



SMART. SECURE. SUSTAINABLE.

MANUFACTURING CAREERS HANDBOOK

DESIGNED FOR
**STUDENTS, PARENTS
TEACHERS &
JOB SEEKERS**

Earn while you learn
Explore exciting,
in-demand and high
paying local roles



MANUFACTURING HAS EVOLVED...

SO HAVE OUR CAREERS

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Modern manufacturing offers an exciting range of roles in manufacturing for all genders.

If you want a high paying role that offers secure employment, smart career options and a sustainable future then come and work in local manufacturing.

See a snapshot of the **smart, secure and sustainable careers** available now and those that are emerging for students or those that would like to re-skill.



SKILLS

IN DEMAND

Victoria, in particular the South East region of Melbourne is Australia's fastest growing manufacturing hub.

Our region hosts 50% of Melbourne's manufacturing jobs. That means there are thousands of manufacturers that need skilled, qualified people – now!

Manufacturers in the south east make everything from petroleum, to plastics, food, fibre, modern electric vehicles, appliances, technology, pharmaceuticals, med-tech, large transportation – all requiring modern manufacturing and advanced technology.



\$7.6B

Manufacturing industry earnings 2021-22

17.8%

Increase from 2020-21

15%

Manufacturing IVA (industry value added) 2021-22

REAL JOBS REAL WAGES

Earn while you learn! No education debt puts you ahead financially

WELDING INSPECTOR \$168,012 P/A



- 3-4 year Fabrication Apprenticeship
- IWI Short Course
- No education debt

VS

BUSINESS MANAGER \$57,000 P/A



- 3 year Bachelor of Business
- 2 year MBA
- Student debt over \$122,136

MAINTENANCE FITTER \$89,969 P/A



- 3-4 year Mechanical Engineering Apprenticeship
- No education debt

VS

LAB TECHNICIAN \$70,974 P/A



- 4 year Bachelor of Science
- Student debt over \$45,000

BOILER MAKER \$90,663 P/A



- 3-4 year Fabrication Apprenticeship
- No education debt

VS

BARISTA \$54,239 P/A



- 3 year Hospitality Degree
- Student debt over \$34,680



CAREER PATHWAYS

Manufacturing careers are many and varied offering exciting opportunities:

Project Engineer • Mechanical Plant Engineer & Operators
Automotive Technician • Welder • Assembler • and More

These careers have been categorized into sub-sectors for study and training pathways so you can earn while you learn:

Metal Fabrication • Renewable Energy • Food & Beverage
Production • Vehicle Manufacturing • Technology



METAL FABRICATION

Roles: Welder/Boiler Maker (trade)

Both involve the welding, bending and cutting of steel and aluminum to fabricate metals. Careers include working on construction sites to fabricating commercial furniture, and all manner of industrial fittings and equipment.

Entry Level Requirements: Work with metal, be creative, use basic mathematics, be enthusiastic and reliable.

Skills: Using a guillotine, folder, welder, roller, spot welder and design tools.

Qualifications: Entry level Welder (basic certificate) plant operator.

Apprenticeship: 3-4 years as a Welder/ Boilermaker, or Mechanical Plant Engineer (Welder/Fitter)

Career Progression: 1-4 years additional University study as an Industrial Engineer, Draftsperson, Non-destructive Testing Inspector or Welding Inspector.



MECHANICAL PLANT ENGINEER

Roles: Mechanical Plant Engineers (trade & non-trade)
Mechanical plant engineers are categorized into trade and non-trade in all sectors of manufacturing.

Tradespeople (fitters/turners) diagnose faults and test machinery (automation) in order to determine repairs; non-trade roles involve the operation of machinery.

Entry Level Requirements: Basic mathematics, enthusiasm, reliability.

Skills: Mechanical maintenance, welding, fault finding, operation of plant and equipment, design interpretation.

Qualifications: Entry level Plant Operator (license/ticket).

Apprenticeship: 3-4 years Mechanical Plant Engineer (welder/fitter/turner/boilermaker).

Career Progression: 1-4 years additional University study (diplomas/degrees) as an Industrial Engineer, Draftsperson.



RENEWABLE ENERGY

Roles: Engineer/Various (trade)

Manufacturing is the key supplier of renewable energy components in Victoria, including electric vehicles, offshore wind and solar components. Tradespeople are currently in high demand.

Entry Level Requirements: Basic mathematics, problem solving, enthusiastic and reliable.

Skills: Mechanical maintenance, welding, fault finding, operation of plant and equipment, interpret designs.

Qualifications: Entry-level welder, assembler, refinery operator.

Apprenticeship: 3-4 years Mechanical Plant Engineer (welder/fitter/turner/boilermaker), electrician

Career Progression: 1-4 years additional University study as an Electrical Engineer, Industrial Engineer, Draftsperson



FOOD & BEVERAGE PRODUCTION

Roles: Mechanical Engineers, Production Operators, Supervisors, Management (trade & non-trade).

Mechanical plant engineers are categorized into trade and non-trade in all sectors of manufacturing.

Entry Level Requirements: Basic mathematics, problem solving, attention to detail, enthusiastic and reliable.

Skills: Quality control, maintenance, system design.

Qualifications: Entry level Production Line Operator, Quality Inspector

Apprenticeship: 3-4 years Mechanical Plant Engineer (fitter/turner), Electrician

Career Progression: 1-4+ years additional University study as a Manufacturing Engineer, Food Scientist



VEHICLE MANUFACTURING

Roles: Assembler, Welder, Diesel & Electric Vehicle Mechanic, Boiler Maker, Spray Painter, Supervisor (trade & non-trade).

Victoria manufactures trucks, semi-trailers, buses, trams and trains and a range of essential automotive components including radiators and electronics.

Entry Level Requirements: Mechanically minded, problem solving, attention to detail, enthusiastic and reliable.

Skills: Welding, assembly, vehicle accessory fit outs using power tools, mechanical skills.

Qualifications: Entry-level welder, assembler, refinery operator.

Apprenticeship: 3-4 years Mechanical Plant Engineer (welder/fitter/turner/boilermaker), electrician

Career Progression: 1-4 years additional University study as an Electrical Engineer, Industrial Engineer, Draftsperson.



TECHNOLOGY MANUFACTURING

Roles: These careers encompass a diverse spectrum from the innovative design of cutting-edge machinery and technology to the assembly and production process. These roles hold exciting opportunities to contribute to the creation of ground-breaking products that shape industries and drive technological advancements.

Entry Level Requirements: Problem solving, strong mathematics, attention to detail and reliable.

Skills: Assembling computer components to specifications and quality standards, writing, soldering, computer repair, testing and inspection, design and installation of equipment.


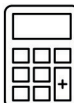





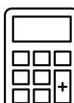



























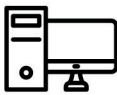
Qualifications: Entry-level mechanical operator.


Apprenticeship: Mechanical plant engineer (fitter & turner), electrician.

Career Progression: 1-4 years additional University study as a Manufacturing Engineer or Software Engineer.



MANUFACTURING MATRIX

ROLE	SKILL	SKILL	SKILL	SKILL	QUALIFICATION	SECTORS
	Basic Welding / Mechanical	Basic Mathematics	Creative / Problem Solving	Design Understanding	3-4 Year Apprenticeship	All
Metal Fabrication						
Mechanical Plant Engineer						
Renewable Energy						
Food & Beverage Production						
Vehicle / Transport Manufacturing						
Technology Manufacturing						



MODERN MANUFACTURING

Ready to join the Modern Manufacturing evolution?

The future of manufacturing includes **AI, Robotics, Automation** and **Advanced Manufacturing**. These roles are evolving quickly so start your manufacturing career now!

Whatever pathway you choose into manufacturing, you'll be taking the **SMART** way into **SECURE** employment in a **SUSTAINABLE** industry.



NEXT STEPS

SKILLS AND JOB CENTRES



These provide free expert advice on training and employment opportunities. You can receive free and independent career advice from qualified staff. Find out about workshops, job-searching and referrals and job matching as well as help preparing resumes and responding to key selection criteria for job applications. Skills and Jobs Centres are available to anyone. Find them at your local TAFE.

www.chisholm.edu.au/About-Us/Skills-and-Jobs-Centre

Earn while you learn!

Start your career in manufacturing and get ahead financially



TAFE schools offer accredited course, traineeships and apprenticeships for students to undertake training in a range of industries.

www.vic.gov.au/tafe

SHORT COURSES



Welding short courses are a great introduction to manufacturing and provide students with highly-sought after skills in state-of-the-art training environments. Pre-apprenticeships (Certificate 2) generally take 8-12 weeks to complete full-time or can be completed at secondary school as part of the VCE, the VCE Major or the Victorian Pathways Certificate. Manufacturing qualifications include a Certificate 2 in Engineering.

www.chisholm.edu.au/career-fields/short-courses

SCHOOL



School Based Apprenticeships and Traineeships (SBATs) involve a combination of part-time employment - you'll earn while you learn. Schooling and training and can be completed as part of the Victorian Certificate of Education (VCE) or Victorian Certificate of Applied Learning (VCAL), the VCE Vocational Major and Victorian Pathways Certificate (VPC). This also includes one week per annum of work experience. Contact your school's careers counsellor or HeadStart.

www.vic.gov.au/head-start-apprenticeships-and-traineeships

NON-TRADE PATHWAY

Entry-level roles for non-trade people in manufacturing are a great way to get your foot in the door to establish a career, without being on an apprenticeship wage or accumulating a large university debt. Often, entry-level roles will offer career progression and companies often pay for their own manufacturing workers to upskill through diplomas as well as providing additional education through tickets and licenses. Young people who get their foot in the door at entry-level can progress from a welder to a welding inspector and fitters can become engineers. There are also roles in project management and supervisory roles. Undertake a Basic Welding Course at TAFE and you'll be on your way!

CAREER EXPOS



Careers Expos are a great way to find out more about manufacturing careers. For information on upcoming manufacturing expos, contact your school's careers counsellor or your Local Learning and Employment Network (LLEN). For Structured Workplace Learning, their statewide programs and more, contact your LLEN.

www.vicllens.org.au

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