



**POLITECNICO
DI TORINO**

Area Gestione Didattica

IL DIRIGENTE
Mahée Ferlini

Albo n. 192/2018



fondo
sociale europeo

Call for applications
for the 2nd level Specializing Master's programme in

“Electrified and Connected Vehicle”
(1st edition)

offered in apprenticeship format 2016-18
(Art. 45 – D.Lgs. n. 81/2015)

Academic Year 2017/2018

(Annex “A”- Executive Decision of the Head of the Division of Student Affairs no. 114/2018 of
February 1st, 2018)



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INIZIATIVA CO-FINANZIATA CON FSE



Art.1 (Programme overview)

The 2nd level Specializing Master's programme in Electrified and Connected Vehicle is offered by Politecnico di Torino for academic year 2017/2018. The Programme Coordinator is Claudio Casetti, professor at the Department of Electronics and Telecommunications (DET) of Politecnico di Torino.

The duration of this 2nd level Specializing Master's programme is 2 years for a total of 77 ECTS.

The 2nd level specializing Master's programme in "Electrified and Connected Vehicle" aims at providing training for young graduate apprentices who will be hired by FCA. The 2nd level Specializing Master's programme will develop skills for the use of innovative technologies in the automotive sector, with particular focus on technologies for the hybrid / electric vehicle and the connected vehicle.

In recent years, the need has arisen for manufacturers to introduce the hybridisation of common thermal motor vehicles in order to reduce fuel consumption and consequently polluting emissions.

Additionally, connected vehicle issues have become extremely interesting for automotive manufacturers and related industries, thanks to the progressive consolidation of standards, the pervasiveness of on-board electronic instrumentation and the emergence of appealing use cases regarding road safety, infotainment and Advanced Driver Assistance Systems.

The primary objective of the 2nd level Specializing Master's programme will thus be the formation of apparently quite different skills, which, however, are essential in the above important innovations in the future of the automotive field. Such skills are spread across mechanical engineering, electronics, energy, information technology and telecommunications. This 2nd level Specializing Master's programme will initially provide students with the basics (vehicle mechanics, thermodynamics, communications, architecture of computers and networks) that create the common language needed to understand the following courses. These will then address specialized skills on electric and hybrid propulsion, on vehicle on-board electronics and intervehicular communication systems.

A project proposal for this 2nd level Specializing Master's programme will be submitted for funding to Regione Piemonte in the framework of a specific regional call for proposals (Avviso Pubblico per la realizzazione dei percorsi formativi per: Laurea triennale e magistrale, Diploma Accademico di I e II livello, Master di I e II livello, Dottorato di Ricerca e Diploma Accademico di Formazione alla Ricerca, Attività di Ricerca - in attuazione della D.G.R. n. 37-3617 del 11/07/2016).

In accordance with the above mentioned call for proposals, selected candidates will be hired by the partner company and upon completion of the programme they will attain a 2nd level Specializing Master's diploma.

The partner company have undertaken to recruit at least fifteen apprentices.



The 2nd level Specializing Master's programme will begin in April 2018 and the apprentices will be recruited by the partner company at the same time.

More information on the learning objectives, programme contents and possible career opportunities is available on the website of the 2nd level Specializing Master's programme in Electrified and Connected Vehicle:

https://didattica.polito.it/master/electrified_connected_vehicle/2018/

Art. 2

(Educational objectives, learning contents and organization of the activities)

This 2nd level Specializing Master's programme is an experiential learning path which combines educational activities at Politecnico and on-the-job training at the company's premises.

The 2nd level Specializing Master's programme is organized as follows:

- training activities at Politecnico di Torino (classroom – laboratory – lecture- business case): approximately 400 hours
- training activities at the partner company: approximately 800 hours, carried out at the employer's premises
- self-learning activities: approximately 300 hours, carried out at the employer's premises.

Table n.1 – Organization of the courses

COURSE	Training activities	Training activities (hours)	Training activities (hours)
	ECTS	Politecnico	Company
Kick-off for a new vehicle world	7	50	24
Motor vehicle and car body design	5	40	10
Hybrid and electrical propulsion systems	10	70	72
Powertrain application to vehicle and energy management	7	60	10
Automotive electronic systems	8	60	32
Intelligent Transport System and Inter-vehicular Networks	4	30	8
Modeling and simulation of vehicular systems	3	20	20
Cybersecurity for automotive	5	40	8
Big Data analytics e Machine Learning	4	30	16
Project Work	24	0	600
TOTAL	77	400	800

The 2nd level Specializing Master's programme will start on April 2018 and will last 2 years.

The official language of the programme is English.



Art. 3 (Admission requirements)

The 2nd level Specializing Master's programme in Electrified and Connected Vehicle is intended for graduates who have to meet the following compulsory requirements:

- to be under the age of 30 on the date of recruitment;
- to have been awarded a full degree (Master 's degree/Laurea specialistica/ Laurea magistrale) in one of the following areas of study within the deadline for enrolment in the 2nd level Specializing Master's programme:
 - o LM-20 (Aerospace and Astronautic Engineering)
 - o LM-25 (Automation Engineering)
 - o LM-27 (Telecommunications Engineering)
 - o LM-28 (Electrical Engineering)
 - o LM-29 (Electronic Engineering)
 - o LM-30 (Energy and Nuclear Engineering)
 - o LM-32 (Computer Systems Engineering)
 - o LM-33 (Mechanical engineering)
 - o LM-53 (Material engineering)
 - o LM-71 (Industrial chemistry)
- High-level English language skills.

The Office of Specializing Master's Programmes and Lifelong Learning will examine the documentation received within the deadline. Only non-Italian university degrees will be evaluated by a specific board chaired by the Programme Coordinator of the 2nd level Specializing Master's programme in Electrified and Connected Vehicle. The partner company will evaluate only the candidates who meet the above mentioned compulsory requirements.

Art. 4 (Partner company selection process)

The partner company will evaluate the applications which meet the compulsory requirements (*Art. 3 "Admission requirements"*), reserving itself the right to contact only the candidates who meet its internal selection criteria. The selected candidates will be hired by the partner company within the meaning of ex-art. 45 of D. Lgs 81/2015.

A good knowledge of the English and Italian language is considered an essential prerequisite for the final selection. The partner company will assess the candidate's level of proficiency during the interview.

During the entire application period the partner company can contact the applicants who satisfy both the compulsory requirements (art.3) and the corporate selection criteria.



For further information refer to the website of the 2nd level Specializing Master's programme in Electrified and Connected Vehicle: https://didattica.polito.it/master/electrified_connected_vehicle/2018/

Art. 5 (Admissions and deadlines)

Applications for this 2nd level Specializing Master's programme must be submitted on-line by filling out the Admission Request Form available on Politecnico di Torino website (*Apply@polito*) at the following link: https://didattica.polito.it/master/electrified_connected_vehicle/2018/

DO NOT apply by e-mail, fax or mail because these applications will NOT be considered.

Admission Request Forms must be submitted within the following deadline:

- March 16th, 2018 at 11:59 a.m. - Italian time

The following supporting documents must be attached to the application form (in English or Italian only):

MANDATORY DOCUMENTS

- valid identification document (passport for extra-EU applicants)
- curriculum vitae (cv must include the authorization to the processing of personal data – in compliance with Legislative Decree no. 196/2003);
- Admission Request Form
- Exam transcripts for both Bachelor's and Master's degree programmes:
 - for applicants with degree(s) awarded by a **non-Italian University or by a private Italian University**: official transcript(s), issued by the University of origin, produced on letter headed paper, containing the full list of all the exams passed and the grades obtained. The transcript(s) must also include the date of the degree conferral. Upon enrolment, admitted students must provide the original copy of the "Dichiarazione di Valore"/"Statement of validity" (related to the Master's degree) issued by the Italian Diplomatic Mission in the country where the qualification was awarded. If the Master's degree was awarded by a European university, admitted students can provide the "Diploma Supplement" instead of the "Dichiarazione di Valore".
 - or
 - for applicants with degree(s) awarded by an **Italian Public University**: self-certification ("dichiarazione sostitutiva di certificazione" - Art. 46 DPR 28 December 2000, n. 445) in which the students declare to have obtained both a Bachelor's degree and a Master's degree. The self-declaration must include: the name of degree programme, the name of the University, the date of degree conferral, the graduation final grade, the full list of all the exams passed and the grades obtained (this information is required for both degrees). Upon enrolment admitted students must provide the original copy of the self-certification, in compliance with art. 75 of D.P.R. 445/2000. Should the self-certification be found to be false or incorrect, the



applicant loses any benefit which he/she might have acquired on the basis of the untruthful declaration.

OPTIONAL DOCUMENTS

- Cover letter
- Reference letter
- Italian language certificate (only for non-Italian applicants)
- English language certificate
- Residence Permit (only for non-EU citizens)

Failure to attach even one of the above mandatory documents will result in the exclusion from the selection process.

Art.6 (Selection outcomes)

At the end of the selection process carried out by the partner company, Politecnico di Torino will publish the list of the candidates admitted to the programme on the online University Bulletin and on the “Selection outcomes” section of the programme website: https://didattica.polito.it/master/electrified_connected_vehicle/2018/

Art.7 (Enrolment)

The candidates who have been admitted to the programme will have to enrol at Politecnico di Torino before the starting date of the 2nd level Specializing Master’s programme. Further information about enrolment will follow by e-mail.

Admitted candidates are not allowed to be simultaneously enrolled in another 2nd level Specializing Master’s programme nor in any other university programme.

Art.8 (Participation fee)

The participation in the 2nd level Specializing Master’s programme is free of charge for admitted students, as provided for by the regional call “Apprendistato di Alta Formazione e di Ricerca 2016 – 2018” (Art. 45 - D. Lgs. n. 81/2015).

In accordance with the “Tuition Fee Guide” of Politecnico di Torino, admitted students are exempted from paying their participation fee, but they still have to pay a fee (€ 19,53) for insurance and revenue stamp for every academic year.



Art. 9 (Qualification)

Upon successful presentation of the student's Project Work, Politecnico di Torino will confer the 2nd level Specializing Master's diploma in Electrified and Connected Vehicle.

Participants are required to:

- reach the total amount of 77 ECTS;
- attend at least 67% of total classroom hours (section 5.2.1 of the Bando della Regione Piemonte "Apprendistato di Alta Formazione e di Ricerca 2016 – 2018 - in attuazione della D.G.R. n. 37-3617 del 11/07/2016" - D.D. N. 537 03/08/2016).

Art. 10 (Competent office)

The competent office is the Office of Specializing Master's Programmes and Lifelong Learning of Politecnico di Torino, Tel. 0110905713 – e-mail: master.apprendistato@polito.it

Art.11 (Person responsible for the administrative procedure)

The person responsible for the administrative procedure is Mr. Alberto Pusceddu (Head of the Specializing Masters Programmes and Lifelong Learning Office).

Art. 12 (Privacy policy and access to documents)

The information provided for in Article 13 of the "Code regarding the protection of personal data" (Legislative Decree No. 196 of 30th June 2003) is available at: <https://didattica.polito.it/privacy/>.

The personal data included in the on-line application form are treated for the selection and enrolment process only; the data are used by Politecnico di Torino within the institution itself, and exclusively for the purposes of the institution: for this reason, personal data are shared with various offices within the University (to carry out the activities within their competence) without further notification to the applicants.

The personal data included in the on-line application form are also forwarded to the partner company by Politecnico di Torino for selection purposes.

Owner of the database is Politecnico di Torino, represented by the Rector, with legal seat in Corso Duca degli Abruzzi, 24-10129 Torino.

The person in charge of the student data is the Head of the Division of Student Affairs.

Access to all documents is allowed in the forms provided by current Legislation.



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Art. 13 (Access to documents)

Access to all documents is allowed in the forms provided by current legislation.

Art. 14 (Final provisions)

Politecnico di Torino does not take any responsibility in case of unavailability of recipients and for loss of communications due to inexact indication of a candidate's email address or telephone number or due to delay or failure to notify changes to the contacts provided during registration.

This Call is published on the online University Bulletin available at https://www.swas.polito.it/dotnet/albo_online/.

The same can be found on https://didattica.polito.it/master/electrified_connected_vehicle/2018/

Torino, 01/02/2018