SYLLABUS

1. Data about the program of study

1.1	Institution	The Technical University of Cluj-Napoca
1.2	Faculty	Faculty of Automotive Engineering, Mechatronics and Mechanics
1.3	Department	Automotive Engineering and Transportation
1.4	Field of study	Automotive Engineering
1.5	Cycle of study	Master in Science
1.6	Program of study/Qualification	Tehnici Avansate în Ingineria Autovehiculelor (Advanced Techniques in Automotive Engineering) - în limba engleză
1.7	Form of education	Full time
1.8	Subject code	12.00

2. Data about the subject

2.1	Subject name			Research Activity 2		
2.2	Subject area			Automotive Engineering		
2.2	Course responsible/lecturer			-		
2.3	Teachers in charge of seminars			-		
2.4 Year of study	I	2.5 Semester	II	2.6 Assessment		C
2.7 Subject category	Formative category					DA
	Optionality					DI

3. Estimated total time

3.1 Number of hours per week	14	of which	3.2 Course	0	3.3 Seminar	0	3.3 Laborator	0	3.3 Proiect	14
3.4 Total hours in the curriculum	196	of which	3.5 Course	0	3.6 Seminar	0	3.6 Laborator	0	3.6 Proiect	196

3.7 Individual study:	
(a) Manual, lecture material and notes, bibliography	0
(b) Supplementary study in the library, online and in the field	52
(c) Preparation for seminars/laboratory works, homework, reports, portfolios, essays	0
(d) Tutoring	0
(e) Exams and tests	2
(f) Other activities	-

3.8 Total hours of individual study (summ (3.7(a)...3.7(f)))	54
3.9 Total hours per semester (3.4+3.8)	250
3.10 Number of credit points	10

4. Pre-requisites (where appropriate)

4.1	Curriculum	
4.2	Competence	

5. Requirements (where appropriate)

5.1	For the course	
5.2	For the applications seminarului / laboratorului / proiectului	

6. Specific competences

Professional competences	Be able to draw up a research plan; To carry out documentation using an indexed international database (SCOPUS); Develop the main chapters of a research paper.
Cross competences	Applying multidisciplinary teamwork and multidisciplinary work techniques on different hierarchical levels within working groups - specific project management; Appropriate use of effective learning methods and techniques; adequate use of information and oral and written communication.

7. Discipline objectives (as results from the *key competences gained*)

7.1	General objective	Acquiring knowledge about research
7.2	Specific objectives	Elaboration of the main chapters of a research paper; Be familiar with Internet browsing tools; Acquiring bibliographic search tools in international databases

8. Contents

8.1. Lecture (syllabus)	Number of hours	Teaching methods	Notes
8.2. Seminars /Laboratory/Project	Number of hours	Teaching methods	Notes
1. Defining the objectives of the research activity that will be accomplished in the dissertation work..	2	Practical work; processing and interpretation of results	
2. Establishment of the theoretical, experimental and / or numerical simulation program that will be realized in the dissertation work.	2		
3. Documentation on the theme of dissertation	82		
4. Making a synthesis of bibliographic documentation.	110		
Bibliography ✓ 5 titles, established together with the tutor			

9. Bridging course contents with the expectations of the representatives of the community, professional associations and employers in the field

The content of the discipline is in line with the concerns of the companies in the field and the current directions of scientific research.

10. Evaluation

Activity type	10.1 Assessment criteria	10.2 Assessment methods	10.3 Weight in the final grade
10.4 Course	-	-	-
10.5 Seminars /Laboratory/Project	The exam consists of checking the synthesis report of the activities carried out	Oral and written evaluation	100%
10.6 Minimum standard of performance			
For the synthesis report of the activities carried out, minimum grade 5(five)			

Date of filling in:		**Title Surname Name**	**Signature**
24.06.2025	Lecture	-	
	Teachers in charge of application (masters program responsible)	Prof. PhD Habil. Eng. Bogdan VARGA	

Date of approval in the department ART 24.06.2025	Head of department Prof.PhD.Eng. Barabás István
Date of approval in the faculty ARMM 25.06.2025	Dean Prof.PhD.Eng. Filip Nicolae