

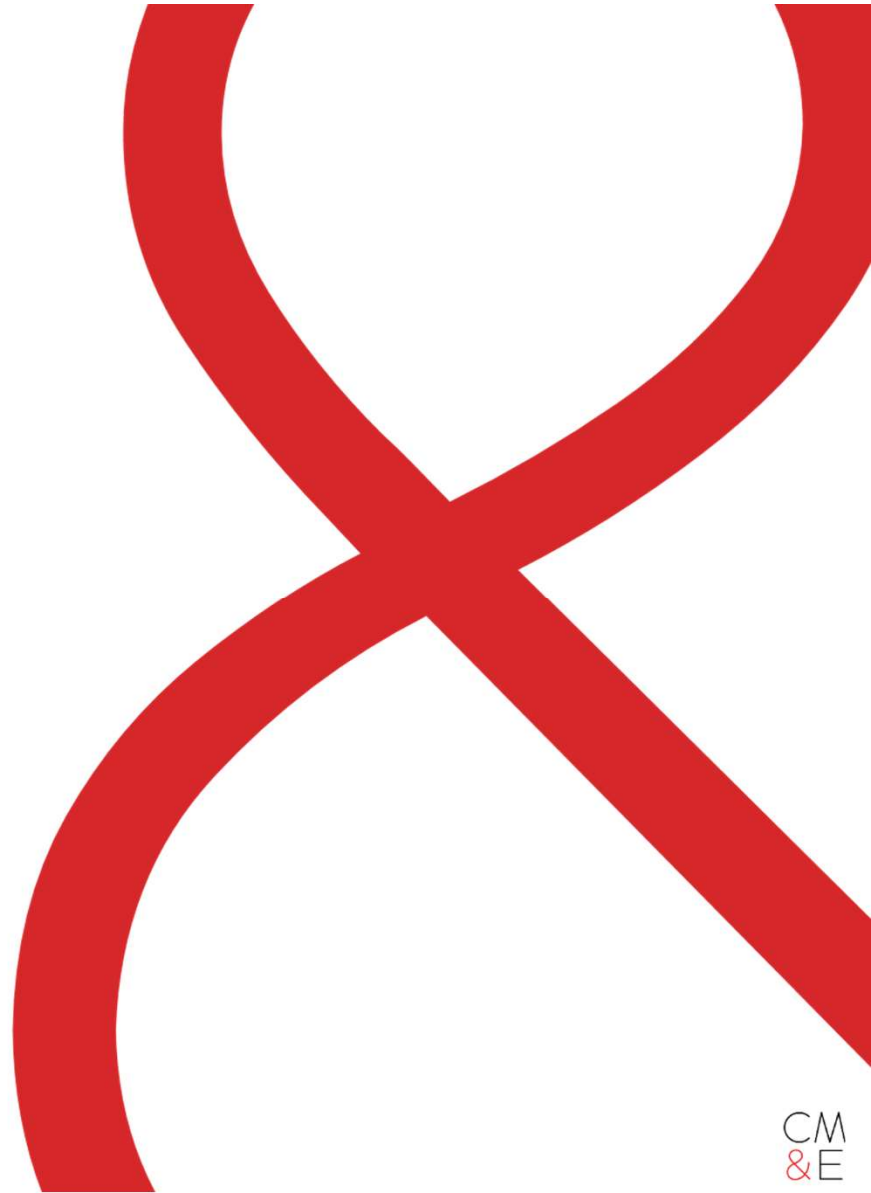
CM
&E

CANADIAN
MANUFACTURERS
& EXPORTERS



AGENDA

- What is Manufacturing?
- What careers are available?
- Why should I consider manufacturing?



WHAT IS MANUFACTURING?

Definition: Manufacturing is the process of taking raw materials / ingredients and changing their shape, form or function through labour, machinery and tools to create a new product.

- Small, medium and large sized businesses
- Solo entrepreneurs
- Craft makers / manufacturers

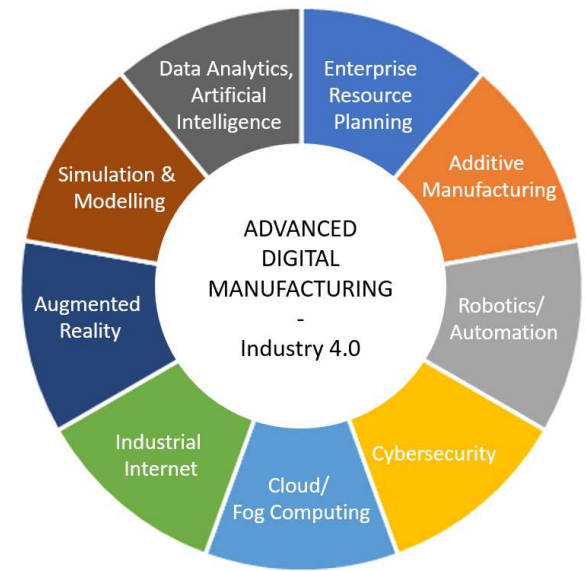
ADVANCED MANUFACTURING

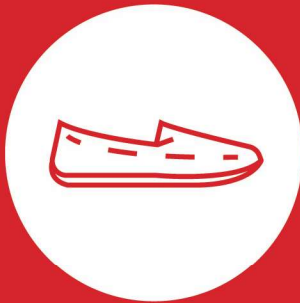
Traditional Manufacturing

- The act of converting raw materials into finished products through manual or mechanized techniques

Advanced Manufacturing

- The use of newly developed technologies to improve products or processes
- Made up of 9 technologies
- The start of industry 4.0





MANUFACTURING IN MANITOBA

We make some pretty cool stuff in Manitoba. Manufacturing drives Manitoba's economy and creates jobs and opportunities for thousands of people in our province.



MANUFACTURING CAREERS

3 main categories:

- Skilled Trades
- Technical
- Business Operations



SKILLED TRADES

- CNC Operator
- Industrial Electrician
- Industrial Painter
- Machinist
- Millwright
- Tool and Die Maker
- Welder



INDUSTRIAL PAINTER



SKILLED
TRADE



AVERAGE
WAGE



H.S. DIPLOMA
OR EQUIVALENT



TYPE OF JOB

Skilled Trade

CAREER EARNING POTENTIAL

\$37,599 - \$56,398

DEMAND FORECAST

↑ 307 by 2024

EDUCATIONAL PATHWAYS

- High School Diploma or Equivalent

HIGH SCHOOL COURSE REQUIREMENTS

- Math 40s
- English 40s

POST-SECONDARY

- Not Required

A DAY IN THE LIFE

Jovana loves cars and art was her favorite subject throughout school. Today, she works as an industrial painter for a manufacturer of truck body parts. After getting ready, which means putting on her personal protective equipment, she heads to the shop floor to prepare the surface to be painted. Once it's prepped, she operates a painting machine, tests the formula to get the paint colour just right, and uses brushes and spray equipment to apply paint on to the truck. Jovana's attention to detail helps her excel in this job every day. She's also responsible for polishing metallic surfaces in the final step of the painting process, adding a professional touch that impresses the final customer.

WHAT DOES A CAREER IN THIS JOB LOOKS LIKE?

Industrial painters use and test formulas to create paints and finishes, use sprayers to apply paint to various surfaces that require protective coatings, and trouble shoot formulas and equipment repairs along the way. You can find many of these jobs in companies that manufacture vehicles, such as buses, airplanes, cars, farm equipment and more.

WHY DOES THIS JOB MATTER?

All metal and wood products get some sort of coating to protect them from the elements and to make them beautiful. It is important that the right formula is applied in the right way to shield the equipment or product from the elements. The paint protects customers and their investments.

WHAT SKILLS AND COMPETENCIES ARE NEEDED?

Math, procedure reading, manual dexterity, eye for detail, communications

OTHER JOBS LIKE THIS

Industrial Coating Sprayer, House Painter, Insulation Sprayer

CAREER JOURNEY

- General Labourer
- Industrial Painter
- Production Supervisor
- Production Manager

TECHNICAL

- Computer Programmer
- Electrical Engineer
- Mechanical Engineer
- Manufacturing Engineer



COMPUTER PROGRAMMER



TECHNICAL



AVERAGE
WAGE



POST-
SECONDARY



TYPE OF JOB

Technical

CAREER EARNING POTENTIAL

\$60,058 - \$90,087

DEMAND FORECAST

↑ 469 by 2024

EDUCATIONAL PATHWAYS

- High School Diploma or Equivalent
- Bachelor's Degree in Applied Computer Science
- College Diploma in Computer Science

HIGH SCHOOL COURSE REQUIREMENTS

- Applied math 40s or
- Pre-calculus 40s
- English 40s

Recommended:

- Science 40s

POST-SECONDARY

- Manitoba Institute of Trades and Technology
- Red River College
- University of Manitoba
- University of Winnipeg

A DAY IN THE LIFE

What Tyler likes best about his day is the chance to put on his headphones, open his laptop and start programming. Today is no different – he is creating a new system that will let the company's inventory control system "talk" to a vendor in Germany's database. He'll spend the rest of the day working on his computer. Here and there, he stops to test if the system is working the way it is supposed to. Most of Tyler's day is spent programming, but he does need to take a conference call with the vendor in Berlin and the company's CyberSecurity consultant in New York. Tomorrow will be a big day for him as he is presenting the new system to his manager and to the company's CEO.

WHAT DOES A CAREER IN THIS JOB LOOKS LIKE?

A computer programmer writes programs and creates the code for software applications and operating systems, testing and re-writing until it functions correctly. This career appeals to those who like to create, and see an idea built from the ground up. Often, you'll find computer programmers are continuous learners, who spend their personal time doing the same things they do at work, because that is where their passion is.

WHY DOES THIS JOB MATTER?

Every aspect of a modern manufacturing operation relies on computer systems and programs to run its business. From communications to scheduling to bonus calculations to efficiencies and quality and so much more, computer programmers ensure a business runs 24/7.

WHAT SKILLS AND COMPETENCIES ARE NEEDED?

Programming, reading comprehension, critical thinking, complex problem solving, quality control analysis, active listening, judgement and decision making, communications

OTHER JOBS LIKE THIS

Software Developer, Computer Systems Analyst, Web Developer, Computer Support Specialist

CAREER JOURNEY

- Help Desk Support
- Computer Programmer
- IT Manager
- Director of IT
- Chief Information Officer (CIO – Executive Level)

BUSINESS OPERATIONS

- Human Resources Professional
- Marketing Professional
- Production Scheduler
- Safety Professional



DON'T FORGET ABOUT THE FOOTER!

HUMAN RESOURCES PROFESSIONAL



BUSINESS
OPERATIONS



AVERAGE
WAGE



POST-
SECONDARY



TYPE OF JOB

Business Operations

CAREER EARNING POTENTIAL

\$55,916 - \$83,875

DEMAND FORECAST

↑ 522 by 2024

EDUCATIONAL PATHWAYS

- High School Diploma or Equivalent
- Bachelor's Degree in Human Resources or Business Administration
- College Diploma in Human Resources

HIGH SCHOOL COURSE REQUIREMENTS

- Applied Math 40s or Pre-calculus 40s
- English 40s

Recommended:

- Computers & Communications

POST-SECONDARY

- Assiniboine Community College
- Brandon University
- Red River College
- University College of the North
- University of Manitoba
- University of Winnipeg

A DAY IN THE LIFE

Andrea is a human resources manager with a large furniture manufacturer. She kicks off her day by phoning applicants to schedule interviews for different roles the company is hiring for. Next, she meets with the production manager to review the salaries and bonuses for the production staff to make sure the company's wages are fair and competitive. Mid-morning, she meets with another manager to help coach an employee through an attendance problem. After lunch, Andrea's team meets to plan the company's annual employee recognition barbeque, which includes some event planning and working within a budget. In the hallway she's stopped by an employee who is struggling with some stress at home, which is affecting his performance at work. They create a plan so the employee feels supported and can focus again. Before she leaves for the day, she meets with the CEO to update her on the status of a new computerized HR system the company is putting into place.

WHAT DOES A CAREER IN THIS JOB LOOKS LIKE?

HR pros know a lot about legislation, company policies, and can understand culture and what motivates people. Human Resources exists to help a company hire, keep and motivate the best group of people for that organization. Most HR professionals find careers with larger companies in almost any sector, including manufacturing.

WHY DOES THIS JOB MATTER?

HR uses strategy, hiring techniques, training, performance discussions, recognition and more to engage and inspire. People are the strength of any company, and HR provides the human touch needed to inspire and engage.

WHAT SKILLS AND COMPETENCIES ARE NEEDED?


Reading comprehension, active listening, speaking, writing, critical thinking, service orientation, social perceptiveness, time management, monitoring, coordination and communications

OTHER JOBS LIKE THIS

People and Culture Champion, Organizational Development Manager, Training and Development Manager

CAREER JOURNEY

- Administrative Assistant
- HR Coordinator
- HR Manager
- HR Director
- Chief Human Resources Officer (CHRO – Executive Level)



For more information contact Andrea at
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