

# Automotive Engineering for Sustainable Mobility

**An English Taught Master Program**

**For further information**

Contact:

**Adrian CLENCI, Assoc. prof.**

**University of Pitesti**  
1, Tg. din Vale street  
Pitești - 110040  
Argeș  
Romania

Tel: +40 348 453 166/163  
Fax: +40 348 453 102  
Mobile: +40 721 492 718  
adrian.clenci@upit.ro  
[www.upit.ro](http://www.upit.ro)



## UNIVERSITY OF PITESTI



Faculty of Mechanics and Technology  
Department Automobiles and Transport



- Energy Management & Control for Sustainable Mobility
- Hybrid Electric Vehicles
- Numerical Simulation

# Automotive Engineering for Sustainable Mobility

## An English Taught Master Program

### A DIFFERENT IDEA

On the one hand, mobility is one of the fundamental aspects of social cohesion as it gives everyone access to employment, training, public services and leisure. Equally, mobility is the motor for economic development. On the other hand, mobility tends to cause the degradation of the environment.

Therefore, an obvious question appears: how to ensure mobility for all of us in order to enable us to access jobs, education, healthcare and leisure and at the same time to protect our environment and the quality of life?

Clearly, now, more than ever, the requirement is to satisfy the demand for travel by using cleaner methods of transport, which generate less pollution. Even though it does not seem to be a new problem, this is actually the real challenge the specialists have to think about.

The new English-taught Master's Degree Program entitled "Automotive Engineering for a Sustainable Mobility" is meant to address this challenge.

This Master program is organized at the Faculty of Mechanics and Technology of the University of Pitești starting with 2011.

### WHAT WILL THIS DEGREE DO FOR YOU?

- give access to the knowledge on the latest and most promising new technologies related to sustainable mobility
- provide a valuable background for future PhD studies
- enable to enroll in the PhD preparation directly in the 2nd year, thus skipping the 1st year
- prepare your career for Research and Development in the Automotive Engineering field

### WHO MAY APPLY?

Students from any part of the world, holding a bachelor's degree in mechanical engineering should apply to this program.

The candidates must present evidence of the required Degree as part of the application procedure. As the courses will be taught in English, the candidates have to prove knowledge of English language to the interview, which will be organized in order to make the final selection / to meet a standard score of 500 TOEFL points (B level).

**Starting date:** 1st of October



## ACADEMIC CURRICULUM

### 1<sup>st</sup> YEAR

No.	Course name	Semester
1.	Advanced mathematics for automotive engineering	I
2.	Applied mechanics	
3.	Applied thermodynamics and energy conversion	
4.	Documentation and capitalization of information	
5.	Operations management	
6.	English language	
7.	Materials and sustainable manufacturing	II
8.	Road vehicle dynamics	
9.	Engine calibration	
10.	Transmissions and alternative drivetrains. Hybrid vehicles	
11.	Numerical analysis in problems of fluid-structure interaction	
12.	English language (facultative)	

### 2<sup>nd</sup> YEAR

No.	Course name	Semester	
13.	Vehicle mechatronics	III	
14.	Vehicle thermal comfort		
15.	Environmental problems of automotive engineering		
16.	Vehicle reliability		
17.	<b>Research semester:</b>	IV	
	Option 1.		
	A		CFD simulation of internal combustion engine (AVL Fire)
			Simulation of vehicles (AVL Cruise, Simulink)
	B		Structural analysis (Matlab, LS Dyna)
			Simulation of vehicle thermal management (Theseus)
	Option 2. Internship in a research center or lab		
	Preparation of the master's thesis		

## University of Pitești

The University of Pitești is a multidisciplinary university, founded in 1962. It is located in Pitești (2 hours northwest of Bucharest, Romania's capital and close to the well-known Dacia-Renault plant) and is one of the long appreciated state-run universities with a remarkable tradition in the Automotive Engineering field.

The Faculty of Mechanics and Technology is one of the eleven faculties of the University of Pitești and is actively participating in the development of the Romanian technical higher education. Its prestige is owed to the almost 50-year-long teaching activity and scientific research of competent faculty staff who, together with the Faculty's graduates, have managed to make the existence of a technical faculty in Pitești well-known. Currently, the activity of the Faculty of Mechanics and Technology is conducted on all the three levels of academic training (Bachelor's, Master's and PhD programs).

The primordial mission of the faculty is to offer high quality education with the purpose of developing the students' intellectual capacities, moral character and field of knowledge, as essential premises for the creation of a professional elite. At the same time, the Faculty of Mechanics and Technology takes the responsibility to conduct high-level scientific research in order to disseminate authentic engineering culture, as a condition for social and economic progress.

Today the ambition of the Faculty of Mechanics and Technology is to continue its tradition of excellence in the Automotive Engineering field and to succeed in establishing itself as the leading Romanian faculty in the field of sustainable mobility.