08-006 standards.
- IRSC has been benchmarked by and helped 8 schools and 2 nations establish programs.



*Nuclear Mavericks describes the trials and tribulations of 9 nuclear pioneers but can be used in all STEM introductory courses to impart a sense of historical pride and ownership.*

*To order books for your school, visit [GoNuke.org](http://GoNuke.org)*



## **Nuclear Mavericks**

*A Biographical Compilation of the Men & Women  
Who Shaped the Nuclear Workforce*

# Environmental Management Courses

## Summer Internship

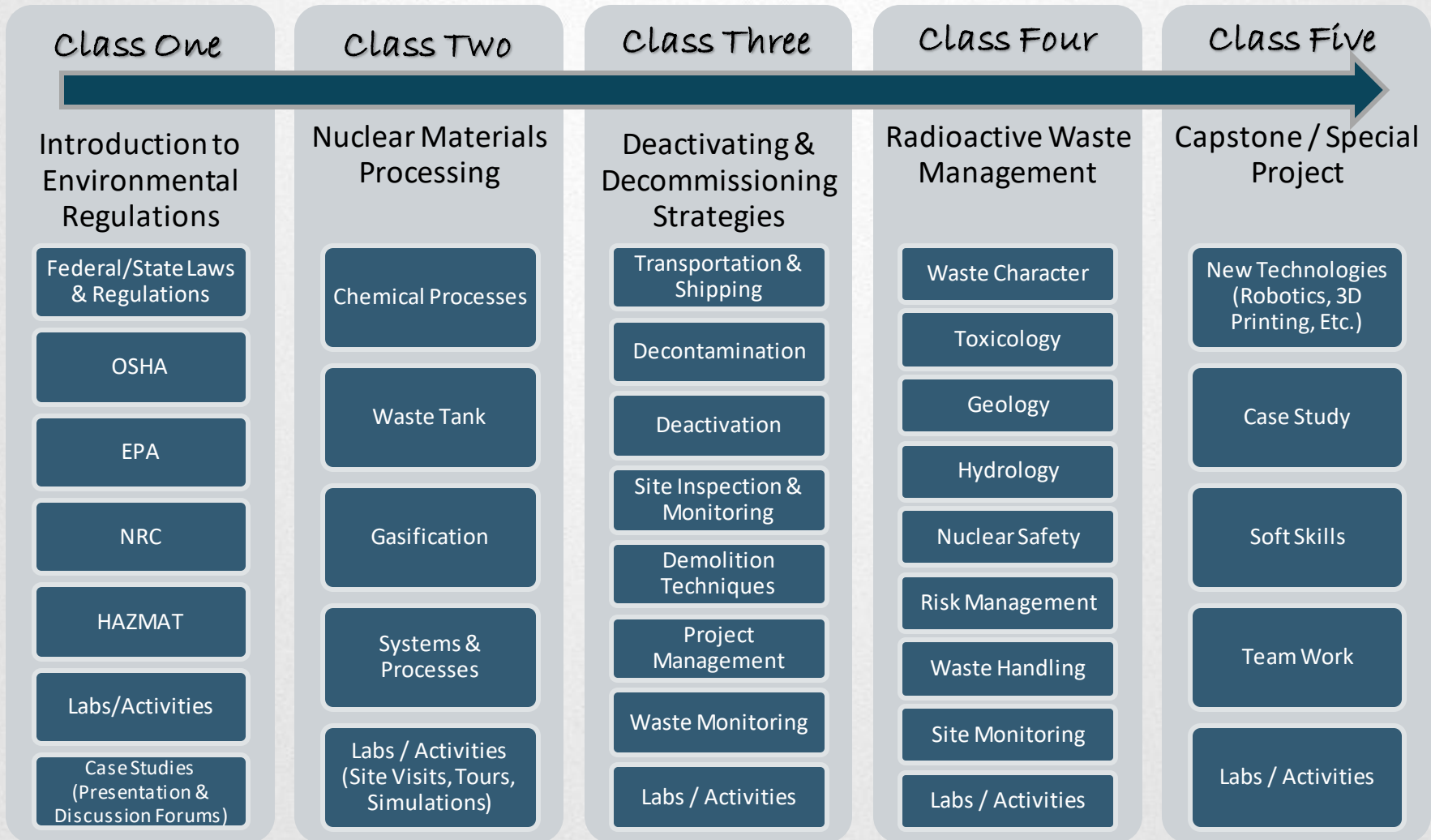
- DOE Partnership

## Second Year Classes

*(15 Credit Hours)*

- Class 1: Introduction to Environmental Regulations
- Class 2: Nuclear Materials Processing
- Class 3: Deactivating & Decommissioning Strategies
- Class 4: Radioactive Waste Management
- Class 5: Capstone / Special Project

# Environmental Management Courses



# **Workforce - Lessons Learned**

**1. No Boutique Program**

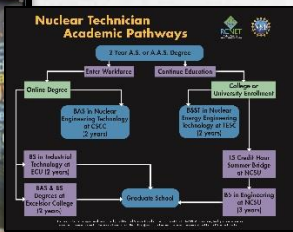
**2. Front door pipeline is hard**

**a. Eliminate Internal barriers**

**b. Eyeball to Eyeball**

# Summary of Other RCNET Products

Product(s)	Target Audience	Type & Location of Materials
Marketing & outreach materials	Academic and industry outreach specialists	RCNET and partner's marketing material including videos, brochures, fact sheets, images, and other printed material available at <a href="http://gonuke.org">gonuke.org</a> .
Job bank	NUCP graduating students & hiring managers	At <a href="http://gonuke.org">gonuke.org</a> website. NUCP graduating students can load their resume and hiring managers can sort and search through them on the protected site.
Academic & career flowcharts	NUCP students	Flow charts on career and academic pathways are available on the <a href="http://gonuke.org">gonuke.org</a> website



**Regional Center for Nuclear Education & Training**

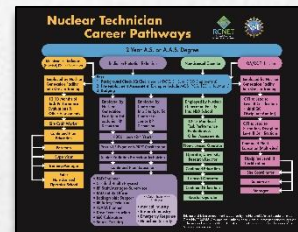
**Mission**  
To make sure the demand for skilled nuclear technicians is met in a standardized and systematic way.

**Goals**

1. Provide standardized curricula for maintenance, operations, radiation protection, and QA/QC activities.
2. Develop, implement, and maintain a writing repository for nuclear curricula.
3. Provide professional development.
4. Provide standardized lesson plans for curriculum training systems.
5. Provide course and program development for students and facilities.

**Partners**

Partnerships throughout the nuclear industry across the U.S.



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ivankatrump • Women's History Month may be coming to an end but every month is a good month to celebrate and encourage women pursuing an education, a career, and the fulfillment of their individual dreams! #WomenInSTEM

8m

motivatingyouth\_ Woman 4 Trump 🇺🇸 · Lowest ever black

9,356 views 8 MINUTES AGO

Add a comment... Post

[https://youtu.be/4QH-D4\\_FK18](https://youtu.be/4QH-D4_FK18)

# Redesigning Math: The Nuclear Case Study



Thank You

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