



**THE UNIVERSITY OF PARMA**  
The world awaits

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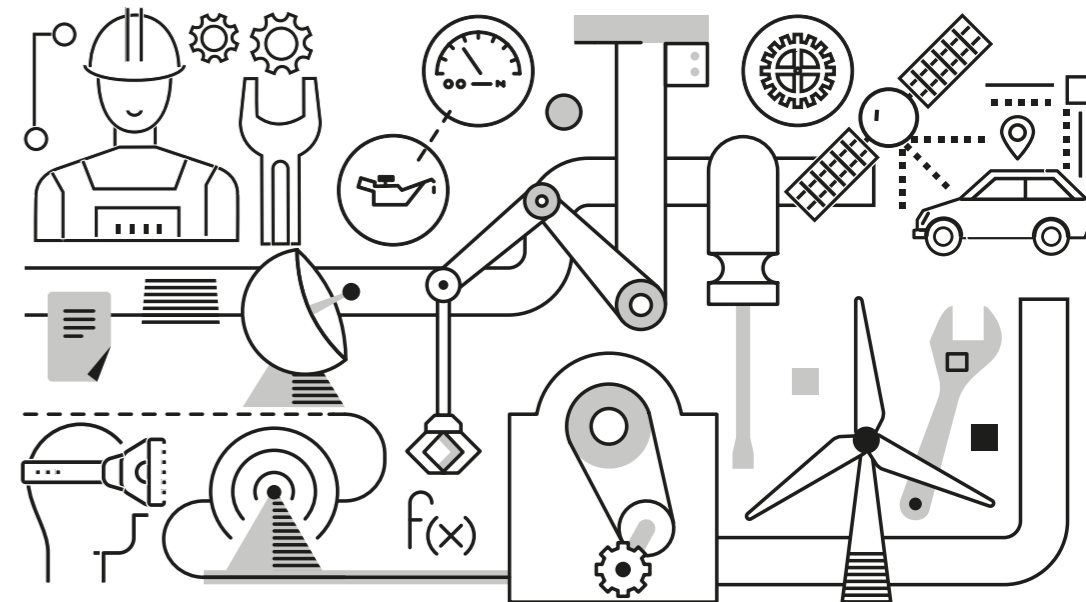
Edizione marzo 2021

ACADEMIC YEAR 2021/2022

TWO-YEAR SECOND-CYCLE DEGREE



# ADVANCED AUTOMOTIVE ELECTRONIC ENGINEERING



WHY STUDY WITH US?  
LET **THE NUMBERS** DO THE TALKING:

800   
professors and  
researchers

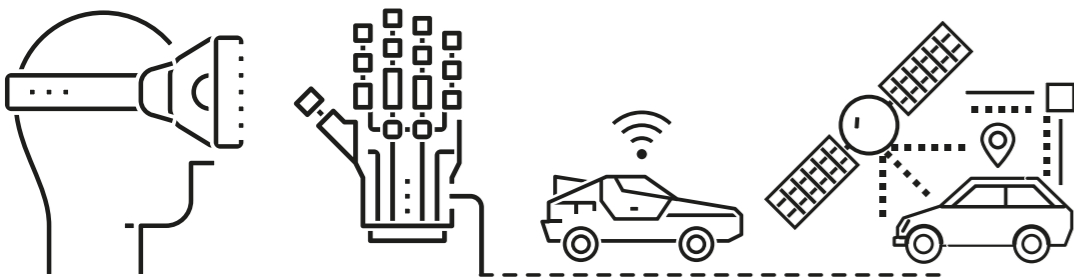
31k   
students from Italy and  
all over the world

96   
courses to  
choose from

100%   
grants for  
those entitled



# ADVANCED AUTOMOTIVE ELECTRONIC ENGINEERING



## WHY PARMA?

Mechanical engineering and electronics melded together to rewrite the definition of what an automobile is, a vision that projects the traditional car into the future. From a collaboration between Emilia Romagna's universities, an inter-university Master's Degree in Advanced Automotive Electronic Engineering is now available. Exclusively taught through the English language, the course is aimed at those who will not only design, develop and produce all of the elements that make up our means of transport but also to enrich their range of professional skills

through its focus on Computer Engineering, Electronics and telecommunications with a clear focus on the automotive industry. By offering a mix of both theory and practice with a strong focus on lab work, students have a chance to immediately experience the world of work. The 'hands-on' nature of the course is a central concept and includes internships with major industrial partners, counted as some of the most advanced within their field in Italy and worldwide.

## WHAT ARE YOU GOING TO LEARN?

### PRIMO ANNO

- HARDWARE-SOFTWARE CO-DESIGN OF EMBEDDED SYSTEMS	12	- WIRED AND WIRELESS INTERCONNECTIONS AND ANTI COLLISION SYSTEMS	9
- APPLIED SIGNAL PROCESSING AND CONTROL	12	- NETWORKING FOR AUTOMOTIVE	9

### 12 CFU A SCELTA TRA:

- AUTOMOTIVE LIGHTING TECHNOLOGY		- POWER ELECTRONICS FOR AUTOMOTIVE	
- TEST, DIAGNOSIS AND RELIABILITY			

### SECONDO ANNO

- AUTOMOTIVE ELECTRONICS	6	- ADVANCED AUTOMOTIVE SENSORS	6
- COMPLIANCE DESIGN OF AUTOMOTIVE SYSTEMS	6		

### 12 CFU CREDITI A SCELTA TRA:

- AUTOMOTIVE CYBER SECURITY		- MODELING AND CONTROL OF ELECTROMECHANICAL SYSTEMS	
- ARTIFICIAL VISION		- AUTOMOTIVE CONNECTIVITY	
- NEURAL NETWORK COMPUTING AND AI		- PLASTICS SCIENCE AND MANUFACTURING TECHNOLOGIES FOR THE AUTOMOTIVE INDUSTRIES	
- COMPUTER VISION, HMI, AND MACHINE LEARNING FOR AUTOMOTIVE			

### ALTRE ATTIVITÀ:

- INDUSTRIAL INTERNSHIP FOR THESIS		- TIROCINIO/ATTIVITÀ PROGETTUALE (9 CFU)	
- MASERATI LAB IN SMART AREAS		- ESAMI A SCELTA (12 CFU)	
- FINAL PROJECT			

## WHAT TO EXPECT AFTER THE COURSE

A highly specialized 2.0 engineer with an international outlook - this is the definition of those who successfully complete the AAEE Master's course. The opportunity to study abroad and to acquire high level skills making AAEE graduates competitive immediately both in Italy and beyond. An AAEE graduate can move comfortably between sectors within the luxury car and motorcycle indus-

try: the planning, development, design, integration and production process management of cutting edge vehicles. This title allows graduates to work professionally in Sector C - Information, Section A of the Engineers Register or to choose to continue their studies through a Research Doctorate or a 2<sup>nd</sup> level Master's Degree.

## GENERAL INFORMATION

### ORIENTATION

**PROF. CARLO CONCARI** [carlo.concari@unipr.it](mailto:carlo.concari@unipr.it)

### ADMISSION

For info contact:  
[corsi.unibo.it/2cycle/AutomotiveElectronicEngineering](https://corsi.unibo.it/2cycle/AutomotiveElectronicEngineering)

### DEPARTMENT

**Engineering and Architecture** - [dia.unipr.it](http://dia.unipr.it)  
Parco Area delle Scienze, 181/A - Campus Universitario

### COURSE TYPE AND DURATION

**2-year Master's Degree**

### DEGREE CODE

**LM-29** Electronic Engineering Master's Degree