



**National Society of  
Professional Engineers®**

# **Become a NICET Advocate for the Engineering Team**

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# What is NICET?

- National Institute for Certification in Engineering Technologies (NICET)
- A semi-autonomous division of the National Society of Professional Engineers
- Established in 1961 as ICET – ETCEI in 1977
- A not-for-profit certification body
- Policy direction by 8-person Board of Governors

# Why does NICET exist?

- Provides nationally-applicable, voluntary certification programs
- Covering most major engineering technology fields & many specialized technical disciplines
- DO NOT offer membership services
- DO NOT provide training

# Licensure/Certification/Diploma?

- **Licensure** is a legal credential conferred by federal, state, or local government authorities
- **Certification** is a voluntary credential conferred by private organizations
- **Diploma/Certificate** is conferred by an educational institution

# Who does NICET certify?

- Individuals with appropriate engineering technician or engineering technologist work experience
- Partial credit given for relevant work experience as craftsperson, scientist or engineer
- Residents of the United States and territories and certain others living abroad

# Types of work...

- Involved in planning, design, fabrication/construction/installation, acceptance, operation, and/or maintenance of products, facilities, and processes
- Carry out support functions – data collection, estimating, proposal/plan/specification preparation, quality control/quality assurance, technical sales, technical writing



# Value of NICET Certification - Technicians/Technologists

- Professional stature
- Opportunities for job advancement
- Quicker entry into new job assignments or new duties/responsibilities
- Prequalified for assignments where NICET certification is required

# Value of NICET Certification

## - Employers

- Knowledge and skill assessment of new and existing personnel
- Identification of specific training needs
- Measure of training comprehension
- Identifiable team of qualified professionals in focused career tracks
- Mobile work force - across all jurisdictions



# Value of NICET Certification

## - Regulatory Agencies

- Third-party evaluation of technical proficiency for all Engineering Team members
- Increased value in engineering products and services purchased for the public
- Additional recourse for unqualified or unethical practitioners on the job

# Value of NICET Certification

## - The Public

- Provides high-quality engineering products and services, more efficiently and cost effectively
- Increased protection of the health, safety, and welfare of the public

# Engineering Technicians...

- “Hands-on” members of Engineering Team
- Specific knowledge of components, operating characteristics, and limitations of engineering systems and processes
- General knowledge of applied math, physical science, and engineering science equivalent to AS degree program in engineering technology

# Technician Programs

- 27 Specialty Areas
- 20 Work Element Model
- 7 Standard Model



# Specialty Areas...

- Transportation Engineering Technology
- Construction Materials Testing
- Fire Protection Engineering Technology
- Geotechnical Engineering Technology
- Industrial Instrumentation
- Underground Utilities Construction
- Building Construction
- Electrical Power Testing
- Low Voltage Communication Systems
- Security Systems

# Certification Requirements...

- Written examination
- Increasing amount of relevant work experience
- Verification of competency
- Professional recommendation (Levels III & IV)
- Major project involvement (Level IV)

# Work Element Model...

- Test individual Work Elements
- Graduated work experience
- Verification of Work Elements
- Professional recommendation (Level III & IV)
- Major project write-up (Level IV)

# Work Element Exams...

- Paper & Pencil format
- Up to 34 Work Elements per exam
- Max. 7-hour tests
- 140 test centers
- Weekly test dates
- Basic multiple-choice questions
- Pass/Fail Work Elements
- “Bank” passed Work Elements



# “New” Standard Model...

- Comprehensive tests
- Graduated work experience
- Verification of Performance Measures
- Professional recommendation (Level III & IV)
- Major project write-up (Level IV)

# Standard Model Exams...

- Computer-Based Testing format
  - Comprehensive exams
  - 1-3 exams per level
- 2-4 hour tests
- 250 test centers
- Daily testing possible
- Advanced multiple-choice, hot-spot, drag & drop, performance simulations
- Pass/Fail exams

# Computer-Based Testing...

- Separate Tests per Level
- 90- Day Testing Window
- Schedule and Test at Pearson VUE
- Photo ID at Check-in
- Palm-Vein Scan
- Locker for Personal Items
- Proctor & Video Surveillance
- Approved References Only
- No Loose Paper
- Dry-Erase Board Provided
- Sign Confidentiality Statement
- Brief Tutorial Before Testing Begins
- Embedded Microsoft Scientific Calculator
- Score Report Upon Exit

# Levels of Certification...

- **Level I –  
Technician  
Trainee**



- **Level II –  
Associate  
Engineering  
Technician**



# Levels of Certification...

- Level III –  
Engineering  
Technician



- Level IV –  
Senior  
Engineering  
Technician



# Engineering Technologists

- Members of Engineering Management Team
- Work closely with engineers, scientists, and technicians
- Thorough knowledge of equipment, applications & established design, and implementation methods

# Engineering Technologists

- Certification awarded at two levels:

## **ASSOCIATE TECHNOLOGIST**

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**BS degree in engineering technology from TAC/ABET accredited program**

## **CERTIFIED TECHNOLOGIST**

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**AT plus five years relevant work experience and two professional endorsements**

- Most major BSET disciplines

# Recertification...

- Continuing Professional Development required every three years
- 90 CPD points: relevant work experience; continuing education; professional involvement; certification activities; recertification exam
- Active, Retired, Inactive, Expired Status



# 52 years of proven performance

- Maintain 100% financial independence
- Annual budget of \$4.6 M – Staff of 25
- 27 specialty certification programs available
- Over 135,000 technicians/technologists certified to date
- Currently about 35,000 active certificates
- 10,000 written exams administered annually
- National testing network of more than 500 centers



**Questions?**

# Thank You

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