

SYLLABUS ¹

THIS COURSE UNIT IS TAUGHT IN ROMANIAN LANGUAGE

1. Information about the program

1.1 Higher education institution	Politehnica University Timisoara
1.2 Faculty ² / Department ³	Mechanical Faculty/ Mechanics and strength of materials
1.3 Chair	—
1.4 Field of study (name/code ⁴)	Vehicle engineering/20
1.5 Study cycle	L
1.6 Study program (name/code/qualification)	Vehicle engineering/20

2. Information about the discipline

2.1 Name of discipline/ formative category ⁵	Mechanics 1 / DD						
2.2 Coordinator (holder) of course activities	Menyhardt Karoly						
2.3 Coordinator (holder) of applied activities ⁶	Menyhardt Karoly						
2.4 Year of study ⁷	1	2.5 Semester	2	2.6 Type of evaluation	E	2.7 Type of discipline ⁸	DI

3. Total estimated time – hours / semester: direct teaching activities (fully assisted or partly assisted) and individual training activities (unassisted) ⁹

3.1 Number of fully assisted hours / week	4 of which:	3.2 course	2	3.3 seminar / laboratory / project	2
3.1* Total number of fully assisted hours / semester	56 of which:	3.2* course	28	3.3* seminar / laboratory / project	28
3.4 Number of hours partially assisted / week	of which:	3.5 training		3.6 hours for diploma project elaboration	
3.4* Total number of hours partially assisted / semester	? of which:	3.5* training		3.6* hours for diploma project elaboration	
3.7 Number of hours of unassisted activities / week	4.3 of which:	additional documentary hours in the library, on the specialized electronic platforms and on the field			1
		hours of individual study after manual, course support, bibliography and notes			2
		training seminars / laboratories, homework and papers, portfolios and essays			1.3
3.7* Number of hours of unassisted activities / semester	60 of which:	additional documentary hours in the library, on the specialized electronic platforms and on the field			14
		hours of individual study after manual, course support, bibliography and notes			28
		training seminars / laboratories, homework and papers, portfolios and essays			18
3.8 Total hours / week ¹⁰	8.3				
3.8* Total hours /semester	116				
3.9 Number of credits	5				

4. Prerequisites (where applicable)

4.1 Curriculum	• Mathematics, Physics
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¹ The form corresponds to the Discipline File promoted by OMECTS 5703 / 18.12.2011 and to the requirements of the ARACIS Specific Standards valid from 01.10.2017.

² The name of the faculty which manages the educational curriculum to which the discipline belongs

³ The name of the department entrusted with the discipline, and to which the course coordinator/holder belongs.

⁴ The code provided in HG no.140 / 16.03.2017 or similar HGs updated annually shall be entered.

⁵ Discipline falls under the educational curriculum in one of the following formative disciplines: Basic Discipline (DF), Domain Discipline (DD), Specialist Discipline (DS) or Complementary Discipline (DC).

⁶ Application activities refer to: seminar (S) / laboratory (L) / project (P) / practice/training (Pr).

⁷ Year of studies in which the discipline is provided in the curriculum.

⁸ Discipline may have one of the following regimes: imposed discipline (DI), optional discipline (DO) or optional discipline (Df).

⁹ The number of hours in the headings 3.1 *, 3.2 *, ..., 3.8 * is obtained by multiplying by 14 (weeks) the number of hours in headings 3.1, 3.2, ..., 3.8. The information in sections 3.1, 3.4 and 3.7 is the verification keys used by ARACIS as: (3.1) + (3.4) ≥ 28 hours / wk. and (3.8) ≤ 40 hours / wk.

¹⁰ The total number of hours / week is obtained by summing up the number of hours in points 3.1, 3.4 and 3.7.

4.2 Competencies	• Identification and usage of fundamental scientific notions
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5. Conditions (where applicable)

5.1 of the course	•
5.2 to conduct practical activities	•

6. Specific competencies acquired through this discipline

Specific competencies	<p>Defining basic concepts, theories and methods in the fundamental field of engineering sciences; their proper use in professional communication</p> <ul style="list-style-type: none"> Use basic knowledge to explain and interpret various concepts and processes associated with the fundamental field of engineering sciences. The use of basic principles and methods for building models typical of the fundamental field of engineering sciences, under qualified guidance.
Professional competencies ascribed to the specific competencies	<ul style="list-style-type: none"> Operating with fundamental concepts in the field of engineering sciences
Transversal competencies ascribed to the specific competencies	<ul style="list-style-type: none"> Execution of professional tasks according to the specified requirements and within the imposed deadlines, following a pre-established work plan and under qualified guidance

7. Objectives of the discipline (based on the grid of specific competencies acquired - pct.6)

7.1 The general objective of the discipline	<p>Consolidation of knowledge in the field of Statics and Kinematics as well as understanding the notions of Force / movement related to other general technical disciplines</p> <ul style="list-style-type: none">
7.2 Specific objectives	<ul style="list-style-type: none"> Assimilation of basic knowledge applicable in the development of other specialized disciplines. Development of the capacity to solve some fundamental elementary problems of mechanical engineering.

8. Content¹¹

8.1 Course	Number of hours	Teaching methods ¹²
Statics	14	

¹¹ It details all the didactic activities foreseen in the curriculum (lectures and seminar themes, the list of laboratory works, the content of the stages of project preparation, the theme of each practice stage). The titles of the laboratory work carried out on the stands shall be accompanied by the notation "(*)".

¹² Presentation of the teaching methods will include the use of new technologies (e-mail, personalized web page, electronic resources etc.).

kinematics	14	Presentation, lecture, explanation, example, demonstration	
Bibliography ¹³			
8.2 Applied activities¹⁴	Number of hours	Teaching methods	
Reduction of force systems	8		
centers of gravity	6		
rigid balance	6		
point and rigid movement	8		
Bibliography ¹⁵ • Menyhardt Karoly, Nagy Ramona, Luca Gheorghe – Mecanica. Dinamica Teorie si aplicatii, Editura Politehnica Timisoara, 2014			
• Hibbeler RC - Statics and mechanics of materials, Pearson/Prentice Hall 2004			

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

• ?

10. Evaluation

Type of activity	10.1 Evaluation criteria ¹⁶	10.2 Evaluation methods	10.3 Share of the final grade
10.4 Course	Proof of acquiring the knowledge accumulated during the semester	Written exam: 2 theoretical topics and 2 problems	67%
10.5 Applied activities	S: Solving imposed problems	test	33%/2
	L: Carrying out laboratory	Lab notebook	33%/2

¹³ At least one title must belong to the discipline team and at least one title should refer to a reference work for discipline, national and international circulation, existing in the UPT library.

¹⁴ Types of application activities are those specified in footnote 5. If the discipline contains several types of applicative activities then they are sequentially in the lines of the table below. The type of activity will be in a distinct line as: "Seminar:", "Laboratory:", "Project:" and / or "Practice/training".

¹⁵ At least one title must belong to the discipline team.

¹⁶ Syllabus must contain the procedure for assessing the discipline, specifying the criteria, methods and forms of assessment, as well as specifying the weightings assigned to them in the final grade. The evaluation criteria shall be formulated separately for each activity foreseen in the curriculum (course, seminar, laboratory, project). They will also refer to the forms of verification (homework, papers, etc.)

	work		
	P¹⁷:		
	Pr:		
10.6 Minimum performance standard (minimum amount of knowledge necessary to pass the discipline and the way in which this knowledge is verified ¹⁸)			
<ul style="list-style-type: none"> Solving and correcting at least half of each proposed topic 			

Date of completion

10/12/2020

**Head of Department
(signature)**

.....

**Course coordinator
(signature)**

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**Date of approval in the Faculty
Council ¹⁹**

**Coordinator of applied activities
(signature)**

.....
**Dean
(signature)**

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¹⁷ In the case where the project is not a distinct discipline, this section also specifies how the outcome of the project evaluation makes the admission of the student conditional on the final assessment within the discipline.

¹⁸ It will not explain how the promotion mark is awarded.

¹⁹ The endorsement is preceded by the discussion of the board's view of the study program on the discipline record.