

Budapesti Műszaki és Gazdaságtudományi Egyetem
Gépészmérnöki Kar
Áramlástan Tanszék
Mechanical Engineering Modelling (MSc)
Fluid Mechanics major (MSc)

Budapest University of Technology and Economics
Faculty of Mechanical Engineering
Department of Fluid Mechanics
Mechanical Engineering Modelling (MSc)
Fluid Mechanics major (MSc)

SUBJECT DATA SHEET AND REQUIREMENTS
(TANTÁRGY ADATLAP ÉS TANTÁRGYKÖVETELMÉNYEK)
Last modified / Utolsó módosítás: 2011.07.19.

Major Project (Diplomatervezés 1.)

I.	<i>Code (kód)</i>	<i>Semester (szemeszter)</i>	<i>Requirements (követelmények)</i>	<i>Credit (kredit)</i>	<i>Language (nyelv)</i>
	BMEGEÁTMWD1	3.	lect./sem./lab. (exam / pract. / signat.) 0/0/11 (p)	14	English

2. Responsible person and Department (Tantárgyfelelős személy és Tanszék):

<i>Name (Név):</i>	<i>Status (beosztás):</i>	<i>Department (Tanszék):</i>
Dr. Jenő Miklós SUDA	assistant professor	Dept. Fluid Mechanics

3. Lecturer (A tantárgy előadója):

<i>Name (Név):</i>	<i>Status (beosztás):</i>	<i>Department (Tanszék):</i>
-	-	Dept. Fluid Mechanics

4. Thematic background of the subject (A tantárgy az alábbi témakörök ismeretére épít):

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5. Compulsory / suggested pre-requisites (Kötelező/ajánlott előtanulmányi rend):

	<i>Subject name (tárgynév)</i>	<i>Code (tárgykód)</i>
Compulsory pre-requisites:	Differential Equations and Numerical Methods Laser Physics Analytical Mechanics Advanced Fluid Mechanics Advanced Thermodynamics Electronics Advanced Control and Informatics Computational Fluid Mechanics Flow Measurements	BMETE90MX46 BMETE12MX00 BMEGEMMMW01 BMEGEÁTMW01 BMEGEENMWAT BMEVIAUM001 BMEGEMIMW01 BMEGEÁTMW02 BMEGEÁTMW03
Suggested pre-requisites:	-	-

6. Main objectives of the subject (A tantárgy célkitűzései):

The aim of the course is to develop and enhance the capability for complex problem solving of the students under advisory management of their project leader and advisors. Each student's project is guided by the project leader and depending on the problem -if applicable- by advisor(s). They form the so-called evaluation team.

7. Detailed thematic description of the subject (A tantárgy részletes tematikája):

Several experimental and/or numerical (CFD) major project proposals will be announced by the project leaders on the registration week or before.

The major project proposals are defined as being complex problems for the 3rd semester and also can be continued in course of the Final Project (BMEGEÁTMWD2) in the 4th semester, hence resulting in the Master Thesis of the student.

8. Mode of education of the subject (A tantárgy oktatásának módja):

In course of the Major Project one single student or group of max. 2 students will work on one selected challenging problem of fluid mechanics.

9. Requirements (Követelmények):

1st evaluation team meeting: on the 4th week: 1st project presentation by the student
2nd evaluation team meeting: on the 8th week: 2nd project presentation by the student
3rd evaluation team meeting: on the 13th week: 3rd major project presentation by the student
On the 14th week on the last day of the semester: submission of the Major Project Report in printed and electronic (CD/DVD) format.

Evaluation team members assess the students work, the 3 presentations & the report in %.

The final grade (practical mark) is calculated based on the % marks of the supervisor and the advisors.

1st ETM 10% of the final grade
2nd ETM 25% of the final grade
3rd ETM 30% of the final grade
Report 35% of the final grade

Minimum requirements: students work must pass the minimum 40%, i.e. (2) “acceptable” level, as a given informative final grade.

10. Consulting opportunities (Konzultációs lehetőségek):

Project leader / advisors / evaluation team members are available in weekly consulting hours.

11. Reference literature (Jegyzet, tankönyv, felhasználható irodalom):

– Website of the subject: <http://www.ara.bme.hu/oktatas/tantargy/NEPTUN/BMEGEATMWD1>

Preliminary literature survey is essential part of the project start, but reference literature will be provided by the project leader / advisors, too.

12. Home study required to pass the subject (A tantárgy elvégzéséhez szükséges tanulmányi munka):

11 contact hours / week, + home study 11 hours / week

13. The data sheet and the requirements are prepared by (A tantárgy tematikáját kidolgozta):

Budapest, 17th of May 2011.

<i>Name (név):</i>	<i>Status (beosztás):</i>	<i>Department (Tanszék):</i>
Dr. Jenő Miklós SUDA	assistant professor	Dept. Fluid Mechanics