

COURSE SYLLABUS

Master's thesis preparation

UP.02.DSI.4.O.21.23-AP

1. Program information

1.1	Higher education institution	<i>University of Pitești</i>
1.2	Faculty	<i>Mechanics and Technology</i>
1.3	Department	<i>Automobiles and Transport</i>
1.4	Field of studies	<i>Automotive Engineering</i>
1.5	Level of education	<i>Master</i>
1.6	Program / Qualification	<i>Automotive Engineering for Sustainable Mobility</i>

2. Discipline information

2.1	Name of discipline		Master's thesis preparation								
2.2	Instructor of the lecture/course activities		<i>Adrian CLENCI</i>								
2.3	Instructor of the lab activities		<i>Adrian CLENCI</i>								
2.4	Year of the studies	//	2.5	Semester	//	2.6	Type of evaluation	V ¹	2.7	The discipline regime	A, DSP²

3. Estimated total time

3.1	Number of hours per week	6	3.2	lecture	-	3.3	seminar	6
3.4	Total hours of the Academic Syllabus	84	3.5	lecture	-	3.6	seminar	84
Distribution of the time allocated to the individual study <small>(= 3.9 x 25 - 3.4 = 10 x 25 - 224 = 26 hours)</small>								ore
Study by handbook, course support, bibliography and notes								22
Additional documentation in the library, on specialized electronic platforms and in the field								22
Preparation of thesis								100
Tutorial								20
Examinations								2
3.7	Total hours of individual study	166						
3.8	Total hours per semester (= 3.4 + 3.7)	250						
3.9	Number of credits allocated to the discipline	10						

4. Prerequisites (where applicable)

4.1	Curriculum	-
4.2	Skills	<i>Advanced mathematics, Applied Mechanics, Numerical methods, Vehicle dynamics, Applied Thermodynamics, Electronics and automatic systems, Automobile's construction, Thermal engines, Transmissions and alternative drivetrains, Vehicle Mechatronics, Materials, Vehicle reliability, Simulation of vehicles</i>

5. Conditions (where applicable)

5.1	for the lecture/course	-
5.2	for the seminar	<i>Classroom equipped with board, video projector, projection screen, computer</i>

6. Skills

Professional skills	<i>CP1 - innovative design and design with the purpose of producing products, technologies that ensure sustainable (sustainable) mobility</i> <i>CP2 - numerical modeling and simulation of the different components of the vehicles</i> <i>CP3 - calibration of different vehicle subsystems for energy optimization purposes</i> <i>CP4 - experimental research with the purpose of validating the prototypes resulting from the activities of conception, design, modeling and numerical simulation</i>
transversal skills	<i>CT1 - documentation and use of information</i> <i>CT2 - professional communication</i> <i>CT3 - project management</i> <i>CT4 - responsible execution of professional tasks under autonomous conditions</i> <i>CT5 - carrying out activities exploiting the ideas of</i>

7. Discipline goal(s)

7.1	The main goal of the discipline	<i>Development of competences in the field of Automotive Engineering</i>
7.2	Specific goal(s)	<i>At the end of this activity, the student should be able to discuss on this particular subject:</i> <ul style="list-style-type: none"> - <i>to elaborate a literature review specific to the master's thesis field;</i> - <i>identify the current state of knowledge on the subject under investigation,</i> - <i>to develop the research directions of the master's thesis, setting the purpose and its planning,</i> - <i>to develop the research topic taking into consideration the discussions / tips with the tutor</i> - <i>to issue the final conclusions of the subject treated in the master's thesis</i>

8. Contents

¹ E – Exam

² O – compulsory; DAP – deepening discipline

7.1. Master's thesis		No. of hours	Teaching methods	Remarks Resources used
1	Defining the master thesis subject	4	- Lecture - Exposure with support material - Explanation - Description and exemplification - The heuristic conversation - Debating - Case study - Exercising - Experiment - Computer aided learning	Board, sketches, tables, graphs, sheets, photos, models, video projector, computer, internet
2	Literature review for the established subject	20		
3	Presentation of the utilized research infrastructure	10		
4	Developing the methodology of the study	20		
5	Results and discussion	20		
6	Final conclusions	10		
TOTAL HOURS		84		

Minimal bibliography:

- It will be established by each tutor, differentiated, according to the topic of the master's thesis.

9. Corroboration the contents of the discipline with the expectations of the epistemic community representatives, professional associations and employers in the field related to the program

The skills acquired in this discipline allow the graduates to work in the field of automotive engineering: design, calibration, test, homologation of thermal engines and automobiles. Being a specialized discipline, its purpose is training students, especially for engineering centers (design, research, development, innovation).

10. Evaluation

Activity type	10.1 Evaluation Criteria	10.2 Evaluation methods	10.3 Percentage of the final grade
10.4 Master's thesis preparation	Active involvement during the activities	Questions / answers. Individual discussions. Weekly recording	40%
	Good understanding of the treated subjects and the ability to analyze and synthesize	Oral discussions	50%
	Correct resolution of the research report. Quality of presentation	Oral presentation. Individual discussions	10%
10.5 Minimum standard of performance	Achieving at least 60% of the evaluation criteria (§10.4)		

Date (of filling)
27.09.2021

Instructor
Professor **Adrian CLENCI**

Date (of approval)
29.09.2021

Director of supplying department
lecturer **Helene BĂDĂRĂU-ȘUSTER**

Director of beneficiary department
lecturer **Helene BĂDĂRĂU-ȘUSTER**