

# Виртуальный практикум: Электромонтажные работы: Electrical installation

## Виртуальный практикум

### [Демо-версия](#)

#### Структура курса

##### Health and Safety and Industry Practices

Aims and Objectives	Демо-версия
- Aims and Objectives: Health and Safety and Industry Practices	✓
i-ACT: Health and Safety Regulations, Roles and Responsibilities	Демо-версия
- Roles and Responsibilities	✓
- Health and Safety Legislation	✓
- Health and Safety	✓
- Health and Safety Legislation	✓
- Health and Safety Legislation	✓
i-ACT: Dealing with Accidents and Illnesses	Демо-версия
- Accidents and Illnesses — Descriptions and Symptoms	✓
- Responding to Accidents and Illnesses	✓
- Accidents and Illnesses — Descriptions and Symptoms	✓
- Responding to Accidents	✓
- Responding to Accidents	✓
i-ACT: Reporting Accidents, Related Legislation and First Aid Requirements	Демо-версия
- Reporting Accidents, Related Legislation and First Aid	✓
- Reporting Accidents, Related Legislation and First Aid	✓
- Reporting Accidents, Related Legislation and First Aid	✓
i-ACT: Identifying Hazards in a Construction Environment	
- Hazards, Risks and Good Housekeeping Practice in a Construction Environment	
- Risk Assessment	
- Conducting a Risk Assessment	
- Risk Assessment	
- Hazards, Risks and Good Housekeeping Practice	
- Hazards, Risks and Good Housekeeping Practice	
i-ACT: Health and Hygiene in a Construction Environment	
- Handwashing Procedure	
- Hazards and Precautions That Should Be Taken	
- Welfare and Hygiene	
- Handwashing Procedure	
- Hazards, Health Risks and Hygiene	
- Welfare Requirements	

- Health and Hygiene in a Construction Environment
- i-ACT: Safely Storing and Handling Materials and Equipment**
  - Manual Handling Legislation, Procedure and Responsibilities
  - Waste Disposal
  - Storing Materials and Equipment
  - Manual Handling Legislation, Procedure and Responsibilities
  - Storage and Handling
  - Safely Storing and Handling Materials and Equipment
- i-ACT: Basic Working Platforms and Access Equipment**
  - Basic Working Platforms and Access Equipment
  - Access Equipment Safety Checks
  - Basic Working Platforms and Access Equipment
  - Basic Working Platforms and Access Equipment
- i-ACT: Working Safely Around Electricity in a Construction Environment**
  - Electric Supply, Legislation and Safe Operation of Electrical Equipment
  - Procedures in Installation, Inspection, Maintenance and Testing to Ensure Electrical Safety
  - Ensuring Electrical Safety
  - Electrical Safety
  - Safe Isolation Procedure
  - Ensuring Electrical Safety
  - Electrical Safety
- i-ACT: Purpose of Personal Protective Equipment (PPE) — Importance and Legislation**
  - Employer's and Employee's Responsibilities in Regards to PPE
  - Different Types of PPE
  - Different Types of PPE
  - PPE at Work Regulations
- i-ACT: Fire and Emergency Procedures**
  - Fire and Emergency Procedures
  - Fire and Emergency Procedures
  - Fire and Emergency Procedures
- i-ACT: Signs and Safety Notices**
  - COSHH Signs and Symbols
  - Machinery Labels and Emergency Signs
  - Signs and Safety Notices
  - Signs and Safety Notices

## **Electrical Science**

### **Aims and Objectives**

- Aims and Objectives: Electrical Science

### **i-ACT: International System Units, Multiple Factors, Transposition of Formulas, Pythagoras' Theorem and Trigonometry**

- International System Units — Part 1
- International System Units — Part 2
- Multiple Factors — Their Prefixes and Symbols

- Transposition of Formula
- Pythagoras' Theorem and Trigonometry
- International System Units and Multiple Factors
- Transposition of Formula
- Pythagoras' Theorem and Trigonometry
- Units of Measurement and Working with Equations and Geometry

**i-ACT: Electrons, Magnetism, Ohm's Law and Power**

- Electrons and Magnetism
- Ohm's Law and Power
- Electrons, Magnetism, Ohm's Law and Power
- Electrons, Magnetism, Ohm's Law and Power

**i-ACT: Conductivity, Resistivity and Direct Current Principles**

- Conductors and Resistivity
- Direct Current Principles
- Conductors and Resistivity
- Understanding Conductors and Resistivity
- Conductors and Resistivity

**i-ACT: Applying Ohm's Law to Series and Parallel Circuits**

- Applying Ohm's Law to Series and Parallel Circuits
- Applying Ohm's Law to Series and Parallel Circuits
- Understanding Ohm's Law for Series and Parallel Circuits
- Applying Ohm's Law to Series and Parallel Circuits

**i-ACT: The Principles of Electromagnetism**

- The Principles of Electromagnetism
- The Principles of Electromagnetism
- The Principles of Electromagnetism

**i-ACT: The Principles of Transformers**

- The Principles of Transformers
- The Principles of Transformers
- The Principles of Transformers

**i-ACT: Understanding Electrical Components**

- Resistors, Thermistors and Capacitors
- Diode, Transistors
- Building a Circuit on a Breadboard
- Resistors, Thermistors and Capacitors
- Use and Application of Electrical Components
- Resistors, Thermistors and Capacitors
- Diode, Transistors
- Use of Electrical Components
- Use and Application of Electrical Components

**Electrical Installation**

**Aims and Objectives**

- Aims and Objectives: Electrical Installation
- i-ACT: Tools Used for Electrical Installation**
  - What Tools Used in Electrical Installation Look Like and How They Work
  - Identifying Tools Used for Electrical Installation
  - Understanding Tools Used in Electrical Installation
  - What Tools Used in Electrical Installation Look Like and How They Work
- i-ACT: Cable Management Systems**
  - Electrical Cable Containment and Management Systems
  - Electrical Cable Containment and Management Systems
  - Understanding Electrical Cable Containment and Management Systems
  - Understanding Electrical Cable Containment and Management Systems
- i-ACT: Wiring Systems**
  - Selecting and Using Cables and Cable Management Systems
  - Wiring Systems and Regulations That Must Be Observed When Selecting Wires
  - Different Types of Wiring and Their Properties
  - Wiring Systems and Regulations That Must Be Worked Against in Wire Selection
  - Wiring and the Factors Which Affect Their Selection
  - Selecting and Using Cables and Cable Management Systems
  - Identifying Different Types of Wiring
  - Wiring Terminology
  - Wiring and Its Selection
- i-Practice: Wiring a Single Phase Commando Socket**
  - Wiring a Single Phase Commando Socket Практикум-тренинг.
  - Wiring a Single Phase Commando Socket Практикум-контроль.
- i-Practice: Wiring a Three Phase Commando Socket**
  - Wiring a Three Phase Commando Socket Практикум-тренинг.
  - Wiring a Three Phase Commando Socket Практикум-контроль.
- i-Practice: Terminating SWA**
  - Terminating SWA Практикум-тренинг.
  - Terminating SWA Практикум-контроль.
- i-Practice: Wiring a Three Phase 4-Way Distribution Board**
  - Wiring a Three Phase 4-Way Distribution Board Практикум-тренинг.
  - Wiring a Three Phase 4-Way Distribution Board Практикум-контроль.
- i-Practice: Wiring a Single Load Board**
  - Wiring a Single Load Board Практикум-тренинг.
  - Wiring a Single Load Board Практикум-контроль.
- i-Practice: Installing Conduit and Trunking**
  - Installing Conduit and Trunking Практикум-тренинг.
  - Installing Conduit and Trunking Практикум-контроль.
- i-Practice: Wiring Lighting Circuits**
  - Preparation Involved for Wiring Lighting Circuits Практикум-тренинг.
  - Preparation Involved for Wiring Lighting Circuits Практикум-контроль.
  - Wiring a 1-Way Lighting Circuit (Three Plate Method) Практикум-тренинг.

- Wiring a 1-Way Lighting Circuit (Three Plate Method) Практикум-контроль.
- Wiring a 2-Way Lighting Circuit (Three Plate Method) Практикум-тренинг.
- Wiring a 2-Way Lighting Circuit (Three Plate Method) Практикум-контроль.
- Wiring an Intermediate Lighting Circuit (Three Plate Method) Практикум-тренинг.
- Wiring an Intermediate Lighting Circuit (Three Plate Method) Практикум-контроль.

## **Electrical Technology**

### **Aims and Objectives**

- Aims and Objectives: Electrical Technology

### **i-ACT: Understanding Electricity Supply**

- Generating Electricity
- Understanding Electromagnetic Generation
- Transmission and Distribution
- Generating Electricity
- Electromotive Force and Electricity Supply
- The Electricity Supply
- Understanding the Alternating Current Waveform

### **i-ACT: Electricity Supply and Characteristics of Consumer Equipment**

- Supply Intake
- Fuses, MCB's and RCD's
- Identifying Fuses, MCB's and RCD's
- Understanding Supply Intake and Consumer Equipment

### **i-ACT: Fault Protection**

- Discrimination, Earthing Systems and Automatic Disconnection of Supply
- Discrimination, Earthing Systems and Automatic Disconnection of Supply
- Discrimination, Earthing Systems and Automatic Disconnection of Supply

### **i-ACT: Basic Protection for Fault-free Conditions and Fault Protection**

- Basic and Fault Protection
- Main Incoming Services Bonding
- Identifying Protection
- Understanding Protection
- Basic and Fault Protection

### **i-ACT: Lighting Circuits**

- 1-Way Lighting Circuits
- 2-Way Lighting Circuits
- Intermediate Lighting Circuits
- Understanding Different Lighting Circuits and Their Uses
- Understanding How to Install Different Lighting Circuits
- Understanding How to Identify Different Lighting Circuits
- Understanding Different Lighting Circuits and Their Uses
- Understanding How to Install Different Lighting Circuits

### **i-ACT: Principles of Final Circuits**

- Volt Drop

- Types of Cables
- De-rating Factors
- Cable Selection
- Volt Drop and De-rating Factors
- Types of Cables
- Cable Selection
- Understanding Cable Selection, Volt Drop and De-rating Factors

**i-ACT: Technical Resource Information and Site Documentation**

- Understanding How to Create a Requisition Plan
- Layout Diagram Electrical Symbols — Part 1
- Layout Diagram Electrical Symbols — Part 2
- Understanding Layout Diagram Electrical Symbols
- Understanding How to Read a Layout Diagram
- Layout Diagram Electrical Symbols
- Resource Information and Site Documentation

**i-ACT: Renewable Energies**

- Solar Energy Generating Systems
- Hydro Energy Generating Systems
- Wind Energy Generating Systems
- Tidal Energy Generating Systems
- Understanding Renewable Energies
- Advantages and Disadvantages of Renewable Energies
- Understanding Renewable Energies

**i-Practice: Safe Isolation Procedure**

- Safe Isolation Procedure Практикум-тренинг.
- Safe Isolation Procedure Практикум-контроль.

**i-Practice: Testing the Main Protective Bonding Conductor for the Incoming Gas and Water Service**

- Testing the Main Protective Bonding Conductor for the Incoming Gas and Water Service  
Практикум-тренинг.
- Testing the Main Protective Bonding Conductor for the Incoming Gas and Water Service  
Практикум-контроль.

**Understand How to Communicate with Others Within Building Services Engineering**

**Aims and Objectives**

- Aims and Objectives: Understand How to Communicate with Others Within Building Services Engineering

**i-ACT: Interpreting and Producing Documented Information Within the Construction Environment**

- Equipment, Understanding and Checks Needed in Order to Complete a Construction Drawing
- Construction Documents and Their Purposes
- Understanding How to Interpret Abbreviations Used in Construction Documents
- Construction Documents and Their Purposes
- Drawing Hatchings and Symbols
- Construction Documents and Their Purposes

**i-ACT: Estimating Quantities of Resources**

- Calculating Work Space and Resource Quantities
- Choosing Materials and Labour Rates
- Pricing Jobs
- Calculating Work Space and Resource Quantities
- Choosing Material, Labour Rates and Job Pricing
- Calculating and Pricing for Resources and Jobs

**i-ACT: Communicating Workplace Requirements Efficiently**

- Communication Methods
- Effects of Communication
- Understanding the Various Roles and Responsibilities Involved in the Construction Environment
- Methods of Communication
- Roles and Responsibilities in the Construction Environment
- Communication, Equality and Personnel

**i-ACT: The Principle of Foundation Construction**

- Foundation Purpose, Factors and Materials
- Foundation Types
- Foundation Purpose, Factors and Materials
- Foundation Types
- Understanding Foundation Construction

**i-ACT: The Principles of Floor Construction**

- Floor Factors
- Floor Types and Materials
- Floor Construction Methods and Materials
- Floor Construction Methods and Materials

**i-ACT: The Principles of Wall Construction**

- Wall Materials
- Wall Types and the Method of Their Construction
- Wall Materials
- Wall Types and the Method of Their Construction
- Understanding the Principles of Wall Construction

**i-ACT: The Principles of Roof Construction**

- External Roof Features
- Roof Coverings
- Roof Types
- Identifying Roof Types and Coverings
- Understanding Roof Types and Coverings
- Roof Types and Coverings

**i-ACT: The Principles of Sustainability, Supply of Utilities and Services Within Construction**

- Sustainability and Energy Efficiency
- Utilities and Services
- Sustainability and Energy Efficiency
- Understanding Sustainability and the Supply of Utilities