

Semiconductor Processing Technicians

SOC: 51-9141 • Career Profile Report

■ Key Facts

\$51,180

Median Salary

31,900

Employment

+11.0%

Growth Rate

■ Requirements & Salary Range

Education: High school diploma

■ Automation Risk Assessment

Medium Risk - 38.0% probability of being automated in the next 10-20 years.

This job has some routine elements but still requires human judgment and interaction.

■ Work-Life Balance

6.2/10 - Good work-life balance

■ Personality Fit (RIASEC)

Higher scores indicate better personality fit for this career type.

Realistic	8.4/10	Investigative	5.0/10
Artistic	3.8/10	Social	4.6/10
Enterprising	4.0/10	Conventional	8.0/10

■ Top Skills Required

Communication skills, Computer skills, Critical-thinking skills, Detail oriented, Dexterity

✓ Strengths

- High Demand
- Flexible Work
- Continuous Learning

■ Challenges

- Burnout Risk
- Rapid Technological Change

■ What They Do

Semiconductor Processing Technicians typically perform the following tasks:

- Manipulate valves, switches, and buttons, or key commands into control panels to start semiconductor processing cycles.
- Maintain processing, production, and inspection information and reports.
- Inspect materials, components, or products for surface defects and measure circuitry, using electronic test equipment, precision measuring instruments, microscope, and standard procedures.
- Clean semiconductor wafers using cleaning equipment, such as chemical baths, automatic wafer cleaners, or blow-off wands.
- Study work orders, instructions, formulas, and processing charts to determine specifications and sequence of operations.
- Load and unload equipment chambers and transport finished product to storage or to area for further processing.
- Clean and maintain equipment, including replacing etching and rinsing solutions and cleaning bath containers and work area.
- Place semiconductor wafers in processing containers or equipment holders, using vacuum wand or tweezers.
- Set, adjust, and readjust computerized or mechanical equipment controls to regulate power level, temperature, vacuum, and rotation speed of furnace, according to crystal growing specifications.
- Etch, lap, polish, or grind wafers or ingots to form circuitry and change conductive properties, using etching, lapping, polishing, or grinding equipment.
- Load semiconductor material into furnace.
- Monitor operation and adjust controls of processing machines and equipment to produce compositions with specific electronic properties, using computer terminals.
- Count, sort, and weigh processed items.
- Calculate etching time based on thickness of material to be removed from wafers or crystals.
- Inspect equipment for leaks, diagnose malfunctions, and request repairs.
- Align photo mask pattern on photoresist layer, expose pattern to ultraviolet light, and develop pattern, using specialized equipment.
- Stamp, etch, or scribe identifying information on finished component according to specifications.
- Scribe or separate wafers into dice.
- Connect reactor to computer, using hand tools and power tools.
- Measure and weigh amounts of crystal growing materials, mix and grind materials, load materials into container, and monitor processing procedures to help identify crystal growing problems.

*Generated by StartRight • Data from U.S. Bureau of Labor Statistics & O*NET*

Source: <https://www.bls.gov/ooh/production/semiconductor-processing-technicians.htm>