INDUSTRIAL DESIGNER

ALSO KNOWN AS: | DESIGN ENGINEER | INDUSTRIAL DESIGN ENGINEER |

MAKE YOUR FUTURE AND DESIGN YOUR CAREER.

As an Industrial Designer, your creativity meets functionality to craft the products of tomorrow.

KEY SKILLS

Skills which may benefit anyone considering a job as a industrial designer include:

- ⊘ Analytical skills
- ⊘ CAD software proficiency
- ⊘ Problem solving
- ⊘ Process optimisation
- ⊘ Technical drawing skills

VALUES & ATTRIBUTES

Values and attributes of anyone considering a job as a industrial designer include:

- ⊘ Creativity
- ⊘ Attention to detail
- ⊘ Customer-focus
- ⊘ Adaptable
- ⊘ Collaborative
- ⊘ Artistic – "Creator"

CAREER PROGRESSION

In this role, you may have the opportunity to progress to other positions. Career progression opportunities include:

- Chief Engineering Officer
- Chief Executive Officer
- Chief Operating Officer
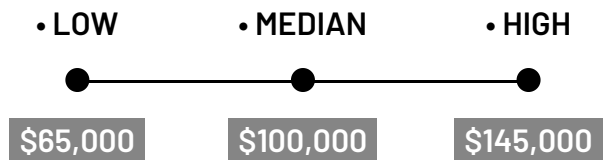- Chief Financial Officer

SALARY EXPECTATION

The expected salary for an Industrial Designer can vary across different areas of manufacturing and may vary as you become more experienced.

• LOW	• MEDIAN	• HIGH
$65,000	$100,000	$145,000

RELATED INDUSTRIES

▸ Aerospace and Defence ▸ Chemicals, Hydrocarbons and Refining ▸ Food and Beverage ▸ Furniture and Other Products

▸ General Manufacturing and Engineering ▸ Meat and Seafood Processing ▸ Pharmaceutical and Medical Technology

▸ Polymers, Plastic and Rubber ▸ Printing and Graphic arts ▸ Pulp, Paper and Packaging ▸ Renewables ▸ Textiles, Clothing and Footwear

▸ Timber and Wood ▸ Transport Equipment and Machinery

RECOMMENDED SCHOOL SUBJECTS

- Chemistry
- Digital Solutions
- Engineering Skills
- Information and Communication Technology
- Mathematical Methods

CORE SCHOOL SUBJECTS

- General Mathematics
- Essential English
- Design
- Industrial Graphics Skills

MANUFACTURING MATTERS.

JOB OVERVIEW

Industrial Designers are the creative minds behind the products we use every day. They blend art, business, and engineering to develop concepts for manufactured products such as cars, home appliances, electronics, and much more. Their work focuses on improving the function, value, and appearance of products for the benefit of both users and manufacturers.

These innovative professionals use their artistic skills and understanding of ergonomics, materials, and manufacturing processes to create designs that are not only aesthetically pleasing but also practical and cost-effective. Industrial Designers play a crucial role in the product development process, from initial concept sketches to final production, ensuring that products meet user needs, market demands, and manufacturing capabilities.

Industrial Designers use a combination of traditional and digital tools in their daily work. They often start with sketching ideas using pen and paper or digital tablets, then move to 3D modelling software like SolidWorks or Rhino for detailed design work. Rapid prototyping tools such as 3D printers and CNC machines are frequently used to create physical models. A typical day might involve brainstorming concepts for a new eco-friendly packaging design, creating renderings of a sleek electric scooter using visualisation software, and meeting with manufacturing engineers to discuss the feasibility of a novel smartphone design. Industrial Designers work on a vast array of products, from redesigning everyday items like ergonomic office chairs and intuitive kitchen appliances to conceptualising futuristic wearable tech devices and sustainable transportation solutions.

WHAT WILL YOU DO?

Your role may include duties as follows:

1. Conceptualise and sketch product designs
2. Create 3D models and prototypes using computer-aided design (CAD) software
3. Collaborate with engineers, marketers, and manufacturers
4. Conduct user research and analyse market trends
5. Present design concepts to clients and stakeholders

HOW TO BECOME A INDUSTRIAL DESIGNER

Employers in manufacturing typically look for candidates with a strong educational background and relevant experience. To become an industrial designer, you typically require a bachelor's degree in a relevant field. Here are the steps to secure a job as an industrial designer:

1. Earn a bachelor's degree in industrial design, design or related field
2. Apply to work as an intern, or directly with an employer
3. Develop a strong portfolio showcasing your projects and skills
4. Obtain relevant certifications (e.g., Six Sigma, Lean Manufacturing)
5. Continue to grow your networks within the industry

VOCATIONAL EDUCATION & TRAINING

While most engineering positions require a bachelor's degree, vocational education and training can provide a pathway and skills useful to higher level application.

PATHWAY THROUGH A TRADE

A trade certificate can be a valuable stepping stone towards university education, offering a unique blend of practical skills and industry knowledge. This pathway allows individuals to gain hands-on, real-world experience in their chosen field before transitioning to higher-level academic learning.

One trade pathway would be to undertake a Certificate III in Engineering – Technical (MEM30522) as a traineeship.

Post-trade qualifications are also available, including a Certificate IV in Engineering Drafting (MEM40422).

Higher level vocational education and training can also offer foundation skills, and entry pathways to university. These qualifications include:

- Diploma of Engineering – Technical (MEM50222)
- Diploma of Engineering – Prototyping (MEM50522)
- Advanced Diploma of Engineering (MEM60122)

Advanced level vocational education and training qualifications can sometimes count towards or give you entry to a university degree.

UNIVERSITY & HIGHER EDUCATION

Many universities offer cooperative education programs that combine classroom study with practical work experience in the manufacturing industry. To become an Industrial Designer, you typically need:

- A bachelor's degree in industrial design, product design or related field
- Some positions may require or prefer a master's degree in design or a related field
- Ph.D. for research and development positions or university teaching roles

In addition to design-specific courses, aspiring Industrial Designers should focus on developing a well-rounded skill set that includes 3D modelling, user experience (UX) design, and sustainability principles. Courses in materials science, manufacturing processes, and design history provide a solid foundation. Many programs now incorporate digital fabrication techniques and virtual/augmented reality tools into their curriculum. Participating in design competitions or collaborative projects with industry partners can help build a strong portfolio and provide networking opportunities. Some universities offer specialised tracks in areas such as automotive design, medical device design, or sustainable product development. Pursuing additional certifications in specific design software or methodologies, such as human-centered design, can further enhance your qualifications and make you stand out in the job market.