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.)

1.	*Code (kód)*	*Semester (szemeszter)*	*Requirements (követelmények)*	*Credit (kredit)*	*Language (nyelv)*
	BMEGEÁTMWD1	3.	lect./sem./lab. (**e**xam / **p**ract. / **s**ignat.) 0/0/11 (p)	14	English

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

Name (Név):	*Status (beosztás):*	*Department (Tanszék):*
Dr. Jenő Miklós SUDA	assistant professor	Dept. Fluid Mechanics

3. Lecturer (A tantárgy előadója):

Name (Név):	*Status (beosztás):*	*Department (Tanszék):*
-	-	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):

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

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

Major Project Report:
Submission deadline: the first working day 4PM after the end of semester (15th week, on Monday 16h) in printed and electronic (CD/DVD) format. It is obligatory to use a common template for format: see detailed template on the website. Document: max. 30 pages (body text from the Introduction and chapters to the Conclusion, including Figures, Tables, etc.). The Report must contain the signed original Project Assignment document.

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, 23rd of April 2012.

Name (név):	*Status (beosztás):*	*Department (Tanszék):*
Dr. Jenő Miklós SUDA	assistant professor	Dept. Fluid Mechanics