

**CAREER AND TECHNICAL EDUCATION CERTIFICATE**

Licensure Requirement Details

**SHEET METAL #2539**

*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 an **Sheet Metal Career and Technical Education Certificate #2539** 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:

- *Sheet Metal Technology/Sheetworking, CIP Code 48.0506: A program that prepares individuals to apply technical knowledge and skills to form, shape, bend and fold extruded metals, including the creation of new products, using hand tools and machines such as cornice brakes, forming rolls, and squaring shears*

**PART B: REQUIRED STATE-ISSUED OCCUPATIONAL LICENSE OR CREDENTIAL**

Currently, there are no state-mandated occupational licenses for this certificate.

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### **PART C: APPLICATION FOR CERTIFICATE USING A DEGREE**

#### **Option 1: Bachelor's degree or higher**

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 of an eligible degree with an eligible grade point average (GPA)
- Successful completion of an examination in physiology, hygiene and substance abuse issues
- Successful completion of a 24-hour introduction to teaching course

#### **Requirements:**

1. Applicants must submit the following:
  - a) An official, sealed copy of their transcript(s) for a bachelor's degree or higher in a Department-approved subject area for the certificate. Applicants must have completed at least 30 credits in a coherent sequence of courses in the subject area from a regionally accredited college or university. Examples of eligible subject areas include the following:
    - *Applicants must submit degree information to the Department of Education for evaluation.*
  - b) The applicant's GPA must be 2.75 or higher. Applicants with a bachelor's degree or higher who graduate on or after September 1, 2004, with a GPA that is below 2.75 in a four-year degree program, but at least 2.50 when a GPA of 4.00 equals an A grade, are eligible to apply for the career and technical education certificate by submitting evidence of a minimum of two years (4,000 hours) of full-time employment or part-time employment as per the requirements of 1(a) – (c) in **PART D**, below.
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 examination, contact a county office of education: <http://www.state.nj.us/education/counties/>
3. 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>

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### Option 2: Associate's degree

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 of an eligible degree with an eligible grade point average (GPA)
- Possession and documentation of an eligible employment experience
- Successful completion of an examination in physiology, hygiene and substance abuse issues
- Successful completion of a 24-hour introduction to teaching course

### **Requirements:**

1. Applicants must submit the following:

a) An official, sealed copy of their transcript(s) for an associate's degree in a Department-approved subject area for the certificate. Applicants must have completed at least 30 credits in a coherent sequence of courses in the subject area from a regionally accredited college or university. Examples of eligible subject areas include the following:

- *Applicants must submit degree information to the Department of Education for evaluation.*

b) Applicants with a GPA that is below 2.75 cannot apply for a certificate using their degree. In such cases, applicants must apply in accordance with the requirements of **Part D** or **Part E**, below.

2. Applicants using an associate's degree must also submit evidence of a minimum of two years (4,000 hours) of full-time employment or part-time employment in an eligible occupational area as identified in Part D, below. Documentation of the employment experience must follow the requirements of 1(a) – (c) in **Part D**.

3. 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/>

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>

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#### **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

**\*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 **Sheet Metal Career and Technical Education Certificate #2539**: *Sheet Metal Mechanic, Sheet Metal Worker, Journeyman Sheetmetal Worker, HVAC Sheet Metal Installer (Heating, Ventilation, and Air Conditioning Sheet Metal Installer), Sheet Metal Apprentice, Field Installer, Sheet Metal Fabricator, Heating, Ventilation, Air Conditioning - Refrigeration Technician (HVAC-R Technician), HVAC Technician (Heating, Ventilation, and Air Conditioning Technician), and Sheet Metal Installer.*

#### **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 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](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:

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#### **TASKS**

- *Determine project requirements, including scope, assembly sequences, and required methods and materials, according to blueprints, drawings, and written or verbal instructions.*
- *Lay out, measure, and mark dimensions and reference lines on material, such as roofing panels, according to drawings or templates, using calculators, scribes, dividers, squares, and rulers.*
- *Fasten seams and joints together with welds, bolts, cement, rivets, solder, caulks, metal drive clips, and bonds to assemble components into products or to repair sheet metal items.*
- *Install assemblies, such as flashing, pipes, tubes, heating and air conditioning ducts, furnace casings, rain gutters, and down spouts, in supportive frameworks.*
- *Convert blueprints into shop drawings to be followed in the construction and assembly of sheet metal products.*
- *Fabricate or alter parts at construction sites, using shears, hammers, punches, and drills.*
- *Select gauges and types of sheet metal or non-metallic material, according to product specifications.*
- *Maneuver completed units into position for installation, and anchor the units.*
- *Transport prefabricated parts to construction sites for assembly and installation.*
- *Drill and punch holes in metal, for screws, bolts, and rivets.*

#### **TOOLS & TECHNOLOGY**

- *Hammers — Ball peen hammers; Bumping hammers; Setting hammers*
- *Metal cutters — Aviation snips; Hand notchers; Power notchers; V-notchers*
- *Punches or nail sets or drifts — Center punches; Hole punches; Prick punches; Rotary punches*
- *Sequential forming machines — Bar folders; Beading machines; Spiral duct machines; Wiring machines*
- *Shears — Power shears; Ring and circular shears; Squaring shears; Unishears*
- *Workshop presses — Drill presses; Hand brakes; Power presses; Rivet presses*
- *Computer aided design CAD software — Autodesk AutoCAD software; Parametric Technology Pro/ENGINEER software; UGS NX; XY Soft Sheet Cutting Suite*
- *Computer aided manufacturing CAM software — Applied Production ProFab; JETCAM Expert; Striker Systems SS-Profile; WiCAM PN4000*
- *Data base user interface and query software — Data entry software*
- *Spreadsheet software*

Applicants will attach a list of tasks, tools and technology used in the workplace to the Statement of Employment Experience form(s) prior to submitting the form(s) to an employer(s) for completion. Based upon the O\*NET Information page 47-2211.00 - Sheet Metal Workers, <http://online.onetcenter.org/link/summary/47-2211.00>

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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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> Pre-Professional Skills Test (PPST) link, which goes to the PRAXIS I<sup>®</sup> Overview page. Click on the light blue “Prepare for the Test” tab. Select one of the three PRAXIS I<sup>®</sup> 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<sup>®</sup> 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>

### **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

**\*NOTICE:** The New Jersey Department of Education uses the federal North American Industry Classification System (NAICS) as its standard for determining eligible self-employment

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experience. NAICS lists the following applicable code for the **Sheet Metal Career and Technical Education Certificate #2539**:

- NAICS Code: 332322 Sheet Metal Work Manufacturing
- NAICS Website: <http://www.census.gov/cgi-bin/sssd/naics/naicsrch?chart=2007>

#### **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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> Pre-Professional Skills Test (PPST) link, which brings you to the PRAXIS I<sup>®</sup> Overview page. Click on the light blue “Prepare for the Test” tab. Select one of the three PRAXIS I<sup>®</sup> 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<sup>®</sup> 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

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section titled, "New Requirement for Certificate of Eligibility," on the following website:  
<http://www.nj.gov/education/educators/license/advisories/applicant.htm>

#### **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 [tttj@doe.state.nj.us](mailto:tttj@doe.state.nj.us)  
New Jersey Troops to Teachers Website: <http://www.nj.gov/njded/tttj>

#### **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>