

AC Induction Motors Basics

Dubai (UAE)

10 - 14 August 2025

UK Training

PARTNER



AC Induction Motors Basics

Code: OG28 From: 10 - 14 August 2025 City: Dubai (UAE) Fees: 4600 Pound

Introduction

AC induction motors are the most commonly used electrical machines in both industrial and commercial settings, valued for their simplicity, reliability, and efficiency. This course offers a comprehensive understanding of the fundamental principles, construction, operation, and maintenance of AC induction motors. Participants will delve into key concepts, learn to identify common issues, and acquire practical skills in motor testing and troubleshooting. Through interactive sessions and hands-on exercises, this training equips participants with the foundational knowledge essential for working with AC induction motors.

Course Objectives

By the end of this course, participants will be able to:

- Grasp the basic principles of AC induction motors.
- Understand the construction and components of AC induction motors.
- Analyze motor performance and operating characteristics.
- Gain practical experience in motor testing and troubleshooting techniques.
- Develop skills to maintain and enhance motor efficiency and reliability.

Course Outlines

Day 1: Introduction to AC Induction Motors

- Overview of AC induction motors and their industrial applications.
- Operating principles of induction motors electromagnetic induction.
- Types of AC induction motors squirrel cage and wound rotor.
- Construction and key components of an induction motor.
- Understanding motor ratings and specifications.

Day 2: Motor Performance and Characteristics

- Torque-speed characteristics of induction motors.
- Starting methods and mechanisms direct-on-line, star-delta, etc..
- Efficiency and power factor of induction motors.
- Understanding load conditions and their impact on motor performance.
- Case study: Selecting motors for specific applications.

Day 3: Testing and Troubleshooting AC Induction Motors

- Common issues with AC induction motors e.g., overheating, vibration.



- Diagnostic tools and testing methods for motor faults.
- Insulation resistance testing and winding resistance measurement.
- Identifying and resolving electrical and mechanical faults.
- Hands-on session: Testing an induction motor.

Day 4: Maintenance Practices for Induction Motors

- Preventive maintenance schedules and best practices.
- Lubrication of bearings and other mechanical components.
- Cleaning and inspecting motor parts.
- Rewinding motor windings: When and how to consider it.
- Workshop: Developing a motor maintenance checklist.

Day 5: Advanced Topics and Energy Efficiency

- Energy-efficient motors and their benefits.
- Variable frequency drives VFDs for speed control.
- Retrofitting and upgrading older motors.
- Innovations and future trends in AC motor technology.
- Final activity: Creating a motor maintenance and energy efficiency plan.



Blackbird Training Cities

Europe



Malaga (Spain)



Sarajevo (Bosnia and Herzegovina)



Oporto (Portugal)



Glasgow (Scotland)



Edinburgh (UK)



Oslo (Norway)



Anney (France)



Bordeaux (France)



Copenhagen (Denmark)



Birmingham (UK)



Lyon (France)



Moscow (Russia)



Stockholm (Sweden)
(Netherlands)



Podgorica (Montenegro)



Batumi (Georgia)



London (UK)



Istanbul (Turkey)



Amsterdam



Düsseldorf (Germany)



Paris (France)



Barcelona (Spain)



Munich (Germany)



Geneva (Switzerland)



Prague (Czech)



Vienna (Austria)



Rome (Italy)



Brussels (Belgium)



Madrid (Spain)



Berlin (Germany)



Lisbon (Portugal)



Zurich (Switzerland)



Manchester (UK)



Milan (Italy)



Blackbird Training Cities

USA & Canada



Los Angeles (USA)



Orlando, Florida (USA)



Online



Phoenix, Arizona (USA)



Houston, Texas (USA)



Boston, MA (USA)



Washington (USA)



Miami, Florida (USA)



New York City (USA)



Seattle, Washington (USA)



Washington DC (USA)



In House



Jersey, New Jersey (USA)



Toronto (Canada)

Africa



Baku (Azerbaijan)
(Thailand)



Maldives (Maldives)



Doha (Qatar)



Manila (Philippines)



Bali (Indonesia)



Bangkok



Beijing (China)



Singapore (Singapore)



Sydney (Australia)



Tokyo (Japan)



Jeddah (KSA)



Riyadh (KSA)



Dubai (UAE)



Kuala Lumpur (Malaysia)



Kuwait City (Kuwait)



Pulau Ujong (Singapore)



Jakarta (Indonesia)



Amman (Jordan)



Beirut (Lebanon)



Blackbird Training Cities

Asia



Kigali (Rwanda)



Cape Town (South Africa)



Accra (Ghana)



Lagos (Nigeria)



Marrakesh (Morocco)



Nairobi (Kenya)



Zanzibar (Tanzania)



Tangier (Morocco)



Cairo (Egypt)



Sharm El-Sheikh (Egypt)



Casablanca (Morocco)



Tunis (Tunisia)



Blackbird Training Clients



UK Training
PARTNER



Blackbird Training Categories

Management & Admin

Professional Skills
Finance, Accounting, Budgeting
Media & Public Relations
Project Management
Human Resources
Audit & Quality Assurance
Marketing, Sales, Customer Service
Secretary & Admin
Supply Chain & Logistics
Management & Leadership
Agile and Elevation

Technical Courses

Hospital Management
Public Sector
Special Workshops
Oil & Gas Engineering
Telecom Engineering
IT & IT Engineering
Health & Safety
Law and Contract Management
Customs & Safety
Aviation
C-Suite Training



BLACKBIRD
FOR TRAINING



International House 185 Tower Bridge
Road London SE1 2UF United Kingdom



+44 7401 1773 35
+44 7480 775526



Sales@blackbird-training.com



www.blackbird-training.com

UK Training

PARTNER

