1. Subject name	**Ship strength**				
2. Subject name in Hungarian	Hajó-szilárdsági számítások				
3. Code	**BMEKOVRM621**	4. Evaluation type	**mid-term grade**	5. Credits	**4**
6. Weekly contact hours	**1 (4) Lecture**	**1 (5) Practice**	**1 (5) Lab**		
7. Curriculum	**Vehicle Engineering MSc (J)**	8. Role	**Specialization (sp) at Vehicle Engineering MSc (J)**		
9. Working hours for fulfilling the requirements of the subject					**120**
Contact hours	42	Preparation for seminars	13	Homework	23
Reading written materials	42	Midterm preparation	0	Exam preparation	0
10. Department	**Department of Aeronautics and Naval Architectures**				
11. Responsible lecturer	Dr. Hargitai L. Csaba				
12. Lecturers	Dr. Simongáti Győző, Dr. Hargitai L. Csaba				
13. Prerequisites					

14. Description of lectures

Ship structure model types. The ship specific details of numerical strength calculation methods, and its special parameters by ships. Numerical strength calculation methods to determine global and local ship structure loads. Conformity of hull strength in accordance with applicable laws, standards and rules of ship classification societies.

15. Description of practices

Students are practicing ship strength calculations based on rules of ship classification societies, national/ international laws and standards.

16. Description of labortory practices

Students are practicing hull strength calculation with computer programs.

17. Learning outcomes

A. Knowledge

- Knows and understands the theoretical and practical process of hull strength calculation.
- Knows the hull structure modells for strength calculation, is familiar with the basics of numerical strength calculation methods, and the calculations of ship-specific parameters.
- Knows the methodology for defining global and local hull loads.
- He/She is familiar with the system and the structure of the laws, standards and classification regulations applicable to ship strength calculations.

B. Skills

- Based on his knowledge, he/she is able to check the strength of a ship's structure in accordance with the requirements of the regulations, laws and standards.

C. Attitudes

- Interested, responsive, independent, take care for the deadlines.

D. Autonomy and Responsibility

- Pro-activity in professional work, the self-standing selection of the relevant solution methods.
- Making decision circumspectly.

18. Requirements, way to determine a grade (obtain a signature)

Mid-term requirement: preparing 1 semestrial home work
Final grade: 1 exam (measuring the theoretical knowledge), 1 semestrial home work, the final grade is the average of the parts second exam and delayed submission of the homework

19. Opportunity for repeat/retake and delayed completion

Delayed submission of the homework

20. Learning materials

Hadházi Dániel: Hajóépítés -
P. Rigo-E. Rizzuto: Analysis and Design of Ship Structure
ISO standards
Rules of ship classification societies
Scientific publications of department

Effective date	10 October 2019	**This Subject Datasheet is valid for**	Inactive courses