

Introduction to Industrial Design

Catalogue Number	8154-0001
Category	Engineering and Design
Duration	15 Hours

Intro to Industrial Design: Pre-test Quiz

Lesson 1: What is Industrial Design?

- Vocabulary
- Necessity is the Mother of Invention
- Career Connections
- Task: Redesigning a Push Pin or Thumbtack
- Intro to Industrial Design: Checkpoint 1
- Intro to Industrial Design: Critical Thinking 1 Quiz

Lesson 2: Technical Drawing

- Drawing for Production
- Task: Sketching Basics
- Isometric Sketching
- Task: Sketching Isometric Shapes
- Multiview Drawings
- Dimensioning
- Working Drawings
- Intro to Industrial Design: Checkpoint 2
- Intro to Industrial Design: Quiz 1
- Intro to Industrial Design: Critical Thinking 2 Quiz

Lesson 3: History of Product Design and How Products are Made

- Vocabulary
- History of Product Design
- The Fundamentals of Design
- Design and the Design Loop
- Intro to Industrial Design: Quiz 2
- Intro to Industrial Design: Critical Thinking 3 Quiz

Lesson 4: Reverse Engineering, Patents, and the Engineer's Notebook

Vocabulary
Reverse Engineering
Reverse Engineering Process
Patents
Engineering Notebooks
Intro to Industrial Design: Checkpoint 3
Intro to Industrial Design: Quiz 3
Intro to Industrial Design: Critical Thinking 4 Quiz

Lesson 5: Human Factors Engineering

The Product Must Fit the User
Flying into the Era of Human Factors Engineering
Human Factors Engineering
Percentile Charts
Percentile Charts cont'd
Target Population
Product Evaluation Methods
Intro to Industrial Design: Quiz 4
Intro to Industrial Design: Critical Thinking 5 Quiz

Lesson 6: Rapid Prototyping

What is Rapid Prototyping?
Subtractive Manufacturing
Additive Manufacturing
Advantages of Additive Manufacturing
Intro to Industrial Design: Quiz 5
Intro to Industrial Design: Critical Thinking 6 Quiz
Intro to Industrial Design: Vocabulary Test Quiz
Intro to Industrial Design: Post-test Quiz

Introduction to Industrial Design: Challenge Section

Challenge 1: Career Research

Challenge 2: Modeling the Push Pin/Thumbtack

Challenge 3: Patent Research

Challenge 4: Reverse Engineering

Challenge 5: Designing an Ergonomic TV Remote Prototype

Challenge 6: Design a Better Handle

Instructor Resources