



SUBJECT DATASHEET

I. SUBJECT DESCRIPTION

1. GENERAL DATA

1.1. Subject name (in Hungarian, in English)

Final Project • Final Project

1.2. Neptun code

BMEGEÁTBKSD

1.3. Type

study unit with contact hours

1.4. Course types and number of hours (weekly / semester)

course type	number of hours (weekly)	nature (connected / stand-alone)
lecture (theory)	-	-
exercise	10	individual
laboratory exercise	-	-

1.5. Type of assessments (quality evaluation)

mid-term grade

1.6. ECTS

15

1.7. Subject coordinator

name: Dr. Balla Esztella Éva (73727725349)
post: adjunct
contact: balla@ara.bme.hu

1.8. Host organization

Department of Fluid Mechanics (<http://www.ara.bme.hu>)

1.9. Course homepage

<http://www.ara.bme.hu/oktatas/tantargy/NEPTUN/BMEGEATBKSD>

1.10. Course language

hungarian, english

1.11. Primary curriculum type

mandatory criteria

1.12. Direct prerequisites

Strong prerequisite:	-
Weak prerequisite:	-
Parallel prerequisite:	-
Milestone prerequisite:	-
Excluding condition:	-

(the subject cannot be taken if you have previously completed any of the following subjects or groups of subjects)

2. AIMS AND ACHIEVEMENTS

2.1. Aim

The aim of the course is that the student acquires the techniques used in engineering practice in connection with the engineering problem that fits into the Bachelor program / specialization training program within the framework of the thesis and acquires independent problem-solving practice. During the preparation of the thesis, the student demonstrates maturity for solving engineering tasks to a high standard by solving and documenting tasks related to various topics. During the preparation of the thesis, the student performs independent engineering work under the guidance of the supervisor of the department - sometimes his / her internal / external consultant - in an individual consultation system, which is coordinated by the supervisor.

2.2. Learning outcomes

Competences that can be acquired by completing the course:

A. Knowledge

- With the help of his / her supervisor, he / she identifies the main elements of the thesis assignment, written about a segment of the chosen engineering field.
- With the help of the prior knowledge of the student, the student systematizes the new knowledge gained during the reading of the literature.
- The student has the knowledge needed to analyze the literature reviewed.
- He / she is aware of the professional knowledge required to perform the tasks in the assignment at the appropriate level.
- The student identifies challenges that would require a departure from the assignment or an extension of the scope of the tasks.
- The student has the knowledge to consult effectively with the supervisor.
- The student has the knowledge to propose changes to the assignment if necessary.
- He / she is aware of the professional knowledge on the basis of which he / she is able to make a proposal for the formulation of the points of the assignment with the help of his / her supervisor.
- The student names the content of each chapter of the thesis, its length can be formulated on the basis of prior knowledge.
- The student gathers the literature with the help of the knowledge acquired during the program.

B. Ability

- Understands the tasks in the assignment correctly.
- Specifies the correct order in which the tasks detailed in the assignment are performed.
- Identifies the range of literature still to be reviewed for the correct preparation of the thesis.
- Describes the relevant knowledge found in the literature in the thesis.
- The student applies the professional knowledge acquired during the student's studies so far during the elaboration of the thesis.

- The student adequately addresses emerging challenges that would require deviating from the assignment or expanding the tasks.
- In the course of the student's work, the student prepares the results of the literature reviewed or the analysis carried out in order to make the consultations with his / her supervisor effective.
- Proposes to the supervisor to modify the thesis assignment if the need arises.
- After completing the work, makes suggestions for ways forward.
- Analyzes the literature reviewed in the light of what has been learned previously.

C. Attitude

- The student constantly monitors his/her work, results and conclusions with the help of the student's supervisor and consultant.
- The student expands his/her knowledge in the chosen field by constantly acquiring knowledge.
- The student is open to using information technology tools and acquiring new skills when needed.
- The student strives to get to know the tool system necessary for solving the technical problems that arise and to learn to use it routinely and in an error-free manner.
- The student develops the ability to provide accurate and error-free problem solving, engineering precision, and accuracy.

D. Independence and responsibility

- Collaborates with the supervisor and the consultant, as well as fellow students as needed, to expand knowledge.
- During the preparation of the thesis, the student accepts the well-founded professional and other critical remarks.
- He / she constantly cooperates with his / her supervisor, consultant and, if necessary, fellow students during the elaboration of the dissertation.
- With his/her knowledge, the student makes a responsible, well-founded, and independent decision based on his/her analysis.
- The student feels responsible for the problems of the engineering course/specialization, energy efficiency, and sustainable use of the environment, as well as present and future generations.

2.3. Teaching methodology

The subject is a unit without contact lessons. The student works independently on a complex task during the semester. The student tries to solve the problems that arise during the solution of the task on its own. He / she only uses the help of his / her supervisor, internal / external consultant when making strategic decisions. During the solution of the task, the student comes to the solution of the task with the help of the knowledge and skills acquired during the program.

2.4. Support materials

a) Textbooks

Paul Gruba, Justin Zobel: How To Write Your First Thesis, Springer Verlag, 2017, ISBN: 978-3-319-61853-1

b) Lecture notes

No book or note after 2005 is yet available for the subject at the time of filling in the form.

c) Online materials

<http://www.ara.bme.hu/oktatas/tantargy/NEPTUN/BMEGEATBKSD>

2.5. Validity of the course description

Start of validity:	2021. May 31.
End of validity:	2024. April 26.

II. SUBJECT REQUIREMENT

3. ACHIEVEMENT CONTROL AND EVALUATION

3.1 General rules

The evaluation of the performance is determined by the supervisor on the basis of the prepared thesis. It is defined based on the elaboration of the topic of the thesis, the standard of engineering, the level of processing of the literature related to the topic, the formal, aesthetic appearance, division and logical structure of the thesis. The aspects of the scoring must be made on the basis of the evaluation form according to the current Faculty Regulations.

3.2 Assessment methods

A. Detailed description of mid-term assessments

Mid-term assessment

- type: formative assessment, project-based, complex
count: 1
purpose, The evaluation of the performance is determined by the supervisor on the basis of the prepared thesis. It
description: is defined based on the elaboration of the topic of the thesis, the standard of engineering, the level of processing of the literature related to the topic, the formal, aesthetic appearance, division and logical structure of the thesis. The aspects of the scoring must be made on the basis of the evaluation form according to the current Faculty Regulations.

B. Detailed description of assessments performed during the examination period (if relevant)

Elements of the exam:

1. written partial exam
-
2. oral partial exam
-
3. practical partial exam
-
4. inclusion of mid-term results
-

3.3 The weight of mid-term assessments in signing or in final grading

identifier	weight
Mid-term assessment	100 %

3.4 The weight of partial exams in grade (if relevant)

type	weight
written partial exam	0 %
oral partial exam	0 %
practical partial exam	0 %
inclusion of mid-term results	0 %

3.5 Determination of the grade

grade • [ECTS]	the grade expressed in percents
very good(5) • Excellent [A]	above 92%
very good(5) • Very Good [B]	85% .. 92%
good(4) • Good [C]	72% .. 85%
satisfactory(3) • Satisfactory [D]	65% .. 72%
sufficient(2) • Pass [E]	50% .. 65%
insufficient(1) • Fail [F]	below 50%

The lower limit specified for each grade already belongs to that grade.

3.6 Attendance and participation requirements

At least **70%** the exercises (rounded down) must be actively attended.

3.7 Special rules for improving, retaken and replacement

The special rules for improving, retaken and replacement shall be interpreted and applied in conjunction with the general rules of the CoS (TVSZ).

Can the submitted and accepted partial performance assessments be resubmitted until the end of the replacement period in order to achieve better results?

NO

Taking into account the previous result in case of improvement, retaken-improvement:

new result overrides previous result

The way of retaking or improving a partial assessment for the first time:

partial assesment(s) in this group cannot be improved or repeated, the final result is assessed in accordance with Code of Studied 122. § (6)

3.8 Study work required to complete the course

Activity	hours / semester
participation in contact classes	140
mid-term preparation for practices	70
elaboration of a partial assessment task	30
additional time required to complete the subject	210
summary	450

3.9. Validity of subject requirements

Start of validity: 2021. April 26.

End of validity: 2024. April 26.

4. ADDITIONAL INFORMATION

4.1 Primary course

The primary (main) course of the subject in which it is advertised and to which the competencies are related:
mechanical engineering

4.2 Link to the purpose and (special) compensations of the Regulation KKK

This course aims to improve the following competencies defined in the Regulation KKK>

a) knowledge

- Student is familiar with the general and specific mathematical, scientific and social principles, rules, contexts and procedures needed to operate in the field of engineering.
- Student has the comprehensive knowledge of global social and economic processes.
- Student has the knowledge of the theories and contexts of fundamental importance in the field of engineering and of the terminology which underpins them.

b) ability

- Student has the ability to apply the general and specific mathematical, scientific and social principles, rules, relationships and procedures acquired in solving problems in the field of engineering.
- Student has the ability to apply the theories and related terminology in an innovative way when solving problems in a given field of engineering.
- Student has the ability to approach and solve specific problems within student's field of specialisation in a multi-disciplinary and interdisciplinary manner.

c) attitude

- Student is open and receptive to learning, embracing and authentically communicating professional, technological development and innovation in engineering.
- Student embraces the professional and ethical values associated with the technical discipline.
- Student seeks to contribute to the development of new methods and tools in the field of engineering. A deepened sense of vocation.

d) independence and responsibility

- Student shares her acquired knowledge and experience through formal, non-formal and informal information transfer with those in her field.
- Student evaluates the work of student's subordinates and contributes to their professional development by sharing critical comments.
- Student takes initiative in solving technical problems.

4.3 Prerequisites for completing the course

Knowledge type competencies

(a set of prior knowledge, the existence of which is not obligatory, but greatly facilitates the successful completion of the subject) | -

Ability type competencies

(a set of prior abilities and skills, the existence of which is not obligatory, but greatly contributes to the successful completion of the subject) | -