

CAREER AND TECHNICAL EDUCATION CERTIFICATE

Licensure Requirement Details

STATIONARY ENGINEER #2538

Prepared by the Office Career and Technical Education

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INTRODUCTION

The following information is provided by the Department of Education to serve as a self-evaluation guide for individuals interested in applying for a career and technical education teaching certificate in the State of New Jersey using the alternate route program. The guide provides information about eligible degrees, employment experience, and self-employment experience that can be used to apply for a certificate. It also contains information regarding required state-issued licenses or credentials, when applicable. Note that this guide is not meant to be used to determine actual eligibility to apply, and it does not contain all of the requirements for an actual certificate application. For complete application information, visit the Office of Licensure and Credentials website at <http://www.nj.gov/education/educators/license/>. **Individuals who do not hold the required credentials listed on this detail page should consult Part F: Other Credentials.**

PART A: CAREER AND TECHNICAL EDUCATION CERTIFICATE AND PROGRAM

The holder of a **Stationary Engineer Career and Technical Education Certificate #2538** issued by the New Jersey Department of Education is eligible to teach in the following secondary career and technical education program offered by public school districts in the State of New Jersey:

- *Mechanic & Repair Technologies/Technicians, Other/Stationary Energy Sources Instructor & Operator, Program CIP #479999*

PART B: REQUIRED STATE-ISSUED OCCUPATIONAL LICENSE OR CREDENTIAL

- Applicants must submit a copy of a Gold Seal or Red Seal Specialist Engineer Certificate issued by the New Jersey Department of Labor and Workforce Development, Bureau of Boiler and Pressure Vessel Compliance, as per N.J.S.A. 34:7, N.J.A.C. 12:90.

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Bureau of Boiler and Pressure Vessel Compliance website:

http://lwd.dol.state.nj.us/labor/lssc/content/PSOSH_Forms.html

PART C: APPLICATION FOR CERTIFICATE USING A DEGREE

Option 1: Bachelor's degree or higher

Currently, there are no four-year or higher degrees for this occupation in the State of New Jersey.

Option 2: Associate's degree

Currently, there are no four-year or higher degrees for this occupation in the State of New Jersey.

PART D: APPLICATION FOR CERTIFICATE USING EMPLOYMENT EXPERIENCE

Applicants using this option must meet all of the following requirements, and should review the requirements prior to submitting an application. The requirements include the following:

- Possession and documentation of eligible employment experience*
- Successful completion of an examination in physiology, hygiene and substance abuse
- Successful completion of a basic skills assessment (PRAXIS I[®] exams)
- Successful completion of a 24-hour introduction to teaching course
- Possession of a current Gold Seal or Red Seal Specialist Engineer Certificate

***NOTICE:** The New Jersey Department of Education uses the federal Occupational Information Network (O*NET) as its standard for determining eligible employment experience. O*NET lists the following additional applicable job titles for the **NAME Career and Technical Education Certificate #**: *Stationary Engineers and Boiler Operators, Boiler Operator, Stationary Engineer, Operating Engineer, Plant Utilities Engineer, Utility Operator, Fireman, Plant Operator, Stationary Steam Engineer, Boiler Engineer, and Boiler Tender.*

Requirements:

1. Applicants must submit evidence of at least four years (8,000 hours) of eligible employment in one or more of the job titles identified above.
 - a) The eligible employment experience must be within 10 years of the date of the application submitted to the New Jersey Department of Education. Employment experience that is older than 10 years will not be accepted.
 - b) The eligible employment experience must be documented by the applicant's employer(s) using the Department of Education's Statement of Employment Experience form. If the applicant's eligible employment experience was obtained from more than one employer during the period of time for which eligible hours will be calculated, then a separate Statement of Employment Experience form must be completed by each employer. Employment experience submitted in any other format

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will not be accepted. Applicants may download the Statement of Employment Experience form from the Department of Education's website at the following link:
http://www.nj.gov/education/educators/license/forms/voc_employer_experience.pdf

- c) The employer(s) completing a Statement of Employment Experience form(s) will comment on the applicant's work performance and safety practices for the following general occupational competencies and tools as identified in the O*NET Job Description for this occupation, as follows:

TASKS:

- *Operate or tend stationary engines, boilers, and auxiliary equipment such as pumps, compressors, and air-conditioning equipment, to supply and maintain steam or heat for buildings, marine vessels, or pneumatic tools.*
- *Observe and interpret readings on gauges, meters, and charts registering various aspects of boiler operation to ensure that boilers are operating properly.*
- *Test boiler water quality or arrange for testing and take necessary corrective action, such as adding chemicals to prevent corrosion and harmful deposits.*
- *Activate valves to maintain required amounts of water in boilers, to adjust supplies of combustion air, and to control the flow of fuel into burners.*
- *Monitor boiler water, chemical, and fuel levels, and make adjustments to maintain required levels.*
- *Fire coal furnaces by hand or with stokers and gas- or oil-fed boilers, using automatic gas feeds or oil pumps.*
- *Monitor and inspect equipment, computer terminals, switches, valves, gauges, alarms, safety devices, and meters to detect leaks or malfunctions and to ensure that equipment is operating efficiently and safely.*
- *Analyze problems and take appropriate action to ensure continuous and reliable operation of equipment and systems.*
- *Maintain daily logs of operation, maintenance, and safety activities, including test results, instrument readings, and details of equipment malfunctions and maintenance work.*
- *Adjust controls and/or valves on equipment to provide power, and to regulate and set operations of system or industrial processes.*
- *Knowledge of occupational health/OSHA and workplace safety practices.*

TOOLS & TECHNOLOGY:

- *Gas welding or brazing or cutting apparatus: Gas brazing equipment; Oxyacetylene welding equipment*
- *Pneumatic sanding machines: Descalers; Sandblasters*
- *Pressure indicators: Bourdon tubes; Manifold test gauges; Pressure gauges*
- *Screwdrivers: Phillips head screwdrivers; Straight screwdrivers*
- *Taps or dies: Dies; Taps*
- *Data base user interface and query software: Data entry software; Database software*

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- *Facilities management software: Building management system software; Computerized maintenance management system CMMS software*
- *Graphics or photo imaging software: Graphics software*
- *Spreadsheet software: Microsoft Excel*
- *Word processing software: Microsoft Word*

Applicants will attach the above list of tasks and tools to the Statement of Employment Experience form(s) prior to submitting the form(s) to an employer(s) for completion. Based upon 51-8021.00 - Stationary Engineers and Boiler Operators.

O*NET website: <http://online.onetcenter.org/link/summary/51-8021.00>

2. Applicants must pass an examination in physiology, hygiene and substance abuse issues pursuant to *N.J.A.C. 6A:9-5.9*, including the effects of narcotics and alcohol. The examination is administered at the county offices of education. In lieu of this examination, the applicant may present basic military training or college level study in areas such as biology, health or nutrition. To obtain details regarding this test, contact a county office of education: <http://www.state.nj.us/education/counties/>
3. Applicants must pass the PRAXIS I[®] basic skills tests*, including the following:
 - Praxis Pre-professional Skills Test Reading (#10710)
 - Praxis Pre-professional Skills Test Writing (#20720)
 - Praxis Pre-professional Skills Test Mathematics (#10730)

For more information regarding the PRAXIS I[®] basic skills tests, visit the “New Jersey: Praxis Test Requirements” page of the Employment Testing Service (ETS) website at the following link: <http://www.ets.org/praxis/nj>. Scroll to the bottom of the page to “Career and Technical Education.” The three required tests are in the column to the right. Test preparation information and materials are also available from ETS. On the webpage, go to the “In This Section” selection in the upper left-hand corner and click on “For Test Takers.” Select the PRAXIS I[®] Pre-Professional Skills Test (PPST) link, which goes to the PRAXIS I[®] Overview page. Click on the light blue “Prepare for the Test” tab. Select one of the three PRAXIS I[®] tests. Each link goes to a page that contains free test prep information as well as test guides that may be purchased.

***NOTICE:** Applicants who have completed a college degree (two-year, four-year or higher) in any subject area, regardless of GPA, are not required to take the PRAXIS I[®] tests.

4. Applicants must complete a 24-hour introduction to teaching course through an authorized provider, which serves as an introduction to the teaching profession for those individuals who are exploring career options. Topics include classroom management, lesson planning, introduction to New Jersey core curriculum content standards, and assessment of pupil progress. To obtain information regarding this requirement, read the section titled, “New Requirement for Certificate of Eligibility,” on the following website: <http://www.nj.gov/education/educators/license/advisories/applicant.htm>
5. Applicants must submit a copy of a current Gold Seal or Red Seal Specialist Engineer Certificate as per the requirements of **PART B**, above.

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PART E: APPLICATION FOR CERTIFICATE USING SELF-EMPLOYMENT EXPERIENCE

Applicants using this option must meet all of the following requirements, and should review the requirements prior to submitting an application. The requirements include the following:

- Possession and documentation of eligible self-employment experience*
- Successful completion of an examination in physiology, hygiene and substance abuse
- Successful completion of a basic skills assessment (PRAXIS I exams)
- Successful completion of a 24-hour introduction to teaching course
- Possession of a current Gold Seal or Red Seal Specialist Engineer Certificate

***NOTICE:** The New Jersey Department of Education uses the federal North American Industry Classification System (NAICS) as its standard for determining eligible self-employment experience. Documentation of self-employment experience must identify the NAICS code used by the applicant when filing state and/or federal taxes. NAICS Website:

<http://www.census.gov/epcd/naics02/naicod02.htm#N54>

Requirements:

1. The candidate shall present a notarized letter from a tax preparer and/or an attorney verifying the following:
 - a) The applicant has at least four years (8,000 hours) of eligible self-employment in one or more of the NAICS codes identified above.
 - b) The eligible self-employment experience is within 10 years of the date of the application submitted to the New Jersey Department of Education. Self-employment experience that is older than 10 years will not be accepted.
2. Applicants must pass an examination in physiology, hygiene and substance abuse issues pursuant to *N.J.A.C. 6A:9-5.9*, including the effects of narcotics and alcohol. The examination is administered at the county offices of education. In lieu of this examination, the applicant may present basic military training or college level study in areas such as biology, health or nutrition. To obtain details regarding this test, contact a county office of education: <http://www.state.nj.us/education/counties/>
3. Applicants must pass the PRAXIS I[®] basic skills tests*, including the following:
 - a) Praxis Pre-professional Skills Test Reading (#10710)
 - b) Praxis Pre-professional Skills Test Writing (#20720)
 - c) Praxis Pre-professional Skills Test Mathematics (#10730)

For more information regarding the PRAXIS I[®] basic skills tests, visit the “New Jersey: Praxis Test Requirements” page of the Employment Testing Service (ETS) website at the following link: <http://www.ets.org/praxis/nj>. Scroll to the bottom of the page to “Career and Technical Education.” The three required tests are in the column to the right. Test preparation information and materials are also available from ETS. On the webpage, go to the “In This Section” selection in the upper left-hand corner, and click on “For Test Takers.” Select the PRAXIS I[®] Pre-Professional Skills Test (PPST) link, which brings you to the PRAXIS I[®] Overview page. Click on the light blue “Prepare for the Test” tab.

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Select one of the three PRAXIS I[®] tests. Each link goes to a page that contains free test prep information as well as test guides that may be purchased.

***NOTICE:** Applicants who have completed a college degree (two-year, four-year or higher) in any subject area, regardless of GPA, are not required to take the PRAXIS I[®] tests.

4. Applicants must complete a 24-hour introduction to teaching course through an authorized provider, which serves as an introduction to the teaching profession for those individuals who are exploring career options. Topics include classroom management, lesson planning, introduction to New Jersey core curriculum content standards, and assessment of pupil progress. To obtain information regarding this requirement, read the section titled, "New Requirement for Certificate of Eligibility," on the following website: <http://www.nj.gov/education/educators/license/advisorics/applicant.htm>
5. Applicants must submit a copy of a current Gold Seal or Red Seal Specialist Engineer Certificate as per the requirements of **PART B**, above.

PART F: OTHER CREDENTIALS

Individuals who possess a degree and/or employment or self-employment experience not listed on this worksheet may submit their degree and/or employment or self-employment experience along with an application for a career and technical education certificate to the Department of Education, which will review the submission in order to determine eligibility. There is a fee associated with this service. However, the Department of Education does not guarantee that credentials submitted will be accepted by the Department of Education as satisfying the requirements for a career and technical education certificate. For more information, visit the Office of Licensure and Credentials homepage at <http://www.nj.gov/education/educators/license/>

PART G: MILITARY SERVICE/TROOPS TO TEACHERS

Individuals with military service may have obtained qualifying employment experience, education, and/or training during their military service via the New Jersey Troops to Teachers program. The Troops to Teachers program (TTT) assists eligible military personnel with the transition to a new career as public school teachers. The New Jersey TTT office will provide participants with counseling and assistance regarding certification requirements, routes to state teacher certification and employment leads. For information, contact the New Jersey Department of Education Troops to Teachers office at 800-680-0884 or e-mail ttnj@doe.state.nj.us
New Jersey Troops to Teachers Website: <http://www.nj.gov/njded/ttnj>

PART H: ARE YOU LOOKING FOR A TEACHING JOB IN NEW JERSEY?

Visit NJHire today, the New Jersey Department of Education's free education recruitment website. NJ HIRE Website: <http://www.njhire.com>