

1. Title of the certificate ^(A)

Diploma di Istruzione Tecnica
Indirizzo MECCANICA, MECCATRONICA ED ENERGIA
Articolazione "ENERGIA"

^(A) In the original language

2. Translated title of the certificate ^(B)

Upper secondary education diploma – Technical schools
MECHANICS, MECHATRONICS, ENERGY
Specialization: "ENERGY"

^(B) If applicable. This translation has no legal status.

3. Profile of skills and competences ^(**)

On completion of the education/training pathway, the holder of the certificate is able to:

Skills common to all technical schools

- use the vocabulary and expressions of the Italian language based on communication needs in different contexts: social, cultural, scientific, economic, technological;
- establish links between local, national and international cultural traditions, in a cross-cultural perspective and for the purposes of study and work mobility;
- use the cultural tools and methodologies acquired to take on a rational, critical, creative and responsible attitude towards reality, the phenomena and problems encountered, also for lifelong learning purposes;
- use and develop visual communication and multimedia tools, also with reference to the expressive strategies and technical tools of online communication;
- command the English language and, if applicable, another EU language and use the sectorial language related to the education pathway in order to interact within various communicative and professional contexts, at level B2 of the Common European Framework of Reference for Languages (CEFR);
- use the language and methods of mathematics to organise and adequately evaluate qualitative and quantitative information;
- identify and apply project management methods and techniques;
- write technical reports and document individual and group activities with regard to specific work situations;
- identify and use communication and team-working tools as appropriate to the sector organizational and professional contexts.

Skills of the *Energy* specialization

- identify the properties of materials in relation to the use, production processes and treatments;
- measure, process and evaluate values and technical features by means of adequate tools;
- structure the production process by defining product manufacture, control and test methods;
- document and follow industrialisation processes;
- design structures, equipment and systems by also applying mathematical models, and analyse their behaviour when subjected to mechanical, thermal, electrical or other stresses;
- design, assemble, test and schedule maintenance of components, machines and thermo-technical systems;
- organise and manage maintenance processes for the main components of handling systems, in compliance with the relevant procedures;
- define, classify and program integrated automation and robotic systems applied to production processes;
- manage and innovate business function-related processes;
- manage projects according to the procedures and standards envisaged in companies' quality and safety systems.

The "Energy" specialisation programme addresses issues concerning energy use and conversion, the relevant technical systems and the regulations on safety and environment protection in force.

4. Range of occupations accessible to the holder of the certificate

The certificate holder can work as a mid-level employee in public and private companies in several industries (mechanics, shipbuilding, aeronautics, manufacturing, mining, etc.) and in such sectors as civil and industrial plants, system maintenance, power generation and distribution, thermo-technical equipment, commercial firms within the industry, technical departments, in the following positions:

- heat and power generation technician;
- water and other liquids supply system operation technician
- technical drafter
- mechanical technician
- plant safety and occupational health and safety technician
- technician responsible for energy saving, renewable energies and optimisation of energy sources in industrial activities
- assessor able to issue Energy Performance Certificates for buildings
- environmental control technician
- operator in heat and steam generation, waste recovery, and water treatment and distribution plants
- technical fitter
- maintenance technician of home heating systems as "responsible third party".

Furthermore, he/she can work as a freelancer, in compliance with the applicable law, as:

- owner of a company fitting technical systems and working in the manufacture, operation and maintenance of home heating, air conditioning, water and gas distribution, lifting, fire protection systems
- technician responsible for design activities; work supervisor; job site manager; plant safety, control and testing coordinator

5. Official basis of the certificate

Name and status of the body awarding the certificate (***)	Name and status of the national/regional authority providing accreditation/recognition of the certificate Ministry of Education, University and Research www.istruzione.it
Level of the certificate (national or international) EQF level 4	Grading scale / Pass requirements State examination. Final grade out of 100. The full scale is used. Minimum passing grade to obtain the certificate: 60/ 100 A final grade of 100/100 cum laude can also be obtained.
Access to next level of education/training <ul style="list-style-type: none">• Higher Technical Education and Training (IFTTS)• Higher Technical Education (ITS)• Universities• Military Academies• Higher Level Arts and Music Education (AFAM)	International agreements
Legal basis Decree of the President of the Republic no. 88 of 15 March 2010	

6. Officially recognised ways of acquiring the certificate		
Description of education/vocational training received	Percentage of total education/training programme (%)	Duration (hours/weeks/months/years)
School-/training centre-based		Standard learning: 1056 hours/year for 5 years
Workplace, internship / work placement / apprenticeship or school-work alternation		The certificate holder can have completed school-work alternation, internship, work placement or apprenticeship pathways and activities documented and officially recognised for the acquisition of the certificate.
Accredited prior learning		
Total duration of the education/training leading to the certificate		5 years
Entry requirements Lower secondary school leaving diploma.		
Additional information Yearly school hours are divided into mandatory subjects and activities and optional subjects if provided for in the Educational Plan drawn up by each school. Schools can allocate a percentage of the total hours of the national study plans (up to 20% in the first two years, 20% in the third and fourth years and 20% in the fifth year) to tailor curricula to local needs. Schools can set up a scientific committee made up of teachers and work experts. During the 5 th year, a non-language-related subject is taught in English. Activities and modules related to "Citizenship and Constitution" are envisaged in the historical-geographical and historical-social fields.		

Details regarding the School/Certificate holder
School awarding the certificate: PDTF02000E - ITI MARCONI-PADOVA
Name of the holder of the certificate:
Attachment of certificate no.:

(*) Explanatory note
This document is designed to provide additional information about the specified certificate and does not have any legal status in itself. The format of the description is based on the following texts: Council Resolution 93/C 49/01 of 3 December 1992 on the transparency of qualifications, Council Resolution 96/C 224/04 of 15 July 1996 on the transparency of vocational training certificates, and Recommendation 2001/613/EC of the European Parliament and of the Council of 10 July 2001 on mobility within the Community for students, persons undergoing training, volunteers, teachers and trainers.
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() The present document does not constitute/replace certification of the competencies of the certificate holder**
(*) The reference data of this supplement are indicated in the last box**