

Industrial Metals Fabrication

(one year (11 months) post-secondary program)

Please read and think about the following information below carefully to decide whether this program is a good fit for you. This information may change and is simply intended to offer you a helpful perspective on what you will experience in this program.

Orientation: Typically, during the last week of August (**Required** for all students).

Program Dates: September through June (courses); July (Practicum)

Scheduled Breaks: Last week of December and first week of January (two weeks); first week of March (one week). Check your registration for exact dates.

Post-Graduation

Work Permit length: Up to 11 months.

Schedule: Monday to Friday as early as 8:00 a.m and as late as 5:00 p.m.

Campus Location: 1035 1st Street North, Brandon, Manitoba. See campus information [here](#)

What You'll Study:

You will be introduced to two trades: machining and welding. Machining: September through February (6 months), then Welding: March through June (4 months), then Practicum (3 weeks).

In each section, start with shop, equipment and safety and orientation. Safety is a focus in the whole program and in every job.

Theory and practice in using many types of equipment, including lathes, milling machines, drill presses, bandsaws and grinding machines.

Learn and use oxyacetylene, shielded metal, gas metal and gas tungsten arc welding and plasma cutting, as well as metal-working and machine operation.

Experience the basics of computer-aided design (CAD) and computer-aided manufacturing (CAM). Then complete a variety of practical projects using CAD/CAM along with the computer numerically controlled (CNC) lathe and milling machine.

Develop the skills to safely use metal-forming machines to prepare, cut, shape and assemble metal components.

Your study will include related skills in blueprint-reading, communications and customer service, math and measurement, and metallurgical science.

All students will complete a "College Foundations" online course to develop the skills and attitudes of a successful Canadian student and employee.

Read more under "Overview" and "Courses and Costs" [here](#). See PDF document on [this page](#).

How You'll "Learn By Doing"

Approximately 60% of program learning will be practical, "hands-on" learning and evaluation; 40% will be "lectures" and theory examinations.

You'll apply your learning and skills with industry-relevant tools and a wide variety of equipment.

One month work practicum at end of program; unpaid.

What You'll Need to Do to Graduate

- **Attend** all classes and activities. **Arrive on time** every day. Participate fully and ask questions.
- Ask instructors or advisors for help when you need it, and ask for help early!
- **Purchase all required books, tools, supplies and safety clothing/footwear**; most required **during first or second week of program**. **If you do not** purchase these items, you will not be allowed in the shop and **you will fail courses very quickly**.
- Work co-operatively in teams and behave respectfully towards all students, staff and partners. **English only**.
- **No personal cell phone use** during class activity.
- **Manage physical demands**: Good hand-eye coordination and ability to use fingers/hands in a skilled and coordinated way, with small or large objects with substantial weight. Be ready to lift equipment or heavy objects (minimum of 50 pounds/23 kilograms). Good vision will be important. The shop or work location may have high noise levels.
- **You will need to be comfortable with using a desktop or laptop computer** to use industry-related software, develop code for computer numerically controlled (CNC) machining, and type assignments. If you have doubts, try quizzes here: <https://www.digitalliteracyassessment.org/> If you have difficulty with these quizzes, this program may not be a good choice for you.
- **Maintain shop safety practices**.
- You will need a **co-work permit** for Practicum; apply **early!** See [here](#).
- **Pass all courses with a C (60%)**. Re-testing is generally not an option. If you fail one or more courses, you could be ineligible to take later courses in the following semester, which could create an “unscheduled break” or part-time status. Both of these situations would make you ineligible for working part-time or for a post-graduation work permit.
- All English skills (reading, writing, listening, speaking) are important. Evaluation can include tests, group projects, practical demonstrations of skills, and presentations.
- **Do your own work**. Cheating, not referencing sources of your ideas, or using other people’s work could result in failing grades/suspension.

Costs

Tuition: see website and letter of acceptance.

Health insurance: All international students will **require** health insurance. Cost approximately \$1000.

Textbooks, tools, supplies, safety clothing and footwear: at least \$1850. **NOT included in tuition**. See lists [here](#); click on the “Tools and Supplies” tab. Purchased on your own, not payable to college. **Much of this will be required early in program**. Also note any required computer equipment on that page; if you do not own that now, it will be an additional cost.

Transportation and living costs are your responsibility.

How Assiniboine College Can Help You

- Trained instructors will share their knowledge and experience from the industry, and will give you frequent and specific feedback on your progress.
- Learning Commons staff available to assist with study skills, like test-taking and writing papers.
- Student advising staff can offer support for personal issues.
- A Regulated International Student Immigration Advisor can answer questions related to permits.
- The college hosts a Tool Fair early in the program, which allows you to compare tools and costs before purchasing your tools. Some companies will offer a student discount.

Job Options for Graduates

Graduates find entry-level employment in industries such as equipment manufacturing, custom manufacturing and repair, farm machinery manufacturing, hydro, mining, automotive manufacturing and rebuilding, railways, and aerospace.

Some jobs will require working outside, sometimes in unpleasant weather, or in unheated buildings. Some jobs will require evening and weekend work and/or long hours of work, especially in the workplace's "busy" season.

Many will require a **valid Manitoba driver's license**. See information [here](#) and [here](#).

Possible jobs on Manitoba In-Demand Occupations list: [7231-Machinists and machining and tooling inspectors](#); [7232-Tool and Die Makers](#); [7237-Welders and related machine operators](#); [7316-Machine fitters](#); [7311-Construction millwrights and industrial mechanics](#).

Other Important Information

This program has a **strict** attendance and punctuality policy.

All students **must wear personal protective equipment (PPE)** (see Supplies list) as required by Manitoba Workplace Safety and Health Legislation. If a student has any doubt about wearing the required PPE they should contact the Chair of the program to discuss **before** choosing the program.

"Co-op work permit" will be required by Immigration, Refugees and Citizenship Canada before you start the practicum placement. Your letter of acceptance will allow you to apply. Apply for this **early**, as processing time is very long! See IRCC website [here](#).

To qualify for working part-time, and for a post-graduation work permit, international students must complete the **full 11 month program with both specializations**. Only one specialization would not be enough.

Completion of this program with a minimum average of 70% *could* qualify you for credit in Level 1 in-school technical training and up to 900 hours in the Machinist trade or up to 800 hours in the Welder trade with Apprenticeship Manitoba. All decisions will be Apprenticeship Manitoba's. See [here](#) for information about apprenticeship.