

## Machining Tool Operators



Machine operation requires significant manual dexterity and fine motor control to be able to perform operations precisely. This is very important for Machining Tool Operators, where metal shaping for construction of goods and equipment or machinery requires a high degree of accuracy. By working directly on manufacturing, Machining Tool Operators pick up transferable knowledge of production which can facilitate switching to other roles within the sector.

### Skills

Skills are developed through training and experience, and are the practical proficiencies someone possesses. The following are top key skills machining tool operators employ in their work:

1. Operation Monitoring
2. Operation and Control
3. Quality Control Analysis
4. Complex Problem Solving
5. Reading Comprehension

### Tasks

Tasks are the assigned duties that an occupational group performs in their daily work. The following are the tasks machining tool operators most regularly encounter:

1. Program equipment to perform production tasks.
2. Operate grinding equipment.
3. Adjust equipment controls to regulate flow of production materials or products.
4. Record operational or production data.
5. Instruct workers to use equipment or perform technical procedures.

### Technical Knowledge

Technical Knowledge is the understanding of theory and utility of modern tools in a work environment. The following tools are used by machining tool operators regularly:

1. Computer-aided design and manufacturing software
2. Industrial control software
3. Inventory management software
4. Analytical or scientific software
5. Office suite software

### Abilities

Abilities refer to the innate faculties that allow workers to carry out tasks and activities. The following are the top abilities that machining tool operators possess:

1. Control Precision
2. Arm-Hand Steadiness
3. Manual Dexterity
4. Near Vision
5. Reaction Time

# Skills Transferability Matrix

FOCAL's Skills Transferability Matrices analyze the transferability of an occupation across a multitude of other occupations on the basis of similarities in **skills, technical knowledge, tasks, and abilities** as outlined by the O\*Net database. It aims to show workers how to leverage their skill set in changing occupations, planning a career path, and transitioning to other industries. It also assists policy makers and educators address changing skill sets and areas of opportunity for workforce entrants in developing industries. Employers can also use this tool in reskilling or upskilling workers to circumvent skills shortages, and reduce the hiring and training challenges.

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Occupations	Skills	Technical Knowledge	Tasks	Abilities	Total
Woodworking machine operators	95%	90%	63%	92%	85%
Metalworking and forging machine operators	95%	81%	66%	93%	84%
Machinists and machining and tooling inspectors	92%	86%	58%	93%	82%
Plastics processing machine operators	95%	57%	56%	92%	75%
Concrete, clay and stone forming operators	93%	48%	52%	93%	71%
Glass forming and finishing machine operators and glass cutters	90%	43%	54%	91%	70%
Electronics assemblers, fabricators, inspectors and testers	88%	71%	30%	84%	68%
Machine operators, mineral and metal processing	93%	43%	41%	91%	67%
Foundry workers	90%	52%	34%	90%	67%
Tool and die makers	92%	48%	35%	90%	66%
Plastic products assemblers, finishers and inspectors	84%	67%	19%	85%	63%
Other metal products machine operators	91%	33%	38%	90%	63%
Chemical plant machine operators	92%	33%	33%	91%	62%
Supervisors, other mechanical and metal products manufacturing	64%	67%	11%	74%	54%

After scanning over 2,600 skills, technical competencies, tasks, and abilities of each of the 500 occupations as defined by the National Occupational Classification (NOC) system, a skills transferability matrix for machining tool operators is produced. In the matrix above, a high score is highlighted in green and indicates the high transferability potential of an attribute of an occupation with that of machining tool operators. Lower or no transferability areas are marked in red.

Machining tool operators share high overall attribute transferability with machine operation roles, likely due to fine motor and control precision skills and abilities, and may smoothly transition to machine operation in other areas of manufacturing. Machining tool operators have observed transferability with metalworking skilled trades, such as tool and die making and machining and tooling, indicating that with proper training, they may succeed in those roles. Their quality control analysis and monitoring skills may result in moderate transferability observed with roles in assembly and inspection. Though limited, upward mobility is observed for machining and tooling operators with some transferability in mechanical and metal product manufacturing supervision.

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