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# Expert in Internal Combustion, Hybrid, and Electric Vehicles

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## What is an ITS Academy course?

ITS Academy courses were established by the Prime Ministerial Decree of January 25, 2008.

These Higher Technical Institutes are part of the reorganization process of the Italian educational system.

ITS Academy LAST offers innovative two-year post-diploma programs that combine high-level training with work experience, in line with national industrial trends.

This is achieved through a continuous exchange with more than 600 companies in the territories where the Foundation operates, focusing on the development of skills and knowledge to create professional profiles tailored to real employment needs.

The courses are structured in two phases (applied across both years):



First part:

Classroom lessons

Lessons are primarily taught by professionals from the corporate world, as well as professors from the university sector. During classroom hours, students engage in both team and individual Project Work, company visits, and conferences.

Second part:

Curricular internship

Conducted within production facilities of the relevant sector, this part of the program is essential for putting the knowledge and skills acquired during the year into practice. It allows students to experience the corporate atmosphere and make themselves known to the company for potential career development after the program concludes.

## Why attend an ITS Academy instead of other post-diploma paths?

For over 10 years, ITS Academy LAST courses have consistently ranked at the top of national leaderboards for educational quality. With average class sizes of 20 students, the academy boasts an employment rate of approximately 95% across all areas within one year of graduation. These programs allow you to gain work experience abroad through Erasmus+ and provide access to a network of more than 600 companies both regionally and nationally. Finally, the courses award a Higher Technical Diploma (Level 5 EQF).



## Why choose the Expert in Internal Combustion, Hybrid, and Electric Vehicles course within the Sustainable Mobility area?

The mobility sector is evolving rapidly due to increasingly stringent regulations on vehicle pollutant emissions, which have led manufacturers to adopt alternative production techniques.

This course was created to train a highly qualified, multidisciplinary professional in the field of passenger, freight, and industrial vehicle mobility. Graduates will possess the skills necessary to navigate technological advancements, both in terms of sustainable powertrains (emission control and reduction, alternative fuels, assisted driving) and digitalization.

## Course Description

The Higher Technical Expert in Internal Combustion, Hybrid, and Electric Vehicles for Sustainable Mobility is a professional figure with specialized expertise and a strong focus on propulsion systems for vehicles powered by both traditional and alternative fuels.

This professional is capable of organizing and managing work and maintenance cycles for every type of vehicle, from cars and passenger transport to freight and industrial vehicles. The program offers a theoretical and practical path developed in synergy with some of the most important companies in the sector.

During the course, you will acquire skills in the following areas:

**Technical** Acquire specialized skills in the diagnostic and functional areas of propulsion equipment for internal combustion, hybrid, and electric vehicles, utilizing cutting-edge digital and technological tools.

**Organizational and Managerial** Learn to organize work and maintenance cycles for all vehicle types and manage complex processes both within and outside the company (maintenance, logistics, administration), integrating these workflows with other professional figures involved.

**Communication and Relational** Develop the ability to build long-term relationships with internal and external customers, suppliers, parent companies, and collaborators. The goal is to optimize performance throughout the after-sales life cycle to manage individual services with greater efficiency.

Al termine del corso oltre al Diploma di Tecnico Superiore otterrai:

### Certifications

Professional Maintenance Technician Personal Certification UNI EN 15628:2014: This certifies the skills required to operate within maintenance functions in compliance with laws, directives, operating instructions, and commonly accepted best practices.

## Career Opportunities

The Higher Technical Expert in Internal Combustion, Hybrid, and Electric Vehicles for Sustainable Mobility finds employment across a wide range of organizations. Specifically, they can work within companies operating in the passenger transport sector, automotive workshops and dealerships, light commercial vehicle providers, industrial vehicle and bus manufacturers, as well as public utility companies.

## Course Subjects

### Transversal Skills (General)

- English (General and Technical)
- Personal Development
- Career Guidance / Professional Orientation
- Workplace Health and Safety
- Company Visits and Conferences
- Project Work

### Core Subjects (Specialized)

- Internal Combustion Systems
- Electrical Measurement Instruments and Diagnostic Systems
- Mechanical Measurement Instruments
- Reading and Interpretation of Technical Diagrams
- High-Voltage Electrical Systems and Certifications/Qualifications
- Vehicle Types and Market Analysis
- Business Organization, Workshop Management, and Economics
- After-Sales Service (Contract and Warranty Management, Safety, and Equipment Use)
- Logistics and Spare Parts Warehousing (On-site and Off-site Repairs)
- Environmental Management (Product Use, Management, and Disposal)