



# Machine Operator

Bio-economy Skills At-a-Glance



Building skills for Canada's bio-economy

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## About BioTalent Canada™

### Helping Canada's Bio-economy thrive globally

Canada is a world leader in biotechnology—the application of living organisms to industrial, agricultural, medical and other processes and products. To maintain and build on this leadership, the sector needs highly skilled, job-ready people.

By acting as a national hub and central resource for employers, job seekers, students, educators and government agencies, BioTalent Canada helps make this happen.

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[www.biotalent.ca](http://www.biotalent.ca) • Telephone: 613-235-1402

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## About the Bio-economy

The bio-economy involves the research, development, manufacturing and commercialization of technologies and products for such areas as:

- Agriculture
- Aquaculture
- Bioenergy
- Bioinformatics
- Bioproducts
- Biosciences
- Environment
- Food Processing
- Forestry
- Genomics
- Human and Animal Health
- Industrial
- Life Sciences
- Medical Devices
- Natural Resources
- Nanotechnology
- Nutraceuticals
- Pharmaceuticals

## Components of the Bio-economy Skills At-a-Glance

The *Bio-economy Skills At-a-Glance* are built around *Key Competencies*. They are *not* complete *Bio-economy Skills Profiles*. They capture the key hard and soft skills required to successfully function in this position. Those key competencies require specific tasks be accomplished in order to attain the desired outcome. More often than not, those key activities are functional in nature and require the application of specific knowledge acquired by education, training or practical experience. In bio-economy companies, those functional competencies may be very broad and diversified, encompassing both scientific and business expertise. Some may refer to functional competencies as hard skills of the position.

The *Bio-economy Skills At-a-Glance* have been developed through secondary research and have NOT been validated by industry. As a result, industry feedback will be greatly appreciated. Please send any feedback to [portfolio@biotalent.ca](mailto:portfolio@biotalent.ca).

The *Bio-economy Skills-At-a-Glance* are useful for such activities as recruiting, professional development, coaching, self-assessment, and many other purposes.

## Occupational Description

Machine operators set up, operate and shut down machinery and equipment used in the production of manufactured products. They understand how the machines work, possible problems and how to perform basic maintenance and repairs.

## Potential Professional Background and Education/Bio-economy or Relevant Experience

### Education/Certification

- A High School diploma is required.
- Some employers may require certification and/or completion of college or post-secondary education

### Professional Experience

- Workplace Hazardous Information Management System certificate
- Transportation of Dangerous Goods
- First Aid training
- Drivers Licence

## Competencies and Tasks

*A Machine Operator must be able to:*

### A. Gather information

TASKS
1. Read work orders to determine required specifications
2. Review production information reports / shift logs
3. Review operational manuals and equipment documentation

***B. Operate machines***

TASKS
1. Set up machinery and equipment for manufacturing requirements
2. Change machinery attachments (e.g., dies, nozzles) as required
3. Input codes and key in programming data into computerized machinery
4. Feed materials to the machinery
5. Adjust machinery settings during operation as required
6. Shut down machinery at end of manufacturing

***C. Maintain machines***

TASKS
1. Clean and lubricate machinery and equipment
2. Complete routine preventative maintenance per SOPs
3. Troubleshoot minor machinery malfunctions
4. Advise Maintenance department of any issues arising during operation

***D. Operate equipment, vehicles and/or mechanized devices***

TASKS
1. Operate cranes or hoists as required
2. Operate material handling equipment such as forklifts as required
3. Operate heavy metalworking machines (e.g., shears, saws, drills, CNC equipment)

***E. Monitor processes, materials, or surroundings***

TASKS
1. Monitor output quality
2. Monitor machinery and equipment performance during operation
3. Observe machinery gauges, meters, computer printouts, electronic instrumentation and video monitors

***F. Document, record and report information***

TASKS
1. Record production information for production reports / maintain shift logs
2. Contribute to the preparation of maintenance reports
3. Complete maintenance records

***G. Document and comply with policies and procedures***

TASKS
1. Comply with corporate policies and procedures
2. Follow standard operating procedures and work instructions
3. Comply with regulatory requirements
4. Follow current Good Manufacturing Practices (cGMP)

***H. Use computers***

TASKS
1. Use email software as appropriate
2. Use Microsoft Office as appropriate
3. Use database software as appropriate

***I. Demonstrate personal competencies***

TASKS
1. Demonstrate teamwork
2. Exhibit sensitivity to cultural and social diversity
3. Be customer service focused
4. Work in a fast-paced environment
5. Follow company's policies and procedures
6. Demonstrate time management skills
7. Manage stress
8. Be a quick learner

TASKS
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9. Communicate effectively and clearly
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## Strong Board of Directors

The Board of Directors is composed of experts in the field of HR, CEOs, CFOs and CSOs from across Canada with extensive financial and industry experience representing companies and organizations in Canada's bio-economy. BioTalent Canada is not a membership organization and therefore relies on the guidance provided by its dedicated volunteer Board of Directors.

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