

2009.01.05.

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)

Fluid Technical Process Modelling (Áramlástechnikai folyamatok modellezése)

I.	<i>Code (kód)</i>	<i>Semester (szemeszter)</i>	<i>Requirements (követelmények)</i>	<i>Credit (kredit)</i>	<i>Language (nyelv)</i>
	BMEGEÁTMW06	3.	lect./sem./lab. (exam / pract. / signat.) 2/0/0 (p)	3	English

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

<i>Name (Név):</i>	<i>Status (beosztás):</i>	<i>Department (Tanszék):</i>
Dr. János VAD	associate professor	Dept. Fluid Mechanics

3. Lecturer (A tantárgy előadója):

<i>Name (Név):</i>	<i>Status (beosztás):</i>	<i>Department (Tanszék):</i>
Dr. János VAD	associate professor	Dept. Fluid Mechanics

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

Fundamentals of Fluid Mechanics

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

	<i>Subject name (tárgynév)</i>	<i>Code (tárgykód)</i>
Compulsory pre-requisites:	-	-
Suggested pre-requisites:	Fluid Mechanics	BMEGEÁTAG01 or BMEGEÁTAE01 or BMEGEÁTAM01 or BMEGEÁTAT01 or BMEGEÁTMF03

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

Getting acquainted with various industrial fields, with special regard to ones based on fluid mechanical processes. Obtainment of skill in recognition and solution of industry-related problems, on the basis of real case studies.

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

Case studies from various fields of industry regarding problem solution related to fluid flow technology.

Outline of the technological process, problem setting.

Practical aspects of problem setting.

Error analysis.

Field work: on-site measurements and additional studies.

Simulation case studies.

Interactive solution of industry-related diagnostic problems.

Proposals for elimination of the problem and their justification.

Future remarks.

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

Presentations; interactive problem solving.

9. Requirements (Követelmények):

Two written mid-term tests, incorporating solution of practical problems - maximum achievable scores: $2 \times 50 =$ total: 100 scores. Pre-requisite for achievement of the subject: min. 40 % obtained out of the part-scores.

10. Consulting opportunities (Konzultációs lehetőségek):

1 hours / week, upon agreement with the educator.

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

– Website of the subject: <http://www.ara.bme.hu/oktatas/tantargy/NEPTUN/BMEGEATMW06>

Vad, J. (2008), *Advanced flow measurements*. Műegyetemi Kiadó, 45085. ISBN 978 963 420 951 5.

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

2 hours / week.

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

Budapest, 5th of January 2009

<i>Name (Név):</i>	<i>Status (Beosztás):</i>	<i>Department (Tanszék):</i>
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