UNIMORE
UNIVERSITÀ DEGLI STUDI DI
MODENA E REGGIO EMILIA

Department of Engineering
"Enzo Ferrari"

Master's Degree Programme in Electronic Engineering

**Department of Engineering "Enzo Ferrari"
Modena Campus**

2 years, full time
ECTS credits: **120**

Programme start: **September 2020**

Teaching Programme

Electron Devices and Components (9)
Techniques and Systems for Digital Communications (9)
Embedded Systems Design (6)
Analog and Mixed Circuit Design (9)
Photonics and Microwaves (9)
System and Control Theory (6)
Final examination (15)

Curriculum "Industrial Automation"
Power Electronics (9)
Instrumentation and Measurement Methods (9)
Reliability and Safety for Industrial Applications(6)
Modeling and Control of Electromechanical Systems (6)
High Performance Electric Drives and Laboratory (9+3)

Curriculum "Smart Connected Systems"
Nanoelectronics and Bioelectronics (6)
Industrial Measurements (9)
Advanced Photonics (6)
Networked Control Systems (6)
Networking Technologies and Protocols (6)
Learning Algorithms for Smart Connected Systems (6)

Choosen by the student (15):
Electronics Design Laboratory (6)
Biomedical Instrumentation and Measurements (6)
Tecnologie di Infrastrutture di Reti (6)
Industrial Co-Teaching (6)
Tirocinio (9)

Presentation

Students enrolling in this programme are focused on the future and the technologies that make it possible: electronics has driven the most incredible revolution of the last centuries. Today, it is hard to think of electronic-free machines, systems or tools, and it is even harder to imagine living our lives without using a "digital prosthesis" (smartphones for examples, or the IoT). Enrol in this programme to specialise in Electronic Engineering and get ready for a high-level career in the industrial, service o research sectors, both in Italy and abroad. The Master's Degree Programme in Electronic Engineering will give you the opportunity to enhance your expertise, and is aimed at training Master Graduates both on the industrial automation sector (control of high-dynamics electro mechanic systems, industrial robotics, implementation systems based on energy-efficient innovative technologies) and on new "smart and connected" technologies (just think about the Internet of Things, autonomous systems, new electronic devices for bioengineering, and systems inspired to the human brain). Courses are provided in English and also allow students to learn a technical jargon that will ensure them an easy access to the job market and the international research. The final examination includes an important experimental or design activity that students will carry out also in collaboration with international companies and research centres. You will have the opportunity to get in touch with a world with no boundaries! The way we train our students is known precisely for its high quality: many engineers who graduated at Unimore now work for important companies and centres in Europe and in the US.

Course content

The Master's Degree programme enables students to develop their competencies in electronics, automation, and telecommunications, through the following topics: microelectronic technologies and semiconductor devices, high-frequency integrated circuits, power electronics, sensors, electronic instrumentation, microwaves and telecommunications systems and networks, control and system theory. The final examination consists of a major experiment or project, which can be conducted in collaboration with international research companies or centres. There is also the concrete opportunity to enter into contact with the professional world of electronics which, potentially, has no boundaries. During the preparation of the final thesis, most students take advantage of the network of international contacts (set up by faculty professors) by travelling abroad and performing research in major European structures. Our students are internationally renowned for their solid preparation. As a matter of fact, many of our engineering graduates are working today for important companies in Europe and in the United States.

Career options

Typical professional settings include research and development, advanced design, and the management and oversight of complex electronic systems. Graduates can find employment in companies (with responsibilities higher than those of first-cycle graduates) for the design and production of electronic components, circuits and systems, in manufacturing industries, in sectors of public administrations and service companies which apply electronic technologies for the processing, transmission, and use of electronic signals. Furthermore, second-cycle graduates can continue their studies through a second-cycle master and/or research doctorate in the area of ICT (Information and Communications Technology).

How to apply

· Register on the www.esse3.unimore.it site under the Registration heading and insert the data requested,
· after having obtained the access credentials, do the login and then click on Application for evaluation from the left-hand menu,
· subsequently, to complete the procedure connect to the link as specified in esse3 and in the guide to the application for admission,
· complete the application for evaluation, inserting the information requested.

Fees and scholarships

min. €600 – max. €2,200. You can apply for the following benefits: 1. A scholarship with total exemption from tuition fees; 2. A reduction of tuition (for those not eligible for total exemption); 3. A financial aid for accommodation and meals. The rules and requirements for submitting the application are contained in the "Notice of Benefits for Entitlement to Study" (Bando Benefici per il Diritto allo Studio) published by ER.GO: www.er-go.it. Incoming students willing to apply for benefits are recommended to contact ER.GO at an early stage of their application to the Master, to be informed on the deadlines. You may also want to contact the International Welcome Desk for guidance on any practical issue, including applications for VISA.

Department of Engineering "Enzo Ferrari"

The Department of Engineering "Enzo Ferrari" in Modena manages teaching and research activities in Civil and Environmental Engineering, Computer Engineering, Electronics Engineering, Mechanical and Vehicle Engineering.
In this Department new opportunities arise from the synergic mixing of teaching, research, both theoretical and ap-

plied, and technology transfer. Devoted Interdepartmental Centres and Incubators are located in the same Campus. Through its Internship Office, the Department promotes and manages the provision of traineeships, using a well-established network of relationships with business associations, individual companies, professional firms, government agencies, foundations, and national and international institutions. In this context, of particular importance to the implementation of framework agreements with trade associations, and agreements with individual companies, aimed at the constant pursuit of learning goals and to maintaining an effective relationship between University and companies.

About UNIMORE

UNIMORE has a longstanding tradition (it was founded in 1175) and is considered one of the best universities in Italy for teaching and research. It is ranked 1st among the engineering programs (source CENSIS 2017/2018). With over than 27,000 students including 3,500 postgraduates, it is large enough to offer all the facilities one would expect from a major university (well-stocked libraries, computer rooms, free internet connection and study support services) but small enough to retain a personal and friendly learning environment. Located in the heart of one of Europe's wealthiest and most dynamic regions, which is world-renowned for its production of mechanical parts, engines, sports cars (e.g., Ferrari and Maserati) as well as for its agro-food sector, ceramic tiles and manufacturing industries.
UNIMORE benefits from a longstanding relationship with the area's firms and corporations, which provide private support for university research and a unique opportunity for on-the-job training before graduation.

Contacts

Programme web page
www.international.unimore.it
www.ing.unimore.it/LM/IngEle
Programme coordinator
Prof. Luca Vincetti
luca.vincetti@unimore.it
International Welcome Desk
internationalwelcomedesk@unimore.it
Information Desk
informastudenti@unimore.it

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